

(104600)

NFPA Rating Health 1 Flammability 0 Reactivity 0		HMIS Rating Health 1 Flammability 0 Reactivity 0	
SECTION I			
Material Safety Data Sheet This MSDS complies with OSHA's Hazard Comm. Standard 29 CFR 1910.1200 and OSHA Form 174		DOT Hazard Classification * Consumer commodity, ORM-D	
Distributed By:	Hillyard Industries, Inc.	Identity (Trade Name)	#1049 Wasp & Hornet Spray
Address:	P.O. Box 909	MSDS Number *	1049-99-1
	St. Joseph, MO 64502	Date Prepared:	January 1, 1999
Telephone (Information)	(816) 233-1321 (Ext.2303) http://www.hillyard.com	Prepared By:	Regulatory Dept.
Telephone (Emergency)	CHEMTREC (1-800-424-9300)	NOTE: Blank spaces are not permitted. If any item is not applicable or no information is available, the space must be marked to indicate that.	

SECTION II - Ingredients/Identity Information

Components (Specific Chemical Identity, Common Name(s))	CAS No.	OSHA PEL	ACGIH-TLV	Other Limits Recommended	%(Opt.)
Petroleum distillates (Exposure as mist)	64742-47-8	5 mg/m ³	5 mg/m ³	STEL 10 mg/m ³	
Carbon dioxide	124-38-9	5000 ppm	5000 ppm	STEL 30000 ppm	
Tetramethrin	7696-12-0	Not Established	Not Established		<1
3-Phenoxybenzyl - (1RS,3RS,1RS,3SR) -2,2-dimethyl-3- (2-methylprop-1-enyl) cyclopropanecarboxylate	26002-80-2	Not Established	Not Established		<1

This product is not known to contain any compound listed and in quantities requiring reporting under SARA Title III Section 313.

Any substance listed as hazardous by the States of California, Florida, Illinois, Michigan, New Jersey, Ohio, Pennsylvania or Texas is described above if known present in regulated concentrations.

SECTION III Physical/Chemical Characteristics

Boiling Point Concentrate - range	362-516° F	Specific Gravity (H ₂ O = 1) Concentrate	0.81
Pressure (psig. @ 70° F)	90 ± 10	Melting Point	No Data
Vapor Density (AIR = 1)	No Data	Evaporation Rate (Butyl Acetate = 1)	No Data
Solubility in Water	Negligible	pH	Not Applicable

Appearance and Odor

Clear colorless liquid with a hydrocarbon scent in an aerosol can.

SECTION IV - Fire and Explosion Hazard Data

USA Flame Projection Test (ASTM D-3065) 0", Extinguishes flame; Non-flammable	Flammable Limits No Data	LEL No Data	UEL No Data
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Extinguishing Media -

Treat as an oil fire. Use carbon dioxide, dry chemical or alcohol compatible foam.

Special Fire Fighting Procedures - Use water spray to keep containers cool and vapors down. Do not allow runoff to enter sewers or public watercourses. Wear self-contained breathing apparatus in chemical fires.

Unusual Fire and Explosion Hazards -

Aerosol container (pressurized) may burst if heated over 130° F. Combustible contents.

XEROX

Material Safety Data Sheet

MSDS No: D-0429

Date: 1/31/86

Revision: 5/10/00

Manufacturer:
Xerox Corporation
Rochester, New York 14644

Telephone # (s): *Safety Information: (800) 828-6571*
Health Emergency: (716) 422-2177
Transportation Information(Chemtrec): (800) 424-9300

Section I - Product Identification

Trade Names/Synonyms: Anti-Static Fluid, Document Handler Anti-Static Fluid

Part No.: 43E30, 43E110, 8R517*, 8R2946,
8R3671, 8R90273*, 8R90275
XCI: 544P23340

Chemical Name: None

WHMIS Status: This is not a WHMIS controlled product.

*Cancelled

Ingredients (% by wt.)

CAS No.

Water (>98%)

7732-18-5

Additives (<1%)

Surfactants (<1%)

Section II - Emergency and First Aid

Primary Route of Entry:

Inhalation

Eyes:

Flush eyes thoroughly with water.

Skin:

Wash with soap and water.

Inhalation:

Remove from exposure.

Ingestion:

Dilute stomach contents with several glasses of water.

Symptoms of Overexposure:

May cause minimal irritation of respiratory passages on continuous exposure to high concentrations.

Medical Conditions Generally Aggravated by Exposure:

None when used as described by product literature.

Additional Information:

None.

Section III - Toxicology and Health Information

This material has been evaluated by Xerox Corporation. The toxicity data noted below is based the constituents of this product.

Oral LD₅₀: N.A.

TLV: N.E.

Dermal LD₅₀: N.A.

PEL: N.E.

Inhalation LC₅₀: N.A.

STEL: N.E.

Eye Irritation: Not an irritant.

Ceiling: N.E.

Skin Sensitization: Not a sensitizer.

XEL¹: N.E.

Skin Irritation: Not an irritant.

Human Patch: Non-irritating, non-sensitizing.

Mutagenicity: No mutagenicity detected in Ames Assay.

Carcinogens: None present

Aquatic LC₅₀: N.A.

Additional Information: None

¹XEL-Xerox Exposure Limit

N.A. - Not Applicable N.E. -None Established N.D. -Not Determined

Xerox

Trade Name: Anti-Static Fluid, Document Handler Anti-Static Fluid **MSDS No.:** D-0429

Section IV - Physical Data

Appearance/Odor:	White liquid / odorless	Softening Range:	N.A.
Boiling Point:	101° C	Melting Point:	N.A.
Solubility in Water:	Completely	Specific Gravity (H₂O=1):	~1
Evaporation Rate:	~5.1 (n-Butylacetate = 1)	Vapor Pressure (mm Hg):	22 @ 20° C
Vapor Density (Air=1):	N.A.	pH:	7.2
Volatile:	99.9% (Wt.) --% (Vol.)	VOC:	<20 g/l

Section V - Fire and Explosion Data

Flash Point (Method Used):	N.A.
Flammable Limits:	LEL: N.A., UEL: N.A.
NFPA 704:	Health - 0, Fire - 0, Reactivity - 0
Extinguishing Media:	N.A.
Special Fire Fighting Procedures:	None
Fire and Explosion Hazards:	None

Section VI - Reactivity Data

Stability:	Stable
Hazardous Polymerization:	Will Not Occur
Hazardous Decomposition Products:	None
Incompatibility (Materials to Avoid):	None

Section VII - Special Protection Information

Respiratory Protection:	None required when used as intended in Xerox products.
Eye Protection:	None required when used as intended in Xerox products.
Protective Gloves:	None required when used as intended in Xerox products.
Other:	None required when used as intended in Xerox products.

Section VIII - Special Precautions

Handling and Storage:	Keep in container supplied. Do not store below freezing.
Conditions to Avoid:	None

Section IX - Spill, Leak, and Disposal Procedures

For Spills or Leakage:	Mop up or wash to waste.
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Waste Disposal Method:	No specific waste disposal method required. Dispose of in accordance with federal, state, and local regulations.
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Section X - Transportation Information

<u>Proper Shipping Name:</u>	<u>Hazard Class</u>	<u>ID #:</u>	<u>Packing Group:</u>	<u>Exception may apply:</u>
D.O.T. Not regulated	N.A.	N.A.	N.A.	-
T.D.G. Not regulated	N.A.	N.A.	N.A.	-

600E33070



WD-40[®]



MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

Manufacturer: WD-40 Company	Telephone:
Address: 1061 Cudahy Place (92110) P.O. Box 80607 San Diego, California 92138-0607	Emergency Only: 1 (800) 424-9300 (CHEMTREC) Information: (619) 275-1400
	Chemical Name: Organic Mixture
	Trade Name: WD-40 Aerosol
	Item No.: 10002, 10005, 10008, 10011, 10013, 10016, 10023

II. HAZARDOUS INGREDIENTS

Chemical Name	CAS Number	%	Exposure Limit ACGIH/OSHA
Aliphatic Petroleum Distillates	8052-41-3	60-70	100 ppm PEL
Petroleum Base Oil	64742-65-0	15-25	5 mg/M ³ TWA (mist)
Carbon Dioxide	124-38-9	2-3	5000 ppm PEL
Non-hazardous Ingredients		<10	

III. PHYSICAL DATA

Boiling Point: NA	Evaporation Rate: Not determined
Vapor Density (air = 1): Greater than 1	Vapor Pressure: 110 ±5 PSI @ 70°F
Solubility in Water: Insoluble	Appearance: Light amber
Specific Gravity (H₂O = 1): 0.816 @ 70°F	Odor: Characteristic odor
Percent Volatile (volume): 70%	

IV. FIRE AND EXPLOSION

Flash Point:	Tag Open Cup 110°F (minimum)
Flammable Limits:	(Solvent Portion) [Le] 1.0% [Ue] 6.0%
Extinguishing Media:	CO ₂ , Dry Chemical, Foam
Special Fire Fighting Procedures:	Contents Under Pressure
Unusual Fire and Explosion Hazards:	FLAMMABLE - U.F.C. level 3 AEROSOL

V. HEALTH HAZARD / ROUTE(S) OF ENTRY

Threshold Limit Value	
Aliphatic Petroleum Distillates (Stoddard solvent) lowest TLV (ACGIH 100 ppm.)	
Symptoms of Overexposure	
Inhalation (Breathing):	May cause anesthesia, headache, dizziness, nausea and upper respiratory irritation.
Skin Contact:	May cause drying of skin and/or irritation.
Eye Contact:	May cause irritation, tearing and redness.
Ingestion (Swallowed):	May cause irritation, nausea, vomiting and diarrhea.
First Aid Emergency Procedures	
Ingestion (Swallowed):	Do not induce vomiting, seek medical attention.
Eye Contact:	Immediately flush eyes with large amounts of water for 15 minutes.
Skin Contact:	Wash with soap and water.
Inhalation (Breathing):	Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.
Pre-existing medical conditions such as eye, skin and respiratory disorders may be aggravated by exposure.	
DANGER!	
Aspiration Hazard:	If swallowed, can enter lungs and may cause chemical pneumonitis. Do not induce vomiting. Call Physician immediately.
Suspected Cancer Agent	
Yes _____ No <u> x </u>	The components in this mixture have been found to be noncarcinogenic by NTP, IARC and OSHA.

VI. REACTIVITY DATA

Stability:	Stable <u> x </u>	Unstable <u> </u>
Conditions to avoid:	NA	
Incompatibility:	Strong oxidizing materials	
Hazardous decomposition products:	Thermal decomposition may yield carbon monoxide and/or carbon dioxide.	
Hazardous polymerization:	May occur <u> </u>	Will not occur <u> x </u>

VII. SPILL OR LEAK PROCEDURES

Spill Response Procedures

Spill unlikely from aerosol cans. Leaking cans should be placed in plastic bag or open pail until pressure has dissipated.

Waste Disposal Method

Empty aerosol cans should not be punctured or incinerated; bury in land fill. Liquid should be incinerated or buried in land fill. Dispose of in accordance with local, state and federal regulations.

VIII. SPECIAL HANDLING INFORMATION

Ventilation:	Sufficient to keep solvent vapor less than TLV.
Respiratory Protection:	Advised when concentrations exceed TLV.
Protective Gloves:	Advised to prevent possible skin irritation.
Eye Protection:	Approved eye protection to safeguard against potential eye contact, irritation or injury.
Other Protective Equipment:	None required.

IX. SPECIAL PRECAUTIONS

Keep from sources of ignition. Avoid excessive inhalation of spray particles, do not take internally. Do not puncture, incinerate or store container above 120°F. Exposure to heat may cause bursting. Keep can away from electrical current or battery terminals. Electrical arcing can cause burn-through (puncture) which may result in flash fire, causing serious injury. Keep from children.

X. TRANSPORTATION DATA (49 CFR 172.101)

Domestic Surface

Description:	Consumer Commodity
Hazard Class:	ORM-D
ID No.:	NONE
Label Required:	Consumer Commodity (ORM-D)

Domestic Air

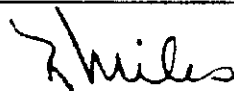
Description:	Consumer Commodity (Non-Flammable Gas – Aerosol)
Hazard Class:	ORM-D
ID No.:	NONE
Label Required:	Consumer Commodity (ORM-D-AIR)

XI. REGULATORY INFORMATION

All ingredients for this product are listed on the TSCA inventory.

SARA Title III chemicals:	None
California Prop 65 chemicals:	None
CERCLA reportable quantity:	None
RCRA hazardous waste no.:	D001 (Ignitable)

SIGNATURE: R. Miles



TITLE: Technical Director

REVISION DATE: March 2001

SUPERSEDES: March 1998

NA = Not applicable

NDA = No data available

< = Less than

> = More than

We believe the statements, technical information and recommendations contained herein are reliable. However, the data is provided without warranty, expressed or implied. It is the user's responsibility both to determine safe conditions for use of this product and assume loss, damage or expense, direct or consequential, arising from its use. Before using product, read label.

MSDS-A

SPARTAN CHEMICAL COMPANY, INC. - MATERIAL SAFETY DATA SHEET

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label)
WASP & HORNET KILLER

Manufacturer's Name - Spartan Chemical Company, Inc.
Emergency Telephone No. - 800/537-8990
Address - 110 N. Westwood Ave., Toledo, OH 43607

NFPA RATINGS: Health-1 Fire-0 React-1
HMIS RATINGS: Health-1 Fire-0 React-1 Pers. Prot.- A

SECTION II: HAZARDOUS INGREDIENTS

Chemical Name(s) - Butyl Propasol
CAS Registry No. - 5131-66-8 Weight - 6%
TWA (mg/m3) - N/A STEL (mg/m3) - N/A Ceiling (mg/m3) - N/A
Carcinogen - No

Chemical Name(s) - Heptane
CAS Registry No. - 142-82-5 Weight - 4%
TWA (mg/m3) - 1600 STEL (mg/m3) - 2000 Ceiling (mg/m3) - N/A
Carcinogen - No

Chemical Name(s) - Propane
CAS Registry No. - 74-98-6 Weight - 3%
TWA (mg/m3) - 1800 STEL (mg/m3) - N/A Ceiling (mg/m3) - N/A
Carcinogen - No

SECTION III: PHYSICAL DATA

Boiling Point - N/A, Specific Gravity (H2O = 1) - 0.95
Percent Solid by Weight - 3-4, Vapor Pressure - N/A
Evaporation Rate (But. Ace. = 1) - <1, Vapor Density (Air = 1) - >1
Solubility in Water - Forms an emulsion
Appearance and Odor - Milky jet stream spray, mild solvent odor
Material Is - Liquid, pH - 7.0-7.5

SECTION IV: FIRE & EXPLOSION HAZARD DATA

Flash Point - 138 F
Method Used - ASTM - D56
Flammable Limits - N/A
Flame Extension - 0" (Level 1 Aerosol)
Extinguishing Media - Water fog, carbon dioxide, dry chemical
Special Fire Fighting Procedures - Use equipment or shielding to protect
personnel against bursting, rupturing or venting containers.
Unusual Fire and Explosion Hazards - At elevated temperatures
(over 54 C/130 F) containers may vent, rupture or burst.

SECTION V: HEALTH HAZARD DATA

Effects of Overexposure - Conditions to Avoid: May cause eye
irritation.

Keep away from food, feedstuffs and domestic water supplies.
Threshold Limit Value - Not Established
Conditions Aggravated by Use - Unknown
Primary Routes of Entry: Skin Contact, Inhalation

☐Emergency and First Aid Procedures -

Eyes: Remove contact lenses. Flush eyes with water for at least 15 minutes. Call a physician.
Skin: Wash with soap and water. Ingestion: Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger.

Never give anything by mouth to an unconscious person.
Call a physician or poison control center.

Inhalation: Remove person to fresh air. Apply artificial respiration

if needed. Physician's Note: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically.

Atropine only by injection is an antidote.

SECTION VI: REACTIVITY DATA

Stability: Stable X

Incompatibility (Materials to Avoid) - Substances that react with water

Hazardous Decomposition Products - None known

Hazardous Polymerization: Will Not Occur X

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled - Small spills should be absorbed.

Waste Disposal Method - Do not incinerate or puncture aerosol container. Dispose of in accordance with state or local regulations.

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type) - None required

Ventilation - Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

Protective Gloves (Specify Type) - Not required

Eye Protection (Specify Type) - Safety goggles

Other Protective Equipment - None required

SECTION IX: SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storing - Contents under pressure.

Do not use or store near heat, sparks or open flame.

Do not store where temperatures could exceed 120 F.

Other Precautions - None

Spartan Chemical Company, Inc. - WASP & HORNET KILLER II (AEROSOL)
Ref: 29 CFR 1910:1200 (OSHA)

NAME: Thomas J. Mitchell

TITLE: Director of Research

DATE: July 18, 1996

SUPERCEDES: June 12, 1996

SCC7/96 Copyrighted: Spartan Chemical Company, Inc.

- For Use Only by Authorized Spartan Distributors.

MATERIAL SAFETY DATA SHEET

212600

Date Issued:

January 2004

Supersedes:

October 2003

Page:

Page 1 of 2

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: VoBan® Vomitus Absorbent

Manufacturer: Frank Miller & Sons, Inc. P.O. Box 278539, Riverdale, Illinois 60827

Emergency Phone: (INFOTRAC): (800) 535-5053 **Reference:** FMS
Information Phone: (708) 201-7200

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS NO	%
Proprietary Information		100%

3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS: Direct contact with this material may cause minimal eye and skin irritation. May cause irritation to the nose, throat, and respiratory passages through extended use.

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with water for at least 15 minutes, lifting the upper and lower lids occasionally. If irritation persists, get medical attention.
INHALATION: Remove to fresh air. Seek medical attention if cough or respiratory symptoms develop.
INGESTION: If large amounts are swallowed, get immediate medical attention.
SKIN CONTACT: Wash exposed skin with soap and water. If any irritation develops, seek medical attention.

5. FIRE FIGHTING MEASURES

FLASH POINT: Not applicable.

EXTINGUISHING MEDIA AND FIRE FIGHTING INSTRUCTIONS

Use normal agents for extinguishing wood fires – water spray, carbon dioxide dry chemical. Material will support combustion. May be drenched with water to reduce fire hazard. Material may smolder after it is involved in a fire. Spread material out and be sure fire is extinguished.

6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED:

Sweep up material and return to container or discard. Dispose in accordance with all Federal, State, and local laws.

7. HANDLING AND STORAGE

Store out of reach of children. Keep container closed and properly labeled when not in use. Store in a cool, dry, well-ventilated place away from incompatible materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls are not usually necessary if good hygiene practices are followed. Before eating drinking, or smoking, wash hands thoroughly with soap and water. Avoid unnecessary skin contact. Impervious gloves are recommended to prevent prolonged skin contact. For operations where eye or face contact can occur, eye protection is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : Orange granular solid
 ODOR: Wintergreen-Mint odor
 BOILING POINT: Not applicable

VAPOR DENSITY: Not applicable
 SPECIFIC GRAVITY: 2.35 lbs per gal.
 SOLUBILITY: Negligible

10. STABILITY AND REACTIVITY

STABILITY: Stable
 CONDITIONS TO AVOID: Ignition sources
 POLYMERIZATION: Will not occur

INCOMPATIBLE MATERIALS: Strong oxidizers
 BY-PRODUCTS: None known

11. TOXICOLOGICAL INFORMATION

California Proposition 65 Warning (applicable in California only) – This product contains (a) chemical(s) known to the State of California to cause cancer.

12. ECOLOGICAL INFORMATION

No data available

13. DISPOSAL INFORMATION

PRODUCT : Dispose of material according to all applicable local, state and Federal regulations.
CONTAINER: Do not reuse empty container. Offer for recycling, or puncture and dispose of in a sanitary landfill.

14. TRANSPORT INFORMATION

SHIPPING NAME: Not Applicable / Not Regulated **HAZARD CLASS:** Not Applicable
UN NUMBER: Not Applicable

15. REGULATORY INFORMATION

The following components of this product may be subject to reporting requirements pursuant to Section 313 of CERCLA (40 CFR 72), Section 12(b) of TSCA, or may be subject to release reporting requirements (40 CFR 307, 40 CFR 311), etc.

COMPONENT	CAS NO	de min (%)	TPO(lbs)	RO(lbs) S313	TSCA 12(b)
C.I. Solvent Yellow 14	842-07-9	1.0			

16. OTHER INFORMATION

NFPA HAZARD RATING (National Fire Protection Association)

HEALTH:	0	4 - Extreme
FIRE:	1	3 - High
REACTIVITY:	0	2 - Moderate
SPECIAL:	--	1 - Slight
		0 - Insignificant

This information is given without any warranty, expressed or implied, or representation. It is offered solely for your consideration, investigation and verification. Before using any product, read its label.

Integrated Ingredients

1420 Harbor Bay Parkway
Suite 210
Alameda, California 94501
800-548-8381

(168450)

MATERIAL SAFETY DATA SHEET

FLEISCHMANN'S VINEGAR

Date Issued: September 3, 1992
Trade Name: Vinegar, All Varieties
Chemical Name: Acetic Acid
Chemical Formula: CH₃COOH
Definition: Product made by the acetic fermentation of ethyl alcohol and contains 5 to 30% acetic acid (or 50 to 300 grain vinegar).

Manufacturer's Name and Address: Integrated Ingredients
 1420 Harbor Bay Parkway, Suite 210
 Alameda, CA 94501
Phone Number: (310) 748-6300

HEALTH HAZARD DATA

Inhalation: Threshold Limit Value: 10 ppm
 Short Term Exposure Limit: 15 ppm for 15 minutes
 Odor Threshold: 1.0 ppm

Inhalation of vapors can cause irritation to respiratory tract.

Skin: Contact may cause mild injury and burns from vinegars of 10% acetic acid and greater. Dilute solutions may cause dermatitis in some sensitive individuals.

Eyes: Contact may cause severe burns and permanent corneal injury from concentrated vinegars. May be followed by blindness. High vapor concentrations may result in conjunctivitis.

Ingestion: Concentrated vinegars may cause pain, irritation and burns in mouth, esophagus and stomach.

EMERGENCY & FIRST-AID PROCEDURES

In case of eye or skin contact, flush immediately and thoroughly with water.
 Saturated clothing should be removed and washed.
 If vapors are inhaled extensively, exposed person should be removed to fresh air immediately.
 If swallowed, water should be consumed to dilute.
 Do not induce vomiting.
 Do not give emetics or baking soda.
 Call a physician.

FIRE AND EXPLOSION HAZARD DATA

Flash Point: 40°C closed cup
 (Acetic Acid)
Auto Ignition Temperature: 427°C
 (Acetic Acid)
Flammable Limits in Air: 4.0% - 16%
 (Acetic Acid)

Fire Extinguishing Agents Recommended: Water spray, foam CO₂ or dry chemical. Water may be used to dilute spills and reduce flammability.

Unusual fire and explosion hazards: Toxic gases and vapors may be released in a fire involving concentrated vinegars.



Integrated Ingredients1120 Harbor Bay Parkway
Suite 210
Alameda, California 94501
830-548-8381**MATERIAL SAFETY DATA SHEET****FLEISCHMANN'S VINEGAR
REACTIVITY DATA****Stability**[X] Stable
[] Unstable**Hazard Polymerization**[X] Will not occur
[] May occur**Incompatibility:**

violent spattering and heat.

Hazardous decomposition products:May produce carbon monoxide (CO) and/or carbon dioxide (CO₂).**SPILL OR LEAK PROCEDURES**

If vinegar is spilled, dike to contain, ventilate area, dilute with water; may be neutralized with addition of soda ash.

Do not flush to streams or sewers.

Waste Disposal Methods:

Treatment or disposal of waste generated by use of vinegar should be reviewed in terms of applicable federal, state and local laws and regulations. Users are advised to consult with appropriate regulatory agencies before discharge, treatment or disposal.

SPECIAL PROTECTION INFORMATION**Respiratory Protection:**

As required to prevent exposure to concentrations which exceed the permissible level.

Ventilation:

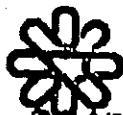
Local exhaust recommended. Mechanical recommended.

Eyes and Face:

Safety glasses or plastic face shield required.

Hands, Arms, Body:Rubber or neoprene gloves recommended.
Rubber apron or other protective equipment as required to reduce direct contact.**Other Equipment:**

Eye wash station, safety shower.

PHYSICAL DATA**Appearance and Odor**
Appropriate color and odor for
type of vinegar**Vapor Pressure (MM Hg)**
11 MM**% Volatiles by Volume**
100%**Specific Gravity**
1.01 - 1.04**Boiling Point**
215°F @ 100 grain**pH**
2.2 @ 100 grain**Solubility in Water**
Complete**Vapor Density (Air=1)**
2.1

(R) 9/92

Integrated Ingredients

A Division of FMC Technologies Inc.

Fleischmann's
VinegarMaun
LaboratoriesPure Culture
ProductsSpice
Islands

MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 0 Flammability = 0 Reactivity = 0

HMIS RATING: Health = 0 Flammability = 0 Reactivity = 0

SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (0779A)

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: TOP SHAPE

Address: 302 North Fourth Street

Date Prepared: March 1, 1996

St. Joseph, MO 64501

Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816)233-1321 (Ext. 2303)

SECTION II -- INGREDIENTS/IDENTITY INFORMATION

Components (Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Zinc oxide (1)	1314-13-2	5 mg/M ³	5 mg/M ³	N.A.	less than 0.5
Water	7732-18-5	none	none	N.A.	—
Acrylic Copolymer	63744-68-3	not established	not established	N.A.	—
Diethylene glycol monomethyl ether(2) **	111-77-3	not established	not established	N.A.	3-6
Polyethylene emulsion	9010-77-9	not established	not established	N.A.	—

(1) Regulated by OSHA and the following states: FL., IL., LA., MA., NJ.

(2) Regulated by the following states: FL., PA., RI.

** This product contains the following chemical subject to reporting requirements of SARA Title III, Section 313: Diethylene glycol monomethyl ether.

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 209^oFSpecific Gravity (H₂O = 1): 25^oC = 1.04 & 39^oC = 1.04

Vapor Pressure (mm Hg.): 19.0

Percent Volatile by Volume (%): 81.8%

Vapor Density (AIR = 1): 1.0

Evaporation Rate (ethyl ether = 1): slower than 1

Solubility in Water: appreciable

Appearance and Odor: White emulsion;

pH (concentrate): 8.9

non-objectionable odor.

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: None (T.C.C.)

Flammable Limits: LEL = N.A. UEL = N.A.

Extinguishing Media: Foam, Carbon Dioxide, Dry Chemical, Water Fog.

Special Fire Fighting Procedures: Wear self-contained breathing apparatus (pressure-demand MSHA/NIOSH approved or equivalent) and full protective gear.

Unusual Fire and Explosion Hazards: Material may spatter if temperatures exceed boiling point.

Polymer film can burn.

SECTION V -- PHYSICAL HAZARDS

Stability: Stable

Conditions to Avoid: N/A

Incompatibility (Materials to Avoid): None known to polish manufacturer.

Hazardous Decomposition Products or Byproducts: None known to polish manufacturer.

Hazardous Polymerization: Will not Occur

Conditions to Avoid: N/A

SECTION VI -- HEALTH HAZARD DATA

Routes of entry:

Inhalation? N/A

Skin? N/A

Ingestion? N/A

HEALTH HAZARD DATA (CONTINUED):

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. None known. (According to Primary Skin Irritation Test [FHSA] and Eye Irritation Test [FHSA] of similar formulation not an eye or skin irritant). FHSA oral studies on more concentrated product produced no toxicity at 5g./kg. Acute inhalation on more concentrated product - not toxic when administered at nominal concentration of 11.6 mg/l.

2. None known to polish manufacturer.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, OR ACGIH as of this date, greater than or equal to 0.1%.

Signs and Symptoms of Exposure:

None known to polish manufacturer.

Medical Conditions Generally Aggravated by Exposure:

None known to polish manufacturer.

Emergency and First Aid Procedures:

If splashed into eyes flush with water for 15 minutes. Flush skin with water. Ingestion: Drink large quantity of water; call physician.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Pick up with mop or wet vac and wash away with water.

Waste Disposal Method: Wash small quantities down sewer with large amount of water. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water. Large spills should be picked up with wet vac or absorbent material. Landfill or incinerate solids. Dispose of liquid per local, state and federal regulations.

Precautions To Be Taken In Handling And Storing: Freezing of product may rupture container. Product shelf life is best retained by storage at 45 - 100°F temperature.

Other Precautions: Inhalation exposure to spray mist should be maintained at less than 10 mg/M³ per eight hours exposure (TWA limit estimated for nuisance dust).

SECTION VIII - CONTROL MEASURES:

Respiratory Protection (Specify Type): None required if good ventilation is maintained.

Ventilation:

Local Exhaust = Not required **Mechanical (General) =** Suggested **Special =** N.A. **Other =** N.A.

Protective Gloves: None required **Eye Protection:** None required

Other Protective Clothing or Equipment: None required.

Work / Hygienic Practices: Do not take internally; wash contaminated clothing and equipment before reuse.

SECTION IX - TRANSPORTATION INFORMATION:

Applicable regulations: 49 CFR = No; IMCO = No; IATA = No.

Proper shipping name: Liquid Floor Wax & Polish

UN No.: Not applicable **Limited Qty.:** Not applicable **Hazard Class:** Not applicable

Labels required: Not required **DOT Exception:** Not applicable

EPA Hazardous waste number / code: Not listed

Hazardous waste characteristics:

Ignitability = Not applicable; **Corrosivity =** Not applicable; **Reactivity =** Not applicable.

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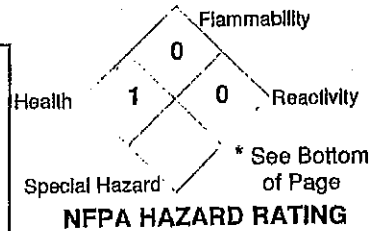
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MATERIAL SAFETY DATA SHEET



Manufactured by:
ANDERSON Chemical Company
 Litchfield, Minnesota 55355-1041
 (320) 693-2477



Product Name: **Top Loader**

24-HOUR EMERGENCY PHONE #: 1-800-424-9300 (CHEMTREC)

Revised: 2/28/2003 Int
 Supersedes: 11/6/2001

I. IDENTIFICATION

Chemical Name And Synonyms:
 Not applicable

DOT Shipping Name
 Not applicable

Chemical Family:
 Laundry Detergent

DOT Hazard Class & I.D. Number
 Not applicable

PG

II. HAZARDOUS INGREDIENTS

Component	CAS NO.	%	TLV	PEL	Toxic	Hazard
Potassium Hydroxide	1310-58-3	3	2mg/m3	NA	NA	Corrosive to eyes, skin and mucous membranes. May cause irritation to the eyes, skin, and respiratory tract.
Trade Secret	TSRN 8250		NE	NE	NA	Skin and eye irritation.
Trade Secret	TSRN 3475		NE	NE	NA	May cause severe eye irritation, burn. Skin irritant.
Trade Secret	TSRN 2645		NE	NE	NA	

**Toxic chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR

NA: Not applicable

III. PHYSICAL DATA

Boiling Point: About 212° F.
Specific Gravity: 1.061
Appearance: Clear, green liquid

Form: Liquid
Solubility In Water: Complete
Odor: Mild

pH, Neat: 10.3

IV. FIRE AND EXPLOSION HAZARD DATA

Flashpoint: Not Applicable

Extinguishing Media: Water fog, carbon dioxide, dry chemical

Special Fire

Fighting Procedures: Although this product is not combustible, if a fire occurs in the near vicinity, good fire-fighting practice dictates the use of self-contained breathing apparatus and other protective gear.

Unusual

Fire And None.

Explosion

Hazards:

V. HEALTH HAZARD DATA

Carcinogenic: The raw materials used in this product are not considered to be a carcinogen by ACGIH and OSHA.

Effects Of

Over-exposure: Irritation of eye and possible cornea damage may occur after prolonged contact.

Emergency And First

Aid Procedures: EYES: Immediately flush with water for 15 minutes, raise eyelids for complete rinsing. GET PROMPT MEDICAL ATTENTION.

SKIN: Flush immediately with water for 15 minutes. If irritation persists, GET MEDICAL ATTENTION.
 Remove contaminated clothing.

INGESTION: Do not induce vomiting. Give large quantities of water or milk. GET IMMEDIATE MEDICAL ATTENTION. Never give anything by mouth to an unconscious person.

VI. REACTIVITY DATA

Stability - Unstable:

Stable:

Conditions To Avoid: None

Incompatibility: None
(Materials To Avoid)

Hazardous
Decomposition: None.
Products:

VII. SPILL OR LEAK PROCEDURES

Steps To Be Taken In Case Material Is Released Or Spilled:

For small spills: flush to sanitary sewer. Large spills: dike, reclaim for use or absorb onto and absorbent material and dispose of in accordance with governmental regulations.

Waste Disposal Method: Dispose of in accordance with local, state, and federal regulations.

VIII. SPECIAL PROTECTION INFORMATION

Respiratory Protection: Respiratory protection is not required for normal use. If mist level is high, wear NIOSH approved respirator.

Ventilation: Adequate.

Protective Gloves: Rubber.

Eye Protection: Glasses.

Protective Clothing: None.

IX. SPECIAL PRECAUTIONS

Precautions To Be Taken In Handling And Storing:

Store away from heat sources and also keep from freezing.

Other Precautions: Eyewash stations and safety showers should be maintained in work area.

X. REVISED INFORMATION

MSDS Status: II. HAZARDOUS INGREDIENTS: Added Right to Know trade secret information.

The opinions expressed herein are those of qualified experts within ANDERSON Chemical Company. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and these opinions and the conditions of use of the product are not within the control of ANDERSON Chemical Company, it is the user's obligation to determine the conditions of safe use of the product.

MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 1 Flammability = 0 Reactivity = 0
HMIS RATING: Health = 1/1 Flammability = 0 Reactivity = 0

SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (497N-12B)

Manufacturer's Name: HILLYARD INDUSTRIES **Product Name:** TAKE DOWN (FRESH AND CLEAN)
Address: 302 North Fourth Street **Date Prepared:** January 12, 2000
 St. Joseph, MO 64501 **Prepared by:** Regulatory Affairs Department
Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.) **Other information calls:** (816) 233-1321 (Ext. 2303)
<http://www.hillyard.com>

SECTION II -- INGREDIENTS/IDENTITY INFORMATION

Components (Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	none	none	N/A	---
Mixture of Bacterial Spores	N/A	not established	not established	N/A	---
Octylphenoxy Polyethoxy Ethanol	9036-19-5	not established	not established	N/A	---
V.O.S. of concentrate = 1.28%					

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 209°F **Specific Gravity (H₂O = 1):** 25°C = 1.00 & 39°C = 1.00
Vapor Pressure (mm Hg.): 17.7 **Percent Volatile by Volume (%):** 92.9%
Vapor Density (AIR = 1): 0.6 **Evaporation Rate (ethyl ether = 1):** slower than 1
Solubility in Water: complete **Appearance and Odor:** Pale-yellow, translucent liquid, fresh and clean odor
pH (concentrate) = 6-7

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: None to Boiling (Tag Closed Cup) **Flammable Limits:** LEL = N/A UEL = N/A
Extinguishing Media: N/A
Special Fire Fighting Procedures: None known to manufacturer.
Unusual Fire and Explosion Hazards: None known to manufacturer.

SECTION V -- PHYSICAL HAZARDS

Stability: Stable **Conditions to Avoid:** Excessive hot or cold temperatures may kill microorganisms.
Incompatibility (Materials to Avoid): Strong acids, alkalis or disinfectants may kill these microorganisms.
Hazardous Decomposition Products or Byproducts: None known to manufacturer.
Hazardous Polymerization: Will not occur. **Conditions to Avoid:** None known to Hillyard.

SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? no Skin? no Ingestion? no

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. According to Primary Skin Irritation Test (FHSA), product concentrate is not an irritant; prolonged exposure may produce severe irritation in sensitive individuals; Eye Irritation Test (FHSA) = Concentrated product was considered to be an eye irritant; complete recovery was seen in all test subjects by day 13. When tested the concentrate was estimated to have acute oral LD₅₀ greater than 5 g./kg. When tested concentrate was not acutely toxic to the subjects following a 1 hour exposure to a concentration of 41.2 mg./L. (actual 41.2 mg./L.); thus LC₅₀ is greater than 41.2 mg./L. (actual 41.2 mg./L.). This is the maximum that could be generated with this test system.

2. None known to Hillyard.

SECTION VI -- HEALTH HAZARD DATA continued:

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

Signs and Symptoms of Exposure: Prolonged skin contact with concentrate can cause severe irritation. Eye contact causes eye irritation. Ingestion may cause nausea.

Medical Conditions Generally Aggravated by Exposure: None known to manufacturer.

Emergency and First Aid Procedures: In case of contact, immediately flush eyes with plenty of cool water for at least 15 minutes. If irritation persists, get medical attention. In case of skin contact, wash with soap and water and apply a topical antiseptic agent. If irritation persists, get medical attention. If ingested, give person several glasses of water and CALL A PHYSICIAN, hospital emergency room, or poison control center for how to induce vomiting. Never give anything by mouth to an unconscious person.

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Flush with water and pick up with mop.

Waste Disposal Method: This product may be disposed of in sanitary sewer or septic tank. Container disposal: Triple rinse or equivalent, then offer clean, dry container for recycling or reconditioning. Waste from normal use may be sewer to a public-owned treatment works in compliance with applicable federal, state and local requirements.

Precautions To Be Taken In Handling And Storing: Keep container closed when not in use. Store at temperatures between 40° - 115°F to maintain microorganism population in container.

Other Precautions: Keep out of reach of children. Avoid prolonged contact with eyes or with open wounds or broken skin. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR Part 372.

SECTION VIII -- CONTROL MEASURES

Respiratory Protection (Specify Type): Not required for normal use.

Ventilation: Not required for normal use.

Local Exhaust = N/A **Mechanical (General) =** N/A **Special =** N/A **Other =** N/A

Protective Gloves: Impervious gloves **Eye Protection:** Splash goggles suggested

Other Protective Clothing or Equipment: Not required.

Work / Hygienic Practices: Wash thoroughly after handling.

SECTION IX - TRANSPORTATION INFORMATION

Applicable regulations: 49 CFR = no; IMCO = no; IATA = no

Proper shipping name: Cleaning Compound

UN No.: not applicable Limited Qty.: not applicable Hazard Class: not applicable

Labels required: not required DOT Exception: not applicable

EPA Hazardous waste number / code: not listed

Hazardous waste characteristics: not listed

Ignitability = not applicable; Corrosivity = not applicable; Reactivity = not applicable

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MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 0 Flammability = 0 Reactivity = 0
 HMIS RATING: Health = 1/0 Flammability = 0 Reactivity = 0

SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (527N-57A)

Manufacturer's Name: HILLYARD INDUSTRIES Product Name: SUPROX READY-TO-USE (5 oz./gallon)
 Address: 302 North Fourth Street Date Prepared: July 17, 2006
 St. Joseph, MO 64501 Prepared by: Regulatory Affairs Department
 Emergency Telephone (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.) Other information calls: (816) 233-1321 (Ext. 8285)

SECTION II -- INGREDIENTS/IDENTITY INFORMATION

Components (Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Hydrogen Peroxide	7722-84-1	1.4 mg/m ³	1.4 mg/m ³	N.A.	<1%
Water	7732-18-5	none	none	N.A.	—

VOC (Ready to use = 5oz.per gallon) = 0.02%

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 739 mm Hg 211°F Specific Gravity (H₂O = 1): 25°C = 1.00 & 39°C = 1.00
 Vapor Pressure (mm Hg.): 17.5 Percent Volatile by Volume (%): 00.8%
 Vapor Density (AIR = 1): 0.62 Evaporation Rate (ethyl ether = 1): Slower than 1
 Solubility in Water: complete Appearance and Odor: Clear, colorless liquid, citrus fragrance
 pH (5 oz/gallon) = 7.9

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: None to 200°F corrected (T.C.C.) Flammable Limits: LEL = Not established UEL = N.A.
 Extinguishing Media: Do NOT use CO₂ extinguisher on this material; use only water spray or appropriate foam.
 Do not use organic compounds on this material.
 Special Fire Fighting Procedures: As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear. Containers can build up pressure if exposed to heat (fire). Cool with water spray.
 Unusual Fire and Explosion Hazards: Contact with incompatible materials (e.g. metals, alkalis, and strong reducing agents) will cause hazardous decomposition resulting in the release of heat, steam, and oxygen. Exposure to heat may cause hazardous decomposition. Do not mix with kerosene, gasoline, ammonia nor chlorine bleach.

SECTION V -- PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: Heat and flame.
 Incompatibility (Materials to Avoid): Metals, Reducing agents, Alkalis, Combustible materials. Organic materials.
 Salt of heavy metals. Impurities.
 Hazardous Decomposition Products or Byproducts: Oxygen, oxides of carbon and steam.
 Hazardous Polymerization: Will not occur Conditions to Avoid: None known to Manufacturer

SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? yes Skin? yes Ingestion? LD50 greater than 5 g/kg

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Contact with may cause eye and skin irritation. Ingestion can cause nausea, vomiting and gastrointestinal irritation.
 Prolonged inhalation may cause respiratory irritation. 2. None known to Hillyard Industries when used according to label directions.

SECTION VI -- HEALTH HAZARD DATA continued

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monograms = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater or equal to 0.1%.

Signs and Symptoms of Exposure: May cause slight irritation to skin and eyes. Inhalation of fine mist or aerosols can lead to slight irritation and inflammation of the respiratory tract. Symptoms may occur with delay. Ingestion may cause the release of oxygen thus cause distension, especially in the event of greater intakes.

Medical Conditions Generally Aggravated by Exposure: No data is available that addresses medical conditions that are generally recognized as being aggravated by exposure to this product.

Emergency and First Aid Procedures: If swallowed, do not induce vomiting. Seek medical attention if irritation persist. Eye and Skin Contact: Flush eyes and skin with plenty of water for 15 minutes; apply water gently and do not rub area. If irritation persists, get medical attention. If excess inhaled, remove to fresh air; if breathing is difficult seek medical attention.

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Small spills should be flushed with water and pick up with mop. Hydrogen peroxide quickly decomposes to oxygen and water.

Waste Disposal Method: Dispose of in accordance with state or local regulations.

Precautions To Be Taken In Handling And Storing: Do not get in eyes, on skin, and clothing. Do not ingest.

Keep container closed when not in use. Since empty packages retain product residue, follow label warnings even after package is empty.

Other Precautions: Do not dispose of in storm drains or streams. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and 40 CFR Part 372.

SECTION VIII -- CONTROL MEASURES:

Respiratory Protection (Specify Type): Not normally required with adequate ventilation.

Ventilation:

Local Exhaust = Normally adequate **Mechanical (General) =** Recommended **Special =** N/A **Other =** N/A

Protective Gloves: Not required. **Eye Protection:** Splash goggles suggested where mist may fall into eyes.

Other Protective Clothing or Equipment: Avoid prolonged contact.

Work / Hygienic Practices: Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling; wash clothing before reuse.

SECTION IX - TRANSPORTATION INFORMATION:

APPLICABLE REGULATIONS: 49CFR = No; IMCO = No; IATA = No.

DOT SHIPPING DESCRIPTION ON BILL OF LADING:

Proper shipping name (quarts and gallons): Not regulated

Package Label = NA Hazard Class = NA Package Group = NA

Ignitability = No; Corrosivity = No; Reactivity = not applicable.

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(162088)

REF: 95MSDS43

MATERIAL SAFETY DATA SHEET

FOX VALLEY SYSTEMS INC.
640 INDUSTRIAL DRIVE
CARY, IL 60013

SECTION I - PRODUCT IDENTIFICATION

TRADE NAME: SUPER STRIPE TRAFFIC PAINT YELLOW
PRODUCT NAME: TRAFFIC PAINT MFG. CODE ID: TYW2R
TYW2D
PRODUCT PURPOSE: LINE/STRIPE MARKING
APPEARANCE: AEROSOL DISPENSING A PAINT. COLOR DEPENDANT UPON GRADE.
CHARACTERISTIC ODOR.
DATE PREPARED: JANUARY 1, 2000
EMERGENCY TELEPHONE: CALL LOCAL POISON CONTROL CENTER
INFORMATION TELEPHONE: (847) 639-5744

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENTS	CAS NO.	PERCENT BY WEIGHT	THRESHOLD LIMIT VALUE OSHA	
			TWA PPM	STEL
ACETONE	67-64-1	1-5	750	1000
2-BUTOXYETHANOL	111-76-2	1-5	25*	NE
BUTANE	106-97-8	1-2	800	NE
ETHYLBENZENE	100-41-4	1-2	100	125
ISBUTANE	75-28-5	15-20	NE	NE
PROPANE	74-98-6	5-15	1000	NE
TOLUENE (a)	108-88-3	10-15	200	150
VM & P NAPHTHA	64742-89-8	5-15	300	400
XYLENE	1330-20-7	3-10	100	150

NOTE: NONE OF THE ABOVE LISTED AS A CARCINOGEN IN NTP, IARC OR OSHA 1910 (z).

LEAD SULFOCHROMATE (b) 1344-37-2 5-10% 0.05 mg/m3 AS Pb & 0.1 mg/m3 AS Cro3, CARCINOGEN IN NTP & IARC.

ANTIMONY (3+) OXIDE (b) 1309-64-4 0.2% 0.5mg/m3 AS Sb, SUSPECT CARCINOGEN IN IARC

LEAD MOLYBDATE, CHROMATE, SULFATE (b) 12656-85-8 <0.4 0.05 mg/m³ AS Pb & 0.1 mg/m³ AS Cr., SUSPECT CARCINOGEN IN NTP & IARC.

- (a) WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.
- (b) WARNING: THIS PRODUCT CONTAINS A CHEMICAL KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

*CAN BE ABSORBED THROUGH SKIN

NE = NOT ESTABLISHED

TIME WEIGHTED AVERAGE (TWA) - THE EMPLOYEE'S AVERAGE AIRBORNE EXPOSURE IN ANY 8-HOUR WORK SHIFT OF A 40-HOUR WORK WEEK WHICH SHALL NOT BE EXCEEDED.

SHORT TERM EXPOSURE LIMIT (STEL) - THE EMPLOYEE'S 15-MINUTE TIME WEIGHTED AVERAGE EXPOSURE WHICH SHALL NOT BE EXCEEDED AT ANY TIME DURING A WORK DAY.

SECTION III - PHYSICAL CHARACTERISTICS

EVAPORATION RATE: SLOWER THAN ETHER

VAPOR DENSITY: HEAVIER THAN AIR

PERCENT VOLATILE BY VOLUME: 70

WEIGHT PER GALLON: 10- 10.6 LBS

BOILING RANGE: N/A

SPECIFIC GRAVITY: N/A

VAPOR PRESSURE: N/A

MELTING POINT: N/A

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY CLASSIFICATION: PRODUCT EXTREMELY FLAMMABLE

LEVEL 2 AEROSOL: NFPA 30B

FLASH POINT: -20 F FLAMMABLE LIMITS: LEL 1.9 UEL 8.5

AUTO IGNITION TEMPERATURE: NA

EXTINGUISHING MEDIA: FOAM, CARBON DIOXIDE, DRY CHEMICAL

SPECIAL FIRE FIGHTING PROCEDURES: FULL PROTECTIVE EQUIPMENT USING SELF-BREATHING APPARATUS SHOULD BE USED. WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT PRESSURE BUILD-UP AND POSSIBLE EXPLOSION WHEN EXPOSED TO EXTREME HEAT.

UNUSUAL FIRE AND EXPLOSION HAZARDS: SPRAY MIST OR VAPORS FROM CAN PER 400 CUBIC FEET OF AIR MAY REACH LOWER EXPLOSIVE LIMIT AND COULD BE IGNITED BY A FLAME OR SPARK.

TYPE OF PAINT	NFPA RATING			REACTIVITY
	HEALTH	FLAMMABILITY		
LEADED	3	4		0

TYPE OF PAINT	HMIS RATING			REACTIVITY	PERSONAL PROTECTION
	HEALTH	FLAMMABILITY			
LEADED	3	4		0	B

- KEY
- 0 = MINIMAL HAZARD
 - 1 = SLIGHT HAZARD
 - 2 = MODERATE HAZARD
 - 3 = SERIOUS HAZARD
 - 4 = SEVERE HAZARD
 - B = SAFETY GLASSES AND GLOVES

SECTION V - HEALTH HAZARD DATA

PRODUCT CONTAINS LEAD CHROMATES. DRIED-FILM OF THIS PAINT MAY BE HARMFUL OR FATAL IF EATEN OR CHEWED. CONTACT WITH BROKEN SKIN OR INHALATION OF SPRAY MIST OR SANDING DUST MAY CAUSE SEVERE BODILY HARM. USE WITH ADEQUATE VENTILATION.

LEAD CHROMATE IS A SUSPECT CANCER HAZARD. RISK OF CANCER DEPENDS ON DURATION AND LEVEL OF EXPOSURE.

PROLONGED OR REPEATED INHALATION AND INGESTION, SUCH AS FROM POOR HYGIENE, HOUSEKEEPING OR HANDLING PRACTICES, CAN RESULT IN LEAD POISONING.

EFFECTS OF OVEREXPOSURE

EYES: PROLONGED OR REPEATED CONTACT MAY CAUSE MODERATE IRRITATION, DEFATTING DERMATITIS AND ABSORPTION THROUGH THE SKIN IN TOXIC AMOUNTS.

BREATHING: EXCESSIVE INHALATION OF VAPORS MAY CAUSE HEADACHES, NAUSEA, DROWSINESS AND IRRITATION OF MUCOUS MEMBRANE OF NOSE AND THROAT. RESPIRATORY IRRITATION AND ALSO ALLERGIC REACTION.

INGESTION: MAY CAUSE NAUSEA

EMERGENCY AND FIRST AID PROCEDURES

IN EYES: FLUSH WITH WATER FOR 15 MINUTES, LIFTING UPPER AND LOWER LIDS OCCASIONALLY, OBTAIN MEDICAL ATTENTION.

ON SKIN: WASH CONTAMINATED AREA THOROUGHLY WITH SOAP AND WATER. APPLY A MOISTURIZING HAND CREAM.

IF BREATHED: IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN ONLY IF TRAINED. IF BREATHING HAS STOPPED GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. KEEP PERSON WARM, QUIET AND OBTAIN MEDICAL ATTENTION.

IF SWALLOWED: ONLY INDUCE THIS PRODUCT DO NOT EAT, DRINK OR SMOKE.

NOTE: FOLLOWING ANY FIRST AID, MEDICAL ADVICE SHOULD BE OBTAINED ESPECIALLY IF SYMPTOMS PERSIST.

THRESHOLD VALUE LIMIT: SEE SECTION II

SECTION VI - REACTIVITY DATA

STABILITY: STABLE

CONDITIONS TO AVOID: HEAT, SPARKS AND FIRE

MATERIALS TO AVOID: STRONG OXIDIZING AGENTS. ALKALI AND ALKALINE EARTH METALS SUCH AS SODIUM, POTASSIUM, AND BARIUM. FINE POWDERS OF LIGHT METALS AND THEIR ALLOYS SUCH AS MAGNESIUM.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS: THERMAL DECOMPOSITION MAY YIELD CO, CO₂

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: REMOVE ALL SOURCES OF IGNITION, VENTILATE AREA, WIPE UP WITH INERT MATERIAL. DO NOT FLUSH INTO DRAINS. REMOVE RESIDUE WITH A SUITABLE SOLVENT CLEANER IMMEDIATELY.

WASTE DISPOSAL METHOD: DISPOSE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS. DO NOT PIERCE OR BURN CAN EVEN AFTER USE.

SECTION VIII - PROTECTIVE EQUIPMENT TO BE USED

RESPIRATORY PROTECTION: NOT NORMALLY NEEDED IF LOCAL EXHAUST IS SATISFACTORY. IF VENTILATION IS INADEQUATE, USE RESPIRATORY MASK APPROVED BY NIOSH/MESA FOR PROTECTION AGAINST SPRAY MIST.

VENTILATION: REQUIREMENTS VARY WITH RATE OF PRODUCT USE. SUPPLEMENT VENTILATION TO KEEP BELOW OSHA AND ACGIH PERMISSIBLE LEVELS OF EACH INGREDIENT.

PROTECTIVE GLOVES: NOT APPLICABLE IN NORMAL USE. WEAR SOLVENT RESISTANT GLOVES WHERE THERE IS ANY RISK OF SKIN CONTACT.

EYE PROTECTION: RECOMMENDED

SECTION IX: PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

CONTENTS UNDER PRESSURE: EXPOSURE TO HIGH TEMPERATURES MAY CAUSE BURSTING. AVOID STORING NEAR RADIATORS, STOVES, OPEN FLAMES OR DIRECT SUNLIGHT. DO NOT INCINERATE OR PUNCTURE CAN.

DO NOT SPRAY INTO FLAMES OR ANY INCANDESCENT MATERIAL. DO NOT SMOKE WHILE USING THIS PRODUCT OR WHERE SOLVENT VAPORS ARE PRESENT.

DOL STORAGE CATEGORY: DO NOT STORE AT TEMPERATURE ABOVE 120F

SECTION 313 SUPPLIER NOTIFICATION

THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 (40 CFR 372):

CAS #	CHEMICAL NAME	% BY WEIGHT UPPER BOUND CONCENTRATION
67-64-1	ACETONE	5
108-88-3	TOLUENE	15
1330-20-7	XYLENE	10
12656-85-8	LEAD MOLYBDATE, CHROMATE, SULFATE	0.4
100-41-4	ETHYLBENZENE	2
1344-37-2	LEAD SULFOCHROMATE	10

THIS INFORMATION SHOULD BE INCLUDED IN ALL MSDSs THAT ARE COPIED AND DISTRIBUTED FOR THIS PRODUCT.

THIS DATA SHEET IS NOT PART OF ANY CONTRACT OF SALE. THE INFORMATION CONTAINED HEREIN IS BELIEVED TO BE CORRECT OR IS OBTAINED FROM SOURCES BELIEVED TO BE GENERALLY RELIABLE. HOWEVER, IT IS THE RESPONSIBILITY OF THE USER OF THESE MATERIALS TO INVESTIGATE, UNDERSTAND AND COMPLY WITH LAW AND WITH PROCEDURES APPLICABLE TO THE SAFE HANDLING AND USE OF THESE MATERIALS. FOX VALLEY SYSTEMS, INC. SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE DIRECTLY OR INDIRECTLY ARISING FROM THE USE OF THE PRODUCT, AND FOX VALLEY SYSTEMS, INC. ASSUMES NO OBLIGATION OR LIABILITY FOR RELIANCE ON THE INFORMATION CONTAINED HEREIN, OR OMISSIONS HEREFROM.

(162082)
RF: 95MSDS42

Material Safety Data Sheet

Fox Valley Systems
640 Industrial Drive
Cary, Illinois 60013

Section I – Product Identification

Trade Name: Super Stripe Athletic Paint White
Super Supreme Traffic Paint Unleaded Yellow
White
Super Stripe Traffic Paint White
Unleaded Red
Gray
Blue
Green
Unleaded Yellow

Product Name:

Mfg. Code ID: SSAW3R
SSAW3D

TCW2R TCW2D
TGY2R TGY2D
TBE2R TBE2D
TGN2R TGN2D
TYU2R TYU2D
STYU2R STYU2D
STCW2R STCW2D
TRU2R TRU2D

Product Purpose: Line/Stripe Marking

Appearance: Aerosol dispensing a paint. Color dependent upon grade. Characteristic odor.

Date Prepared: January 1, 2000

Emergency Telephone: Call Local Poison Control Center

Information Telephone: (847) 639-5744

Section II - Hazardous Ingredients

Ingredients	CAS NO	Percent By Weight	Threshold Limit Value OSHA	
			TWA PPM	STEL
Acetone	67-64-1	1-5	750	1000
2-Butoxyethanol	111-76-2	1-5	25*	NE
Butane	106-97-0	1-5	000	NE
Isooctane	75-28-5	15-20	NE	NE
Propane	74-98-6	5-15	1000	NE
Toluene (a)	108-88-3	10-20	100	150
VM & P Naphtha	64742-89-0	5-15	300	400
Xylene	1330-20-7	8-15	100	150
Ethylbenzene	100-41-4	2-3	100	125

Note: None of the above listed as a carcinogen in NTP, IARC, or OSHA 1910(z)

(a) Warning: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

* Can be absorbed through the skin.

NE= Not Established

Volume Weight Average (TWA) – The employee's average airborne exposure in any 8 hour work shift of a 40-hour workweek, which shall not be exceeded.

Short Term Exposure Limit (STEL) – The employee's 15-minute time weighted average day exposure, which shall not be exceeded at any time during a workday.

Section III – Physical Characteristics

Evaporation Rate: Slower than ether

Vapor Density: Heavier than air

Percent Volatile By Volume: 70

Weight Per Gallon: 10 – 10.6 lbs.

Boiling Range: N/A

Specific Gravity: N/A

Vapor Pressure: N/A

Melting Point: N/A

Section IV – Fire and Explosion Hazard Data

Flammability Classification: Product Extremely Flammable

Level 2 Aerosol – NFPA 30B

Flash Point: -20F

Flammable Limits: LEL 1.9 UEL 8.5

Auto Ignition Temperature: N/A

Extinguishing Media: Foam, Carbon Dioxide, and Dry Chemical

Special Fire Fighting Procedures: Full protective equipment using self-breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure build-up and possible explosion when exposed to extreme heat.

Unusual Fire and Explosion Hazards: Spray mist or vapors from can per 400 cubic feet of air may reach lower explosive limit and could be ignited by a flame or spark.

NFPA Rating

Type of Paint	Health	Flammability	Reactivity	
Unleaded	2	4	0	
Type of Paint	Health	Flammability	Reactivity	Personal Protection
Unleaded	2	4	0	0

Key: 0 = Minimal Hazard
1 = Slight Hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard
5 = Safety Glassed and Gloves

Section V - Health Hazard Data

Effects of Overexposure

Eyes: May cause irritation, redness, tearing, blurred vision and conjunctivitis.

Skin: Prolonged or repeated contact may cause moderate irritation and defatting dermatitis.

Breathing: Excessive inhalation of vapors may cause headaches, nausea, drowsiness and irritation of mucous membranes of nose and throat.

Ingestion: May cause nausea.

Emergency and First Aid Procedures

In Eyes: Flush with water for 15 minutes, lifting upper and lower lids occasionally, obtain medical attention.

On Skin: Wash contaminated area thoroughly with soap and water. Apply a moisturizing hand cream.

If Breathed: If affected, remove individual to fresh air. If breathing is difficult, administer oxygen only if trained. If breathing has stopped give artificial respiration, preferably mouth to mouth. Keep person warm, quiet and obtain medical attention.

Other: When using this product, do not eat drink or smoke.

Note: Following any first aid, medical advice should be obtained, especially if symptoms persist.

If Swallowed: Only induce vomiting at the instruction of a physician. Keep person warm, quiet and obtain medical attention.

Threshold Value Limit: See Section II

Section VI – Reactivity Data

Stability: Stable

Conditions to Avoid: Heat, Sparks and Fire.

Materials to Avoid: Strong oxidizing agents. Alkali and alkaline earth metals such as sodium, potassium and barium. Fine powders of light metals and their alloys such as magnesium.

Hazardous Decomposition or Byproducts: Thermal decomposition may yield Co or CO₂.

Hazardous Polymerization: Will not occur.

Section VII – Spill or Leak Procedures

Steps to be Taken if Material is Released or Spilled: Remove all sources of ignition, ventilate area, and wipe up with inert material. Do not flush into drains. Remove residue with a suitable solvent cleaner immediately.

Waste Disposal Method: Dispose in accordance with federal, state and local laws. Do not pierce or burn can even after use.

Section VIII – Protective Equipment to be Used

Respiratory Protection: Not normally needed if local exhaust is satisfactory. If ventilation is inadequate, use respiratory mask approved by NIOSH/MESA for protection

Ventilation requirements vary with rate of product use. Supplement ventilation to keep below OSHA and AGGIH permissible levels of each ingredient.

Protective Gloves: Not applicable in normal use. Wear solvent resistant gloves where there is any risk of skin contact.

Eye Protection: Recommended

Section IX – Precautions to be Taken in Handling and Storing

Contents under pressure. Exposure to high temperatures may cause bursting. Avoid storing near radiator, stove open flame or direct sunlight. Do not incinerate or puncture can.

Do not spray into flames or any incandescent materials. Do not smoke while using this product or where solvent vapors are present.

DOL Storage Category: Do Not Store at Temperature Above 120F.

Section 313 – Supplier Notification

These products contain the following toxic chemicals subject to the reporting requirements of Section 333 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372).

CAS#	Chemical Name	% By Weight Upper Bound Concentration
67-64-1	Acetone	5
108-88-3	Toluene	20
1330-20-7	Xylene	15
100-41-4	Ethylbenzene	3

This information should be included in all MSDSs that are copied and distributed for these products.

This data sheet is not part of any contract of sale. The information contained herein is believed to be correct or is obtained from sources believed to be generally reliable. However, it is the responsibility of the user of these materials to investigate, understand and comply with the law and with procedures applicable to the safe handling and use of these materials. Fox Valley Systems, Inc. shall not be liable for any loss or damage directly or indirectly arising from the use of the product, and Fox Valley Systems, Inc. assumes no obligation or liability for reliance on the information contained herein, or omission herefrom.

MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 1 Flammability = 0 Reactivity = 0

HMIS RATING: Health = /1 Flammability = 0 Reactivity = 0

SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (#0771)

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: SUPER SHINE-ALL

Address: 302 North Fourth Street

Date Prepared: October 3, 1997

St. Joseph, MO 64501

Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816)233-1321(Ext. 2303)

SECTION II -- INGREDIENTS/IDENTITY INFORMATION

Components (Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	none	none	N.A.	---
Tall oil soap, potassium	61790-44-1	not established	not established	N.A.	---
Ammonium parath sulfate	67762-19-0	not established	not established	N.A.	---
Triethanolamine(1)	102-71-6	not established	5 mg/m ³	N.A.	---

(1) Regulated in FL., MA., PA., RI.

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 743mmHg 205°F

Specific Gravity (H₂O = 1): 25°C = 1.00 & 39°C = 1.00

Vapor Pressure (mm Hg.): 17.6

Percent Volatile by Volume (%): 87%

Vapor Density (AIR = 1): 0.6

Evaporation Rate (ethyl ether = 1): Slower than 1

Solubility in Water: Complete

Appearance and Odor: light amber liquid, Sassafras odor

pH (concentrate) = 9.0-9.3

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: None (T.C.C.)

Flammable Limits: LEL = N.A. UEL = N.A.

Extinguishing Media: Water

Special Fire Fighting Procedures: None.

Unusual Fire and Explosion Hazards: None known to Hillyard Industries.

SECTION V -- PHYSICAL HAZARDS

Stability: Stable

Conditions to Avoid: N.A.

Incompatibility (Materials to Avoid): None of which we have knowledge.

Hazardous Decomposition Products or Byproducts: As with any organic materials, combustion will produce carbon dioxide and probably carbon monoxide.

Hazardous Polymerization: Will not occur

Conditions to Avoid: None known to Hillyard Ind.

SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? No Skin? No Ingestion? No

SECTION VI -- HEALTH HAZARD DATA (continued)

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Primary Irritation test on the concentrate per the Federal Hazardous Substance Act showed the concentrated product was a primary skin irritant and an eye irritant.
2. None Known by Manufacturer.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

Signs and Symptoms of Exposure: May cause irritation to skin and eyes.

Medical Conditions Generally Aggravated by Exposure: Open cuts and sores may be irritated by contact.

Emergency and First Aid Procedures: In case of contact with eyes or skin, flush with plenty of water for 15 minutes. Remove contaminated clothing. Call a physician if irritation persists. Wash clothing before reuse. If swallowed give water; may cause diarrhea; call physician

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Rinse area with water and pick up with wet vac or mop.

Waste Disposal Method: Dispose of in accordance with state or local regulations.

Precautions To Be Taken In Handling And Storing: Not applicable.

Other Precautions: Do not dispose of in storm drains or streams.

SECTION VIII -- CONTROL MEASURES:

Respiratory Protection (Specify Type): Not normally required.

Ventilation:

Local Exhaust = Normally adequate **Mechanical (General) =** Recommended **Special =** N.A. **Other =** N.A

Protective Gloves: None required with normal use. **Eye Protection:** Splash goggles where eye contact is likely.

Other Protective Clothing or Equipment: Not normally required.

Work / Hygienic Practices: Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling; wash clothing before reuse.

SECTION IX - TRANSPORTATION INFORMATION:

Applicable regulations: DOT = no; IMCO = no; IATA = no

Proper shipping name: Cleaning compound

UN No.: not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable

Labels required: not required **DOT Exception:** not applicable

EPA Hazardous waste/number code: not listed

Hazardous waste characteristics:

Ignitability = not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

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MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 3 Flammability = 0 Reactivity = 0

HMIS RATING: Health = 3 Flammability = 0 Reactivity = 0

SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (0719A)

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: STRIP-ALL

Address: 302 North Fourth Street

Date Prepared: August 29, 1994

St. Joseph, MO 64501

Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816)233-1321(Ext. 303)

SECTION II -- INGREDIENTS/IDENTITY INFORMATION**Components**

(Specific Chemical Identity:

Common Name(s)

Sodium metasilicate (1)

CAS#

OSHA PEL

ACGIH

TLV

OTHER LIMITS

RECOMMENDED

%

6834-92-0

not

not

2 mg/M³

5-10

established

established

Ethanolamine (2)

141-43-5

3 ppm

3 ppm

N/A

3-5

Water

7732-18-5

none

none

N/A

Benzyl alcohol (3)

100-51-6

not

not

N/A

established established

(1) Exposure may be elevated as ceiling for Sodium hydroxide per OSHA: PEL = 2mg/M³ or TLV = 2mg.M³

(2) Regulated by OSHA, and the following states: CT, FL, IL, LA, MA, NJ, PA, RI.

(3) Regulated by FL, MA, PA.

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: corr. 208°F

Specific Gravity (H₂O = 1): 25°C = 1.05 & 39°C = 1.06

Vapor Pressure (mm Hg.): 17.2

Percent Volatile by Volume (%): average 92.2

Vapor Density (AIR = 1): 0.8

Evaporation Rate (ethyl ether = 1): slower than 1

Solubility in Water : complete

Appearance and Odor: clear amber liquid; non-objectionable odor

pH (concentrate) = 12.5-13.5

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: None (Tag Closed Cup)

Flammable Limits: LEL = N/A UEL = N/A

Extinguishing Media: Water, carbon dioxide, dry chemical or foam.

Special Fire Fighting Procedures: Normal fire fighting procedures may be used. Cool and cautiously approach or handle fire-exposed containers.

Unusual Fire and Explosion Hazards: N/A

SECTION V -- PHYSICAL HAZARDS

Stability: Stable

Conditions to Avoid: N/A

Incompatibility (Materials to Avoid): Oxidizing materials and strong acids.

Hazardous Decomposition Products or Byproducts: Produces normal products of combustion when exposed to fire.

Hazardous Polymerization: Will not occur

Conditions to Avoid: None known

SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Ingestion? Yes

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Direct contact with concentrate in eyes can cause severe irritation and damage.

2. Prolonged and repeated exposure to skin may produce irritation or damage. Inhalation of spray mist may result in varying degrees of irritation.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater or equal to 0.1%.

SECTION VI – HEALTH HAZARD DATA cont.

Signs and Symptoms of Exposure: Concentrated product may produce skin and eye burns. Ingestion may produce burns of the mouth throat, esophagus and stomach.

Medical Conditions Generally Aggravated by Exposure: Skin problems such as industrial dermatitis.

Emergency and First Aid Procedures: In case of contact immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Remove contact lenses and again flush eyes with water. GET MEDICAL ATTENTION. Wash clothing and thoroughly clean contaminated shoes before reuse. If swallowed do not induce vomiting; immediately give large amounts of water and CALL A PHYSICIAN, hospital emergency room or poison control center. Inhalation: remove victim to fresh air; if respiratory tract remains irritated, call a physician.

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Absorb with floor dry or similar inert material. Sweep or scrape up and put in appropriate container. Rinse spill area thoroughly with water. Use appropriate protective equipment.

Waste Disposal Method: Disposal is regulated by the Resource Conservation and Recovery Act; concentrate is corrosive per EPA Hazardous Waste Classification. Disposal of regulated quantities should be neutralized at a permitted facility in accordance with all federal, state and local requirements.

Precautions To Be Taken In Handling And Storing: Keep container closed when not in use. Container disposal: Triple-rinse (or equivalent), then offer clean, dry container for recycling or reconditioning. Waste from normal use may be sewerer to public-owned treatment works in compliance with applicable federal, state and local requirements.

Other Precautions: Do not use with fog mist or fine droplet sprayer without respiratory protection. This product contains no reportable quantities of toxic chemicals subject to the reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and 40 CFR Part 372.

SECTION VIII – CONTROL MEASURES:

Respiratory Protection (Specify Type): Ventilate to keep air concentration below TLV on ethanalamine or metasilicate.

Ventilation:

Local Exhaust = Recommended **Mechanical (General) =** Recommended **Special =** N/A **Other =** N/A

Protective Gloves: Impervious gloves when working with concentrate

Eye Protection: Chemical safety goggles when working with concentrate

Other Protective Clothing or Equipment: Impervious to water and alkaline liquid where concentrate is a concern.

Work / Hygienic Practices: Wash thoroughly after handling.

SECTION IX - TRANSPORTATION INFORMATION:

Applicable regulations: DOT = No; IMCO = No; IATA = No

Proper shipping name: Cleaning compound

UN No.: not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable

Labels required: not required **DOT Exception:** not applicable

EPA Hazardous waste/number code: not listed

Hazardous waste characteristics:

Ignitability = not applicable; **Corrosivity =** yes; **Reactivity =** not applicable

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MATERIAL SAFETY DATA SHEET

I. IDENTIFICATION

Name State CLR--Bulk Formula Type Window and glass cleaner

D.O.T. Shipping Name: NA
 Hazard Class: NA
 ID No. NA Label None required

II. HAZARDOUS INGREDIENTS

Material	Weight %	TLV
Isopropanol (CAS #67-63-0)	< 10%	400 ppm
2-butoxyethanol (CAS #111-76-2)-skin	< 3%	25 ppm
Ammonia (CAS #7664-41-7)	< 1%	25 ppm

III. PHYSICAL DATA

Boiling Point (F) 200-220° Specific Gravity (Water=1) 0.985
 Volatile By Weight (%) > 99% Weight Per Gallon: (Pounds) 8.2
 Solubility in Water > 99% soluble pH 10.2
 Appearance & Odor: Emulsified blue-green liquid

IV. FIRE & EXPLOSION HAZARD DATA

Flashpoint (°F)(Method Used): 101°F. by T.C.C.
 Extinguishing Media: Waterfog, foam, CO₂, dry chemical
 Special Fire Fighting Procedures: none
 Unusual Fire & Explosion Hazards: none

V. HEALTH HAZARD DATA

Effects Of Overexposure Direct contact with eyes may cause irritation. May be harmful if swallowed.

FIRST AID PROCEDURES

If Swallowed Seek medical attention as soon as possible. Contains Isopropyl Alcohol.

If Inhaled Remove person to fresh air. If irritation persists, contact a physician.

If In Eyes: Flush eyes immediately with plenty of cool water for at least 15 minutes. Contact a physician.

If On Skin: Wash with soap and water.

MATERIAL SAFETY DATA SHEET

I. IDENTIFICATION

Name Formula 999 Type A formulated water-based all purpose cleaner

D.O.T. Shipping Name: N/A
 Hazard Class: N/A
 ID No. N/A Label N/A

II. HAZARDOUS MATERIALS

Materials	Weight %	TLV
2-butoxyethanol (CAS #111-76-2)	< 4	25 ppm (skin)
Trisodium phosphate (CAS #10101-89-0)	< 5	N/A
Sodium metasilicate (CAS #6834-92-0)	< 3	N/A
Nitritotriacetic acid, trisodium salt	< 3	N/A

This product contains 2-butoxyethanol (glycol ether) which is a toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA).

III. PHYSICAL DATA

BOILING POINT: 218° SPECIFIC GRAVITY (WATER = 1): 1.080±0.003
 VOLATILE BY WT.: 84 % PER GALLON: 9.04 pounds
 SOLUBILITY IN WATER: Complete pH: 12.5
 APPEARANCE AND ODOR: A clear blue liquid with bouquet odor.

IV. FIRE & EXPLOSION HAZARD DATA

Flashpoint (F°)(Method Used): None to 200°F., by C.O.C.
 Extinguishing Media: N/A
 Special Fire Fighting Procedures: None
 Unusual Fire & Explosion Hazards: None

V. HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE: May be harmful if swallowed. Direct eye contact will cause mild irritation. CHRONIC HEALTH EFFECTS: Based on tests with laboratory rats and mice, the National Toxicology Program (NTP) lists nitritotriacetic acid (NTA) as a suspect carcinogen. There is no evidence that NTA is a human carcinogen. Chronic exposure to 2-butoxyethanol can cause blood abnormalities.

FIRST AID PROCEDURES

If Swallowed Contact a physician or Poison Control Center immediately.

If Inhaled N/A

If In Eyes: Flush eyes immediately with plenty of cool water for at least 15 minutes. If irritation persists, contact a physician.

If On Skin: Flush with water.

VI. REACTIVITY DATA

Stability STABLE

Conditions To Avoid: Application through a steam cleaner.

INCOMPATIBILITY (Materials To Avoid) None

Hazardous Decomposition Products: Exposure to high temperatures may produce carbon dioxide, carbon monoxide, water and traces of oxide of phosphorus and aliphatic compounds
HAZARDOUS POLYMERIZATION WILL NOT OCCUR

VII. SPILL OR LEAK PROCEDURES

Steps To Be Taken if Material Is Released Or Spilled Flush with plenty of water.

Waste Disposal Method _____

Do not reuse empty containers for any purpose. Flush thoroughly with water, crush or perforate and discard, or give rinsed drums to a drum recycler for recycling. Be sure pt of waste stream is below 12.5. If this is a true, dispose of as a nonhazardous waste.

Follow All Federal, State and Local Regulations Regarding Waste Disposal.

VIII. SPECIAL PROTECTION INFORMATION

Eye protection and protective gloves are recommended any time you work with any concentrated industrial strength cleaning products.

Respiratory Protection No special protection required.

Ventilation Normal ventilation is adequate

Protective Gloves Recommended Eye Protection Recommended

Other Protective Equipment An eyewash station, or source of clean water should be nearby in case of accidental eye contact.

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Avoid temperatures below freezing. Keep containers tightly closed when not in use. OTHER PRECAUTIONS: CAUTION: Avoid contact with eyes. If accidentally splashed in the eyes, immediately flush with plenty of water for at least 15 minutes. If irritation persists, seek medical attention. Keep out of the reach of children. Do not reuse empty containers for any purpose. NOTE: A cleaning solution too concentrated can have a dulling effect on certain paints and inexpensive-grade varnished. It is recommended to try the cleaning solution first on a small area before using.

Read and follow all label directions and precautions before using the product. These products are intended for industrial and institutional use only. Not intended for household use or resale.

KEEP OUT OF THE REACH OF CHILDREN.

While we believe that the data contained herein is factual and the opinions expressed are those of qualified experts, the data are not to be taken as a warranty or representation for which the company assumes legal responsibility. They are offered solely for your consideration, investigation, and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State, and Local laws and regulations.

HEALTH AND SAFETY INFORMATION (216) 861-7114

NOVEMBER, 1989

VI. REACTIVITY DATA

Stability Stable

Conditions To Avoid: Heat, sparks and open flame.

INCOMPATIBILITY (Materials To Avoid) Strong oxidizers, strong caustics.

Burning this product may result in the
Hazardous Decomposition Products: formation of CO and/or CO₂.

HAZARDOUS POLYMERIZATION WILL NOT OCCUR

VII. SPILL OR LEAK PROCEDURES

Steps To Be Taken if Material Is Released Or Spilled Ventilate area. Flush with plenty of water.

Waste Disposal Method Flashpoint below 140°F. TCC. Makes this product an ignitable hazardous waste under EPA Definition. Dilution with water reduces the flashpoint

Follow All Federal, State and Local Regulations Regarding Waste Disposal.

VIII. SPECIAL PROTECTION INFORMATION

Eye protection and protective gloves are recommended any time you work with any concentrated industrial strength cleaning products.

Respiratory Protection Avoid breathing spray of this product.

Ventilation Normal ventilation

Protective Gloves NA Eye Protection Recommended

Other Protective Equipment NA

IX. SPECIAL PRECAUTIONS

Precautions To Be Taken In Handling Storage
COMBUSTIBLE LIQUID. Do not store near heat, sparks or open flames. Do not weld or cut empty drums. Do not reuse empty drums for any purpose.

Direct eye contact can cause irritation. Avoid spraying directly onto varnished surfaces.

Read and follow all label directions and precautions before using the product. These products are intended for industrial and institutional use only.

FOR INDUSTRIAL USE ONLY.

KEEP OUT OF THE REACH OF CHILDREN.

While we believe that the data contained herein is factual and the opinions expressed are those of qualified experts, the data are not to be taken as a warranty or representation for which the company assumes legal responsibility. They are offered solely for your consideration, investigation, and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State, and Local laws and regulations.

November, 1989

700340



MATERIAL SAFETY DATA SHEET

SECTION 1 - MANUFACTURER OR SUPPLIER DATA

MSDS NUMBER

100055

MANUFACTURER'S NAME & MAILING ADDRESS U S Chemical Corporation 316 Hart Street Watertown, Wisconsin 53094 USA	PREPARED BY D. E. Kenas	SIGNATURE <i>David E. Kenas</i> SS
EMERGENCY TELEPHONE NO. (24 HOUR SERVICE) Medical Emergency ONLY: 1-800-851-7145 Ext. 075	TITLE Quality Assurance Manager	DATE 1-4-02
PRODUCT INFORMATION TELEPHONE NO. (8 AM TO 5 PM CST, MON - FRI) Product Information: 1-800-558-9566		

SECTION 2 - IDENTITY OF MATERIAL

PRODUCT NAME STAINLESS STEEL POLISH			
PRODUCT DESCRIPTION Cleaner and Polish for Stainless Steel		FORMULA Proprietary Blend	CHEMICAL FAMILY N.A.
REGULATED IDENTIFICATION	DOT PROPER SHIPPING NAME N.A. (Combustible Exception)		
	SHIPPING ID NUMBER N.A.	PACKING GROUP N.A.	HAZARD CLASS N.A.

SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT N.A.	SPECIFIC GRAVITY (H ₂ O = 1) .875	PHYSICAL FORM Liquid Emulsion	COLOR White
VAPOR PRESSURE (mm Hg) N.A.	MELTING POINT N.A.	SOLUBILITY IN WATER Complete	SCENT Spearmint
VAPOR DENSITY (AIR = 1) N.A.	EVAPORATION RATE (BUTYL ACETATE = 1) N.A.	pH 2500 ppm SOLUTION N.A.	pH CONCENTRATE 8.5
OTHER Slightly Viscous, White Opaque Emulsion.			

SECTION 4 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS (CHEMICAL NAME; COMMON NAME)	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	PERCENT WT./WT
Petroleum Solvent CAS Registry Number 64742-48-9	Not Established	Not Established	300 ppm TWA (Exxon)	30.0
Mineral Oil CAS Registry Number 8042-47-5	5 mg/m ³ TWA as mist	5 mg/m ³ TWA as mist	10 mg/m ³ STEL as mist (ACGIH)	30.0
1-Methyl-2-Pyrrolidinone: N-Methylpyrrolidone CAS Registry Number 00000-872-50-4	Not Established	Not Established	100 ppm TLV-TWA (GAF Chemicals Corp.)	1.0-5.0

This product contains no other ingredient considered hazardous according to the criteria of 29 CFR 1910.1200, OSHA. However, this product contains chemicals which may be subject to reporting requirements according to the criteria of SARA Title III, 40 CFR, Part 370, Section 311 and Section 312. This product also contains chemicals which may be subject to reporting requirements according to the criteria of SARA Title III, 40 CFR, Part 372, Section 313.

STATE RIGHT TO KNOW INFORMATION

THIS PRODUCT CONTAINS: WATER/7732-18-5, PETROLEUM SOLVENT/64742-48-9, MINERAL OIL/8042-47-5, SODIUM OLEATE/143-19-1, N-METHYLPYRROLIDONE/872-50-4

NFPA RATING: Health-2/Flammability-2/Reactivity-0 See Section 5 for Protective Equipment.
 HMIS RATING: Health-2/Flammability-2/Reactivity-0 See Section 5 for Protective Equipment.

CARCINOGENICITY:

This product does not contain any known carcinogens or anticipated carcinogens according to the criteria of the NTP Annual Report on Carcinogens, IARC Monographs, and OSHA 29 CFR 1910, Subpart Z.

(CONTINUED IN SECTIONS 5 TO 8)

SECTION 5 - SAFE USAGE DATA

PROTECTIVE EQUIPMENT TYPES	EYES Safety glasses with side shields and an eye-wash station.	
	RESPIRATORY None required with normal use.	GLOVES Rubber or Neoprene.
	OTHER If major exposure is possible to eye/skin, wear/use appropriate protective equipment.	
VENTILATION	GENERAL MECHANICAL Satisfactory. Maintain adequate ventilation. Keep levels below recommended TLV.	
	LOCAL EXHAUST Not ordinarily needed. Avoid inhalation of mists containing this product.	
PRECAUTIONS	HANDLING & STORAGE Follow all label directions. Instruct personnel about proper use, hazards, precautions, and first-aid measures. Avoid inhalation, ingestion and contact with skin and eyes.	
	Do not store near heat, sparks, or open flame. Keep container closed when not in use. Recommended storage temperature below 100°F. Do not freeze. Keep out of children's reach. Wash after handling.	

SECTION 6 - HEALTH HAZARD DATA

EFFECTS OF EXPOSURE	INHALATION Inhalation of mists may cause irritation to nose, throat, and mucous membranes, tissue damage, and pulmonary irritation. Severity depends upon degree of exposure.
	INGESTION May cause nausea, vomiting, and tissue damage to mouth, esophagus, stomach, and to other tissues with which contact is made. Severity depends upon degree of exposure.
	SKIN & EYES SKIN: Contact may cause mild to severe irritation, depending on degree of exposure. EYES: Contact may cause severe irritation, temporary or permanent vision loss, and blindness.
	ACUTE & CHRONIC ACUTE: Irritation to skin and eyes. Permanent eye damage may result without immediate first aid treatment. CHRONIC: None Known.
ROUTES OF ENTRY	INGESTION-X SKIN ABSORPTION-X TARGET ORGANS SKIN-X EYES-X INHALATION-X Eyes, Skin, Respiratory System.

SECTION 7 - PHYSICAL HAZARD DATA

FLAMMABILITY	LEL = Approx. .7% UEL = Approx. 6.5%	FLASH POINT = 138°F METHOD USED = Tag Closed Cup *See Section 8: Fire-Unusual Hazards
STABILITY	STABLE <input checked="" type="checkbox"/>	CONDITIONS TO AVOID Avoid mixing with any other cleaning product. Do not store at high temperatures. Recommended storage temperature <100° F.
	UNSTABLE <input type="checkbox"/>	HAZARDOUS DECOMPOSITION PRODUCTS Incomplete combustion yields carbon monoxide, and other toxic and irritating fumes.
HAZARDOUS POLYMERIZATION	MAY OCCUR <input type="checkbox"/>	CONDITIONS TO AVOID
	WILL NOT OCCUR <input checked="" type="checkbox"/>	N.A.
INCOMPATIBILITY	MATERIALS TO AVOID Strong oxidizers such as sodium or calcium hypochlorite, and oxygen bleaches.	

SECTION 8 - EMERGENCY RESPONSE DATA

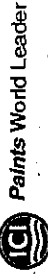
FIRE	EXTINGUISHING MEDIA To fight fire, use foam, dry chemical, carbon dioxide, water spray or fog.
	SPECIAL PROCEDURES Use air-supplied breathing equipment for enclosed areas. Cool exposed containers with water spray. Avoid breathing vapors or fumes.
	UNUSUAL HAZARDS *This product has not been tested as a whole for LEL and UEL values. However, the values are listed for Petroleum Solvent, the component contributing to this hazard.
FIRST AID MEASURES	INGESTION: Do not induce vomiting. If patient is conscious and can swallow, administer milk or water. SKIN: Remove contaminated clothes, flood with water for 15 minutes. EYES: Flood with lukewarm (not hot) water poured from a large glass 2 or 3 inches from eyes. Remove contacts. Have patient blink as much as possible while flooding the eyes. Continue for 15 minutes. INHALATION: Move victim to fresh air. Give artificial respiration if patient is not breathing. ADMINISTER FIRST AID TREATMENT AS STATED ABOVE, THEN CALL 1-800-851-7145 Ext 075 OR CONTACT PHYSICIAN FOR FURTHER MEDICAL INSTRUCTIONS.
SPILLS RQ N.A.	STEPS TO BE TAKEN Wear proper protective equipment including rubber boots. Stop leak if you can do so without risk. Dike or dam large spills. Ventilate area if needed. Soak up with sand or other non-combustible inert absorbent materials. Flush area with water and follow with normal clean-up procedures. Keep combustibles away! Be careful as spills are slippery.
	WASTE DISPOSAL METHOD Comply with all federal, state, and local regulations. Consult state and local authorities for restrictions on disposal of chemical waste. If approved, may be diluted and drained to a municipal sewer or waste treatment plant. Rinse empty container thoroughly with water before discarding. Please recycle empty container whenever possible.

THE DATA IN THIS MATERIAL SAFETY DATA SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND DOES NOT RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR PROCESS. THE DATA CONTAINED IS BELIEVED TO BE ACCURATE. HOWEVER, SINCE USE CONDITIONS VARY AND ARE OUTSIDE OUR CONTROL, THE MANUFACTURER MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, AND ASSUMES NO LIABILITY FOR FAILURE TO FOLLOW PRODUCT USE DIRECTIONS AND SAFETY PRECAUTIONS.



The Glidden Company
Cleveland, Ohio 44115

MATERIAL SAFETY DATA SHEET



Paints World Leader

FIRE AND EXPLOSION HAZARD DATA

Extinguishing media: dry chemical or foam water fog, carbon dioxide.

Unusual fire and explosion hazards: closed containers may explode when exposed to extreme heat or fire. vapors are heavier than air and may travel long distances to a source of ignition and flash back. closed containers may burst if exposed to extreme heat or fire. in closed tanks, water or foam may cause frothing or eruption.

Special fire fighting procedures: water may be used to cool and protect exposed containers. firefighters should use full protective clothing, eye protection, and self-contained breathing apparatus. self-contained breathing apparatus recommended.

HEALTH HAZARD DATA

Primary route(s) of exposure: inhalation, skin contact, eye contact, ingestion.

Effects of overexposure:

Inhalation: irritation of respiratory tract, lungs. prolonged inhalation may lead to mucous membrane irritation, drowsiness, dizziness and/or lightheadedness, headache, uncoordination, nausea, vomiting, gastro-intestinal disturbances, coughing, sneezing, apathy, central nervous system depression, respiratory problems, anesthetic effect or narcosis, difficulty of breathing, blood abnormalities, kidney damage, pacuomocinosis, loss of consciousness. possible sensitization to respiratory tract.

Skin contact: irritation of skin. prolonged or repeated contact can cause dermatitis, defatting, blistering, severe skin irritation. possible sensitization to skin. Skin contact may result in dermal absorption of component(s) of this product which may cause apathy.

Eye contact: irritation of eyes. Prolonged or repeated contact can cause tearing of eyes, redness of eyes, severe eye irritation.

Ingestion: ingestion may cause fatigue, drowsiness, dizziness and/or lightheadedness, headache, nausea, vomiting, diarrhea, gastro-intestinal disturbances, severe abdominal pain, apathy, central nervous system depression, respiratory problems, intoxication, anesthetic effect or narcosis, central nervous system damage, liver damage, kidney damage, bladder damage, pulmonary edema, loss of consciousness, cyanosis, acute poisoning, respiratory failure, cardiac failure, brain damage, death.

Supplemental health information: may be absorbed through skin. contains formaldehyde, a potential cancer hazard. Rats exposed to formaldehyde via inhalation developed cancer of the nasal cavity. Evidence in humans is limited (nasal and nasopharyngeal cancer). Formaldehyde is listed as a carcinogen by OSHA, probable human carcinogen (Group 2a) by IARC, and anticipated human carcinogen by NTP. Overexposure can cause eye, skin, and respiratory tract irritation, and skin and respiratory sensitization. Some laboratory tests results have shown ethylene glycol to be an animal teratogen. contains crystalline silica which is considered a hazard by inhalation. IARC has classified crystalline silica as probably carcinogenic for humans (2a). This classification is based on the findings of laboratory animal studies that were considered sufficient and data from epidemiological studies that were considered limited for carcinogenicity. crystalline silica is also a known cause of silicosis, a non-cancerous lung disease. NTP has classified crystalline silica a reasonably anticipated human carcinogen. a study conducted by NTP, using a continuous breeding protocol, demonstrated that diethylene glycol in drinking water at a concentration of 3.5% (6.1 g/kg/day) resulted in decreased fertility and reproductive performance in mice. these effects were not seen in the lower dose levels evaluated. Since the exposure resulting from incidental contact is likely to be lower by several degrees of magnitude and the route of exposure used in this study does not reflect a likely route from occupational or consumer use the significance of these findings to humans is uncertain. treatment related nasal tumors were observed in rats and mice exposed to vinyl acetate via inhalation at 600 ppm for 2 years.

Medical conditions aggravated by exposure: eye, skin, respiratory disorders kidney disorders liver disorders nervous system disorders

FIRST AID PROCEDURES

Inhalation: remove to fresh air. restore and support continued breathing. get emergency medical attention. have trained person give oxygen if necessary. Get medical help for any breathing difficulty. remove to fresh air if inhalation causes eye watering, headaches, dizziness, or other discomfort.

Skin contact: flush from skin with water. then wash thoroughly with soap and water. Remove contaminated clothing. wash contaminated clothing before re-use. if irritation occurs, consult a physician.

Eye contact: flush immediately with large amounts of water, especially under lids for at least 15 minutes. If irritation or other effects persist, obtain medical treatment.

Ingestion: if swallowed, obtain medical treatment immediately.

REACTIVITY DATA

Stability: stable

Incompatibility: oxidizers, acids, reducing agents, bases, aluminum, zinc, metals, peroxides, nitric acid, hydrofluoric acid, magnesium, caustics, mineral acids, sodium, potassium.

Conditions to avoid: elevated temperatures, contact with oxidizing agent, contact with aluminum or zinc, ultraviolet light, storage near acids, freezing, sparks, open flame.

Hazardous decomposition products: carbon monoxide, carbon dioxide, acid fumes, oxygen, aldehydes, toxic gases, acids.

Hazardous polymerization: will not occur

SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled: comply with all applicable health and environmental regulations. eliminate all sources of ignition. Ventilate area. spills may be collected with absorbent materials. Evacuate all unnecessary personnel. Place collected material in proper container. complete personal protective equipment must be used during cleanup. large spills - shut off leak if safe to do so. Dike and contain spill. Pump to storage or salvage vessels. use absorbent to pick up excess residue. Keep salvageable material and rinse water out of sewers and water courses. small spills - use absorbent to pick up residue and dispose of properly.

Waste disposal: dispose in accordance with all applicable regulations. avoid discharge to natural waters.

SPECIAL PROTECTION INFORMATION

Respiratory protection: control environmental concentrations below applicable standards. Where respiratory protection is required, use only NIOSH/MSHA approved respirators in accordance with OSHA standard 29 CFR 1910.134.

Ventilation: provide dilution ventilation or local exhaust to prevent build-up of vapors.

Personal protective equipment: eye wash, safety shower, safety glasses or goggles. impervious gloves, impervious clothing, face shield, apron.

SPECIAL PRECAUTIONS

Handling and storage: store below 100F. Keep away from heat, sparks and open flame. Keep from freezing.

Other precautions: use only with adequate ventilation. do not take internally. keep out of reach of children. Avoid contact with skin and eyes, and breathing of vapors. Wash hands thoroughly after handling, especially before eating or smoking. keep containers tightly closed and upright when not in use. avoid conditions which result in formation of inhalable particles such as spraying or abrading (sanding) painted surfaces. If such conditions cannot be avoided, use appropriate respiratory protection as directed under special protection information. ground equipment when transferring to prevent accumulation of static charge.

The information contained herein is based on data available at the time of preparation of this data sheet which The Glidden Company believes to be reliable. However, no warranty is expressed or implied regarding the accuracy of this data. The Glidden Company shall not be responsible for the use of this information, or of any product, method or apparatus mentioned and you must make your own determination of its suitability and completeness for your own use, for the protection of the environment, and the health and safety of your employees and the users of this material.

Complies with OSHA hazard communication standard 29CFR1910.1200.

prepared 10/10/94

EMERGENCY TELEPHONE NO. (800)545-2643

Product Codes with % by Weight

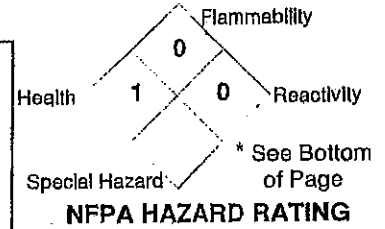
Ingredients

acetic acid ethenyl ester	4000	4002	4008	4018	4025	4070	4080	4087	4090	4100	4102	4108	4118	4125	4140	4180	4187	4190	4199	8200	8202	8208	8218	8225	8280	8287	8290	
1,2-ethanediol	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0	1-1.0
1,2-propanediol										1-5	1-5	1-5	1-5	1-5				5-10	1-5									
ethanol, 2,2'-oxybis-							10-20	10-20	5-10									5-10										
limestone									5-10											1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5	
limestone								1-5																				
kaolin										5-10	5-10	5-10	5-10	5-10														
rephline syenite	10-20	10-20	10-20	10-20	10-20	10-20	5-10																					
ceramic materials and wares, chemicals							1-5																					
silicic acid, aluminum sodium salt									1-5	1-5	1-5	1-5	1-5	1-5														
kieselguhr	1-5	1-5	1-5	1-5	1-5	1-5	1-5			1-5	1-5	1-5	1-5	1-5														
aluminum hydroxide	1-5	1-5	1-5	1-5	1-5	1-5	1-5			1-5	1-5	1-5	1-5	1-5														
propanoic acid, 2-methyl-, monoester with	1-5	1-5	1-5	1-5	1-5	1-5	1-5																					
2,2,4-trimethyl-1,3-pentanediol										20-30	20-30	20-30	20-30	20-30														
titanium oxide						10-20	1-5	10-20							10-20	10-20	10-20	10-20	10-20									1-1.0
titanium oxide						1-5	5-10	1-1.0	1-1.0												1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5
quartz	1-5	1-5	1-5	1-5	1-5	1-5	1-5	1-5							1-5	1-5	1-5	1-5	1-5									
silica															1-5	1-5	1-5	1-5	1-5									
limestone															01-1	1-5	5-10											
formaldehyde	10-20	10-20	10-20	10-20	10-20	10-20									1-5	1-5	5-10	20-30		10-20	10-20	10-20	10-20	10-20	10-20	1-5	5-10	20-30
titanium oxide										10-20																		
acrylic copolymer						5-10	10-20	10-20																				
vinyl acrylic copolymer																												
2-propenoic acid, 2-methyl-, polymer with																												
butyl 2-propenoate and methyl																												
2-methyl-2-propenoate																												
styrene acrylic copolymer																												
2-propenoic acid, butyl ester, polymer with	10-20	10-20	10-20	10-20	10-20	10-20																						
ethenyl acetate																												
2-propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and																												
ethenylbenzene	5-10	5-10	5-10	5-10	5-10	5-10																						
neohelene syenite	10-20	10-20	10-20	10-20	10-20	10-20																						
water	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40	30-40
water																												

MATERIAL SAFETY DATA SHEET



Manufactured by:
ANDERSON Chemical Company
 Litchfield, Minnesota 55355-1041
 (320) 693-2477



Product Name: Spotless

24-HOUR EMERGENCY PHONE #: 1-800-424-9300 (CHEMTREC)

Revised: 2/28/2003 Int
 Supersedes: 10/1/1998

I. IDENTIFICATION

Chemical Name And Synonyms:
 Not applicable

DOT Shipping Name
 Not applicable

Chemical Family:
 Rinse Aid

DOT Hazard Class & I.D. Number # PG
 Not applicable

II. HAZARDOUS INGREDIENTS

Component	CAS NO.	%	TLV	PEL	Toxic	Hazard
Trade Secret	TSRN 6909		NE	NE	NA	May cause eye, skin, and respiratory tract irritation.
Trade Secret	TSRN 5500		NE	NE	NA	Slight eye irritant. May cause skin irritation.

**Toxic chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR

NA: Not applicable

III. PHYSICAL DATA

Boiling Point: Approx. 212°F.
Specific Gravity: 1.020
Appearance: Dark blue liquid

Form: Liquid
Solubility in Water: Complete
Odor: None

pH, Neat: neutral

IV. FIRE AND EXPLOSION HAZARD DATA

Flashpoint: Not Applicable
Extinguishing Media: Not applicable.

Special Fire
Fighting Procedures: Although this product is not combustible, if a fire occurs in the near vicinity, good fire-fighting practice dictates the use of self-contained breathing apparatus and other protective gear.

Unusual Fire And Explosion Hazards: None.

V. HEALTH HAZARD DATA

Carcinogenic: The raw materials used in this product are not considered to be a carcinogen by ACGIH and OSHA.

Effects Of Over-exposure: Eye and mucous membrane irritation.

Emergency And First Aid Procedures:

EYES: Flush with water for 15 minutes. Call a physician.
SKIN: Wash off skin using water.
INGESTION: Drink water, induce vomiting by sticking finger down the throat, call a physician. DO NOT give anything by mouth to an unconscious person.

VI. REACTIVITY DATA

Stability - Unstable: Stable:

Conditions To Avoid: High heat.

Incompatibility: Strong oxidizers
(Materials To Avoid)

Hazardous Decomposition Products: Thermal decomposition may yield carbon monoxide and carbon dioxide.

VII. SPILL OR LEAK PROCEDURES

Steps To Be Taken In Case Material Is Released Or Spilled:

Small spills - flush with large amounts of water. Wear eye protection.

Waste Disposal Method: Consult appropriate regulatory agencies to determine proper disposal procedures for large spills.

VIII. SPECIAL PROTECTION INFORMATION

Respiratory Protection: Only need if airborne concentrations are high.

Ventilation: Adequate to keep airborne concentrations low.

Protective Gloves: Plastic

Eye Protection: Goggles

Protective Clothing: Not required

IX. SPECIAL PRECAUTIONS

Precautions To Be Taken In Handling And Storing:

Store in cool, dry area.

Other Precautions: Not applicable.

X. REVISED INFORMATION

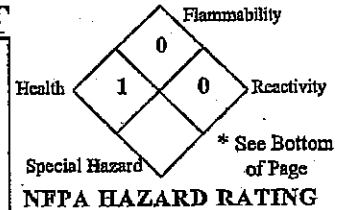
MSDS Status: II. HAZARDOUS INGREDIENTS: Added Right to Know trade secret information.

The opinions expressed herein are those of qualified experts within ANDERSON Chemical Company. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and these opinions and the conditions of use of the product are not within the control of ANDERSON Chemical Company, it is the user's obligation to determine the conditions of safe use of the product.

705810

MATERIAL SAFETY DATA SHEET

Distributed By:

HILLYARD, INC.302 N. Fourth St.
St. Joseph, Missouri 64502**Product Name: Spotless**

EMERGENCY PHONE #: 1-800-424-9300 (CHEMTREC)

I. IDENTIFICATION**Chemical Name And**

Synonyms: Not applicable

DOT Shipping Name

Not applicable

Chemical

Family: Rinse Aid

DOT Hazard Class & LD. Number

Not applicable.

PG

II. HAZARDOUS INGREDIENTS

Component	CAS NO.	%	TLV	PEL	Toxic	Hazard
Alkoxyated linear alcohol			not established		NA	

** Toxic chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR §372).

NA: Not applicable

III. PHYSICAL DATA**Boiling Point:** Approx. 212° F.**Specific Gravity:** 1.020**Appearance:** Dark blue liquid**Form:** Liquid**Solubility In Water:** Complete**Odor:** None**pH, Neat:** neutral**IV. FIRE AND EXPLOSION HAZARD DATA****Flashpoint:** Not Applicable**Extinguishing Media:** Not applicable.**Special Fire****Fighting Procedures:** Although this product is not combustible, if a fire occurs in the near vicinity, good fire-fighting practice dictates the use of self-contained breathing apparatus and other protective gear.**Unusual Fire And****Explosion Hazards:** None.**V. HEALTH HAZARD DATA****Carcinogenic:** The raw materials used in this product are not considered to be a carcinogen by ACGIH and OSHA.**Effects Of****Over-exposure:** Eye and mucous membrane irritation.**Emergency And First Aid Procedures:****EYES:** Flush with water for 15 minutes. Call a physician.**SKIN:** Wash off skin using water.**INGESTION:** Drink water, induce vomiting by sticking finger down the throat, call a physician. DO NOT give anything by mouth to an unconscious person.

* NFPA Degree or Hazard: 4 = Extreme; 3 = High; 2 = Moderate; 1 = Slight; 0 = Insignificant.

Continued On Back

VI. REACTIVITY DATA

Stability - Unstable: Stable:

Conditions To Avoid: High heat.

Incompatibility: Strong oxidizers
(Materials To Avoid)

Hazardous

Decomposition Products: Thermal decomposition may yield carbon monoxide and carbon dioxide.

VII. SPILL OR LEAK PROCEDURES

Steps To Be Taken In Case Material Is Released Or Spilled: Small spills - flush with large amounts of water. Wear eye protection.

Waste Disposal Method: Consult appropriate regulatory agencies to determine proper disposal procedures for large spills.

VIII. SPECIAL PROTECTION INFORMATION

Respiratory

Protection: Only need if airborne concentrations are high.

Ventilation: Adequate to keep airborne concentrations low.

Protective Gloves: Plastic

Eye Protection: Goggles

Protective Clothing: Not required

IX. SPECIAL PRECAUTIONS

Precautions To Be Taken In Handling And Storing: Store in cool, dry area.

Other Precautions: Not applicable.

X. REVISED INFORMATION

MSDS Status: III PHYSICAL DATA (color change to blue)

Revised: 10/1/1998 imt

Supersedes: 9/16/1997

The opinions expressed herein are those of qualified experts within ANDERSON Chemical Company. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and these opinions and the conditions of use of the product are not within the control of ANDERSON Chemical Company, it is the user's obligation to determine the conditions of safe use of the product.

MATERIAL SAFETY DATA SHEET

SPOT & STAIN REMOVER GEL

SECTION I - IDENTIFICATION

MANUFACTURER'S NAME..... Haviland Consumer Products Incorporated
ADDRESS (STREET,CITY,STATE,ZIP) 421 Ann St., N.W., Grand Rapids, MI 49504
PHONE NUMBER..... (616) 361-6691
EMERGENCY PHONE NUMBER..... CHEMTREC (800) 424-9300
EFFECTIVE DATE..... 1/3/00
TRADE NAME..... SPOT & STAIN REMOVER GEL
CHEMICAL FAMILY..... Mineral Acid

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	OSHA/PEL	ACGIH/TLV (Units)	PROD. CAS #
**Phosphoric Acid	1 mg/m3 TWA	1 mg/m3 TWA	7664-38-2
**Muriatic (Hydrochloric) Acid	5ppm ceiling	5ppm ceiling	7647-01-0

**SEE NOTE UNDER
"REFERENCES" AT END OF
SDS**

SECTION III - PHYSICAL DATA

BOILING POINT..... NotDetermined
FREEZING POINT NotDetermined
VAPOR PRESSURE (mm Hg)..... Unknown
VAPOR DENSITY (Air=1)..... Not Available
SOLUBILITY IN H2O..... Completely
APPEARANCE/ODOR..... Clear, Red Liquid; Odorless
SPECIFIC GRAVITY (H2O=1)..... 1.574
PH..... Not Established

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT..... Will Not Burn
LOWER EXPLOSIVE LIMIT (% by Volume) Not Applicable
UPPER EXPLOSIVE LIMIT (% by Volume) Not Applicable
EXTINGUISH MEDIA..... As for Surrounding Fire.
SPECIAL FIRE FIGHTING PROCEDURES... Wear self contained breathing
apparatus. If heated to decomposition,
product emits toxic phosphorus
pentoxide fumes.
UNUSUAL FIRE HAZARD..... Phosphoric acid will not burn but can
react with metals to liberate hydrogen
gas that can form flammable or
explosive mixtures with air.

MATERIAL SAFETY DATA SHEET

SPOT & STAIN REMOVER GEL

SECTION V - HEALTH HAZARD DATA

CARCINOGENICITY..... None
NTP..... No
IARC..... No
OVER EXPOSURE EFFECTS..... Irritation, slightly toxic when inhaled or ingested. Causes redness and burns to exposed tissues.
PRIMARY ROUTE(S) OF ENTRY..... Inhalation
FIRST AID PROCEDURES..... In case of contact: Immediately flush eyes and skin with plenty of water for at least 15 minutes. For eyes get medical attention.

If inhaled: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting. If conscious, give large quantities of water to dilute. Call a Physician Immediately.

EXPOSURE AGGRAVATED MEDICAL CONDITIONS None Currently Known

SECTION VI - REACTIVITY DATA

CHEMICAL STABILITY..... Stable
CONDITIONS TO AVOID..... Not Applicable
INCOMPATIBLE MATERIALS..... Alkalies, many metals.
DECOMPOSITION PRODUCTS..... Toxic fumes of phosphorus pentoxide.
HAZARDOUS POLYMERIZATION..... Will Not Occur
POLYMERIZATION AVOID..... Not Applicable

SECTION VII - SPILL OR LEAK PROCEDURE

FOR SPILL Wear acid vapor respirator and gloves. Soak up small spills with sand, earth, or absorbent. Scoop up and place in clean, dry, marked, lined steel containers. Neutralize with soda ash. Flush away residue with large quantities of water applied to entire spill area.
WASTE DISPOSAL METHOD..... Dispose of spilled or waste material, contaminated soil and other contaminated material in licensed landfill or treatment facility in accordance with all federal, state and local regulations.

MATERIAL SAFETY DATA SHEET

SPOT & STAIN REMOVER GEL

SECTION VIII - SPECIAL PROTECTION

RESPIRATORY PROTECTION..... Supplied air or self contained breathing apparatus with full facepiece.
VENTILATION..... To maintain vapors below limits.
PROTECTIVE GLOVES..... Rubber or other impervious material.
EYE PROTECTION..... Splash proof chemical goggles.
OTHER PROTECTIVE EQUIPMENT.... For operations where spills or splashing may occur, use an impervious body covering and boots. A safety shower and eye bath should be available.
HANDLING AND STORAGE..... Store away from heat and strong alkalies. Wear protective equipment during handling. Keep container closed when not in use. Never use pressure to empty. Do not store near organic or other readily oxidizable materials.

SECTION IX - SPECIAL PRECAUTIONS

HAZARD CLASS..... Corrosive, 8, PG III
DOT SHIPPING NAME..... PHOSPHORIC ACID
UN NUMBER..... UN1805
REPORTABLE QUANTITY (RQ)..... 6,666lbs.

REFERENCES ZZ1S&SRG

NOTE Hazardous Component(s) subject to reporting under 40 CFR 372 (SARA Title III, Sec. 313).

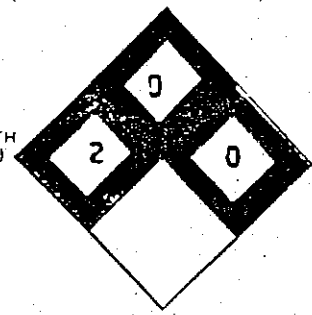
SODIUM CARBONATE

NFPA Designation 704

DEGREE OF HAZARD

- 4 = EXTREME
- 3 = HIGH
- 2 = MODERATE
- 1 = SLIGHT
- 0 = INSIGNIFICANT

HEALTH (BLUE)



EMERGENCY TELEPHONE NOS:
 CHEMTREC (303) 424-9300
 MEDICAL (303) 595-9048
 OTHER

REVISION: 3

EFFECTIVE: 11/06/85

PRINTED: 11/09/85

PREPARED FOR USE BY.....

HAVILAND PRODUCTS
421 ANN ST NW

PRODUCT INFORMATION *****

SYNONYMS.....
 SHIPPING NAME - DOT.....
 IATA.....
 IMCO.....
 FORMULA.....
 CHEMICAL FAMILY.....

SODA ASH, SODIUM CARBONATE ANHYDRON
 SODIUM CARBONATE
 SODIUM CARBONATE
 SODIUM CARBONATE
 NA2CO3
 ALKALI

PRECAUTIONARY INFORMATION *****

PRECAUTIONARY STATEMENT...
 (PLEASE USE THIS STATEMENT
 TO SATISFY THE IN-PLANT
 LABELING REQUIREMENTS
 OF THE OSHA HAZARD
 COMMUNICATIONS STANDARD
 29CFR 1910.1203)

HEALTH
 DUSTS MAY CAUSE SEVERE IRRITATION OF EYES AND
 SLIGHT IRRITATION OF NOSE AND THROAT.
 REPEATED CONTACT MAY CAUSE REDNESS AND DRY
 CRACKED SKIN.
 PHYSICAL:
 REACTS WITH ACIDS TO RELEASE HIGH VOLUMES OF
 HEAT AND CARBON DIOXIDE.

INGREDIENTS *****

CAS# AND COMPONENT.....

497-19-8 SODIUM CARBONATE 99.8%

RECEIVED

DATE 11-18-85

INITIALS ja

MATERIAL SAFETY DATA

497

19 8

NFPA Designation 704

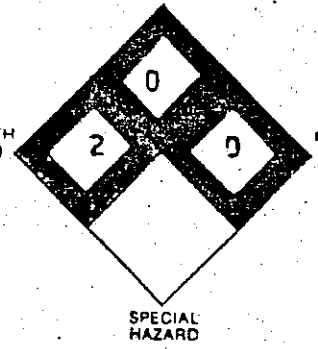
FLAMMABILITY (RED)

SODIUM CARBONATE

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HEALTH (BLUE)



REACTIVITY (YELLOW)

SPECIAL HAZARD

EMERGENCY TELEPHONE NOS:
 CHEMTREC (800) 424-9300
 MEDICAL (303) 595-9048
 OTHER

REVISION: 0 EFFECTIVE: 11/06/85 PRINTED: 11/09/85

***** PHYSICAL DATA *****

MELTING POINT.....: 851 DEGREES C (1564 DEGREES F)
 BOILING POINT.....: DECOMPOSES
 VAPOR PRESSURE.....: NIL
 VAPOR DENSITY (AIR - 1)...: NA
 ROOM TEMPERATURE
 APPEARANCE AND STATE: WHITE GRANULAR SOLID
 ODOR.....: ODORLESS
 SPECIFIC GRAVITY (H2O =1): 2.509
 SOLUBILITY IN H2O % BY WT: 33.2 MAX.
 % VOLATILES BY VOLUME....: NIL
 EVAPORATION RATE
 (BUTYL ACETATE = 1)..: NA
 PH (AS IS).....: NA
 PH (1% SOLUTION).....: 11.4

***** FIRE, EXPLOSION AND REACTIVITY DATA *****

FLASH POINT.....: NONCOMBUSTABLE
 AUTOIGNITION TEMPERATURE.: NA
 FLAMABLE LIMITS UPPER...: NA
 (AIR) LOWER...: NA
 EXTINGUISHING MEDIA.....: WATER
 SPECIAL FIREFIGHTING.....: NONE
 PROCEDURES
 DEGREE OF FIRE AND: NONE
 EXPLOSION HAZARD
 STABILITY.....: STABLE
 HAZARDOUS POLYMERIZATION.: WILL NOT OCCUR
 CONDITIONS TO AVOID.....: CONTACT WITH ACIDS EXCEPT UNDER CONTROLLED
 CONDITIONS
 MAJOR CONTAMINANTS THAT...: NONE
 CONTRIBUTE TO INSTABILITY
 INCOMPATIBILITY.....: REACTS WITH ACIDS WITH RELEASE OF LARGE VOLUMES
 OF CARBON DIOXIDE GAS AND HEAT.
 HAZARDOUS DECOMPOSITION...: NONE
 PRODUCTS

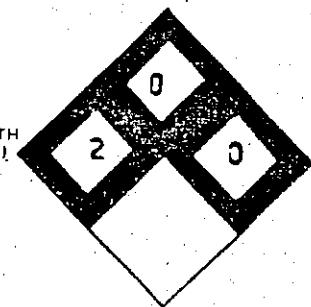
SODIUM CARBONATE

NFPA Designation 704

DEGREE OF HAZARD

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HEALTH (BLUE)



REACTIVITY (YELLOW)

SPECIAL HAZARD

EMERGENCY TELEPHONE NOS:
 CHEMTREC (800) 424-9300
 MEDICAL (303) 595-9048
 OTHER

REVISION: 0

EFFECTIVE: 11/06/85

PRINTED: 11/09/85

***** EMERGENCY AND FIRST AID PROCEDURES *****

INHALATION.....: REMOVE FROM EXPOSURE. IF DISCOMFORT OCCURS AND PERSISTS, OBTAIN MEDICAL ATTENTION.

INGESTION.....: DRINK WATER TO DILUTE. OBTAIN MEDICAL ADVICE VIA PHONE.

DECONTAMINATION PROCEDURE: WASH WITH SOAP AND WATER.

NOTES TO PHYSICIAN.....: WHILE INTERNAL TOXICITY IS LOW, IRRITANT EFFECTS OF HIGH CONCENTRATIONS MAY PRODUCE CORNEAL OPACITIES AND VESICULAR SKIN REACTIONS IN HUMANS WITH ABRADED SKIN ONLY. TREATMENT IS SYMPTOMATIC AND SUPPORTIVE.

***** SPECIAL PROTECTION *****

VENTILATION REQUIREMENTS.: USE GENERAL ROOM DILUTION OR LOCAL EXHAUST VENTILATION WHERE EXCESSIVE DUST MAY BE RELEASED INTO WORK ENVIRONMENT.

RECOMMENDED PERSONAL.....: NIOSH/MSHA DUST RESPIRATOR

PROTECTIVE EQUIPMENT

RESPIRATORY.....: WEAR DUST RESPIRATOR IF NUISANCE DUST TLV OF 10 MG/CUBIC METER EXCEEDED OR DISCOMFORT PRESENT

EYES.....: CHEMICAL GOGGLES

GLOVES.....: GENERAL PURPOSE

SPECIAL CLOTHING...: FULL COVER CLOTHING

AND EQUIPMENT

***** STORAGE AND HANDLING *****

(PLEASE USE THIS STATEMENT TO SATISFY THE IN-PLANT LABELING REQUIREMENTS OF THE OSHA HAZARD COMMUNICATIONS STANDARD 29CFR 1910.1200)

DO NOT STORE CLOSE TO ACIDS. MINIMIZE THE FREE FALL WHEN HANDLING TO MINIMIZE THE DUST GENERATED.

WEAR EYE PROTECTION AND NIOSH/MSHA APPROVED DUST RESPIRATOR TO PREVENT IRRITATION WHERE EXCESSIVE DUST IS PRESENT.

***** DISPOSAL, SPILL OR LEAK PROCEDURES *****

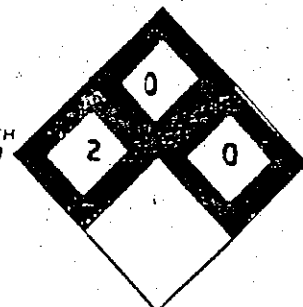
PROCEDURE FOR RELEASE.....: SWEEP UP AS MUCH AS POSSIBLE FOR SALVAGE OR OR SPILL DISPOSAL. WASH AWAY RESIDUE WITH WATER.

SODIUM CARBONATE

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HEALTH (BLUE)



REACTIVITY (YELLOW)

SPECIAL HAZARD

EMERGENCY TELEPHONE NOS:
 CHEMTREC (800) 424-9300
 MEDICAL (303) 595-9048
 OTHER

REVISION: 3

EFFECTIVE: 11/06/85

PRINTED: 11/09/85

ROUTES OF EXPOSURE

EYE CONTACT.....: CORNEAL OPACITIES AND IRRITATION OCCURRED IN RABBIT EYE TESTS. TOXICOLOGY 23:281-291 1982

SKIN CONTACT.....: NON-IRRITATING TO INTACT SKIN. MINOR IRRITATION MAY OCCUR ON ABRADED SKIN. TOXICOL. APPL. PHARMACOL. 31:481-490 (1975)

SKIN ABSORPTION.....: NO SIGNIFICANT HAZARD. NO EFFECT FROM 50% AQUEOUS SOLUTION IN HUMANS, RABBITS OR GUINEA PIGS. TOXICOL. APPL. PHARMACOL. 31:481-490 (1975).

INHALATION.....: NO DATA AVAILABLE TO INDICATE THAT AIRBORNE DUST IS A HEALTH HAZARD.

INGESTION.....: NO SIGNIFICANT HAZARD. LD50 = 5.6G/KG(RATS) GIG. TR. PROF. ZABOL. 11:55-57 (1976)

EXPOSURE LIMITS

EFFECTS OF OVEREXPOSURE

ACUTE EXPOSURE.....: MAY CAUSE SEVERE IRRITATION OF THE EYES, INCLUDING CORNEAL OPACITIES. DUSTS AND MISTS ARE IRRITATING TO THE SKIN, MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.

CHRONIC EXPOSURE.....: MAY CAUSE INFLAMMATION OF THE MUCOUS MEMBRANES IN THE RESPIRATORY TRACT AND OF THE SKIN.

EMERGENCY AND FIRST AID PROCEDURES

EYES.....: FLUSH WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES, LIFTING THE UPPER AND LOWER LIDS OCCASIONALLY. SEE AN OPHTHALMOLOGIST IF IRRITATION PERSISTS.

SKIN.....: WASH WITH PLENTY OF WATER FOR 15 MINUTES. IF IRRITATION OCCURS AND PERSISTS, OBTAIN MEDICAL ATTENTION.

SODIUM CARBONATE

NFPA Designation 704

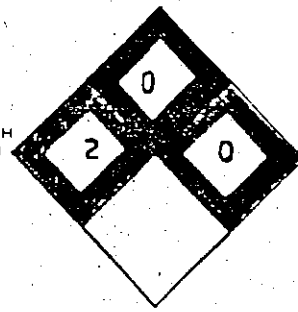
FLAMMABILITY (RED)

DEGREE OF HAZARD

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HEALTH (BLUE)

REACTIVITY (YELLOW)



EMERGENCY TELEPHONE NOS:
 CHEMTREC (800) 424-9300
 MEDICAL (303) 595-9648
 OTHER

REVISION: 3

EFFECTIVE: 11/06/85

PRINTED: 11/09/85

***** DISPOSAL, SPILL OR LEAK PROCEDURES *****

WASTE DISPOSAL METHOD..... IF MATERIAL CANNOT BE SALVAGED, THE PREFERRED METHOD OF DISPOSAL IS IN A SECURE CHEMICAL LANDFILL IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL ENVIRONMENTAL REGULATIONS. EMPTY CONTAINERS MAY BE INCINERATED OR DISCARDED AS GENERAL TRASH.

***** TRANSPORTATION DATA *****

DOT PROPER SHIPPING NAME.: SODIUM CARBONATE
 DOT CLASSIFICATION.....: NON HAZARDOUS
 DOT LABELS.....: NA
 DOT MARKING.....: NA
 DOT PLACARD.....: NA
 UN NUMBER.....: NA
 HAZARDOUS SUBSTANCE/RQ...: NA
 49 STCC NUMBER.....: NA
 EMERGENCY ACCIDENT PRECAUTIONS AND PROCEDURE: NONE
 PRECAUTIONS TO BE TAKEN...: NONE
 IN TRANSPORTATION
 CMA CHEMCARD NUMBER.....: NONE
 TYPE PACKAGES.....: RAILROAD HOPPER CARS, HOPPER TRUCKS, BAGS
 OTHER SHIPPING IDS.....

***** ADDITIONAL REGULATORY INFORMATION *****

MATERIAL IS REPORTED IN EPA TSCA INVENTORY LIST? YES
 MATERIAL IS LISTED AS A CARCINOGEN/POTENTIAL CARCINOGEN IN FOLLOWING
 NTP ANNUAL REPORT... ? NO
 IARC MONOGRAPHS..... ? NO
 OSHA 29CFR PART 1910 SUBPART Z ? NO

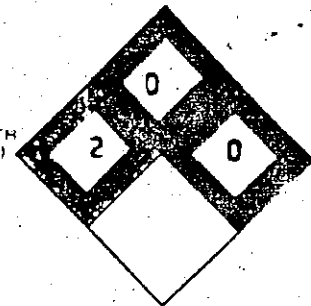
SODIUM CARBONATE

NFPA Designation 704

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HEALTH (BLUE)



REACTIVITY (YELLOW)

SPECIAL HAZARD

EMERGENCY TELEPHONE NOS:

CHEMTRIC (303) 424-9330

MEDICAL (303) 595-9048

OTHER

REVISION: 0

EFFECTIVE: 11/06/85

PRINTED: 11/09/85

ADDITIONAL INFORMATION *****

ACQUATIC TOXICITY: BLUEGILL: TLM, 24 HRS =
 385 MG/L. COMM. ENERGI AT. RAPPT. CEA-R2938
 CA 65:9414C 1966

MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 2 Flammability = 0 Reactivity = 0
HMIS RATING: Health = 2 Flammability = 0 Reactivity = 0

SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (502N-48E)**Manufacturer's Name:** HILLYARD INDUSTRIES**Product Name:** SHOWER FOAM**Address:** 302 North Fourth Street
St. Joseph, MO 64501**Date Prepared:** March 5, 2001**Prepared by:** Regulatory Affairs Department**Emergency Telephone No.:** (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)**Other information calls:** (816) 233-1321 (Ext. 8285)<http://www.hillyard.com>**SECTION II -- INGREDIENTS/IDENTITY INFORMATION****Components****(Specific Chemical Identity:****OTHER LIMITS
RECOMMENDED**

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Phosphoric acid * (1)	7664-38-2	1 mg/M ³	1 mg/M ³	N/A	13-17
Water	7732-18-5	none	none	N/A	---
Lauryl dimethyl amine oxide	1643-20-5	not est.	not est.	N/A	---
Coco amino propyl dimethyl betaine	61789-40-0	not est.	not est.	N/A	---

*This product contains the following chemicals subject to the reporting requirements of SARA Title III, Sec. 313, and 40 CFR Part 372: Phosphoric acid.

(1) Regulated by OSHA and the following states: FL, IL, LA, MA, NJ, NY, PA, RI

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: corr. 208°F **Specific Gravity (H₂O = 1):** 25°C = 1.08 & 39°C = 1.07
Vapor Pressure (mm Hg.): 17.5 **Percent Volatile by Volume (%):** 73
Vapor Density (AIR = 1): 0.6 **Evaporation Rate (ethyl ether = 1):** slower than 1
Solubility in Water : appreciable **Appearance and Odor:** blue-green liquid; wintergreen odor
pH (conc.) 1.52

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: none (Tag Closed Cup) **Flammable Limits:** LEL = N/A UEL = N/A

Extinguishing Media: Water, foam or dry chemical; carbon dioxide

Special Fire Fighting Procedures: Hot phosphoric acid is corrosive. Wear protective clothing to avoid contact with skin or eyes.

Unusual Fire and Explosion Hazards: May generate hydrogen gas in contact with some metals.

SECTION V -- PHYSICAL HAZARDS

Stability: Stable **Conditions to Avoid:** None known to Hillyard

Incompatibility (Materials to Avoid): Strong oxidizing agents, ammonia or bleaches; strong alkalis and cyanides, and some metals.

Hazardous Decomposition Products or Byproducts: Hydrogen gas from contact with some metals

Hazardous Polymerization: Will not occur **Conditions to Avoid:** N/A

SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Ingestion? Yes

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Concentrate was not a primary skin irritant when tested per Federal Hazardous Substance Act. Concentrate was a primary eye irritant per the Federal Hazardous Substance Act; all test subjects showed moderate to severe discharge with moistening of the lids and hairs in a considerable area around the eye. At a dose of 5 g./Kg. No deaths were observed. Also was not acutely toxic following a 1 hour exposure at nominal concentration of 55.74 mg./L. (actual concentration of 15.21 mg./L. Spray mist of concentrate may irritate nose and throat. 2. None known to Hillyard.

SECTION VI -- HEALTH HAZARD DATA continued

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

Signs and Symptoms of Exposure: Concentrate can cause severe eye irritation. Harmful if swallowed. Concentrate burns mouth and lips after ingestion; sour taste of acid, severe gastrointestinal irritation.

Medical Conditions Generally Aggravated by Exposure: N/A

Emergency and First Aid Procedures: If swallowed, immediately give large amounts of water and call a physician, hospital emergency room or poison control center. If excess inhaled, remove to fresh air. In case of contact, immediately flush eyes or skin with plenty of water for 15 minutes; remove contact lenses and flush eyes again with water. For eyes, CALL A PHYSICIAN. If skin irritation persists, get medical attention. Remove and wash all contaminated clothing before reuse.

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Small spills: Pick up with noncombustible absorbent. Large spills: Dike far ahead of liquid spill. Avoid contact with skin and eyes. Rinse affected area thoroughly with water.

Waste Disposal Method: Disposal of concentrated product is regulated under RCRA as corrosive waste (pH less than 2). Disposal of regulated quantities should be neutralized at a permitted facility in accordance with federal, state and local regulations. Waste from normal product use may be sewer to a public-owned treatment works in compliance with pretreatment requirements.

Precautions To Be Taken In Handling And Storing: Keep container closed when not in use. Avoid excessive temperature; i.e., welding, flame cutting and brazing.

Other Precautions: Contact lenses should not be worn when working with this material.

SECTION VIII -- CONTROL MEASURES

Respiratory Protection (Specify Type): Self-contained breathing apparatus in areas where high mist vapor concentration cannot be controlled by ventilation.

Ventilation:

Local Exhaust = If required to maintain TLV Mechanical (General) = Normal ventilation sufficient Special = N/A Other = N/A

Protective Gloves: Acid-resistant rubber **Eye Protection:** Chemical safety goggles (conc.)

Other Protective Clothing or Equipment: Protective clothing or rubber apron where contact with conc. is a concern.

Work / Hygienic Practices: Corrosive - do not get in eyes, on skin or clothing. Avoid prolonged breathing of vapors.

SECTION IX - TRANSPORTATION INFORMATION

Applicable regulations: DOT = No; IMCO = No; IATA = No

Proper shipping name: Cleaning compound

UN No.: not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable

Labels required: not required **DOT Exception:** not applicable

EPA Hazardous waste/number code: not listed

Hazardous waste characteristics:

Ignitability = not applicable; **Corrosivity =** yes; **Reactivity =** not applicable

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.

SPARTAN CHEMICAL COMPANY, INC. - MATERIAL SAFETY DATA SHEET

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label)
SHINELINE EMULSIFIER PLUS

Manufacturer's Name - Spartan Chemical Company, Inc.
Emergency Telephone No. - 800/537-8990
Address - 110 N. Westwood Ave., Toledo, OH 43607

NFPA RATINGS: Health-3 Fire-0 React-0
HMS RATINGS: Health-3 Fire-0 React-0 Pers. Prot.-B

SECTION II: HAZARDOUS INGREDIENTS

Chemical Name(s) - 2-Butoxyethanol*
CAS Registry No. - 111-76-2 Weight - 28%
TWA (mg/m3) - 120 STEL (mg/m3) - N/A Ceiling (mg/m3) - N/A
Carcinogen - No

Chemical Name(s) - Sodium hydroxide
CAS Registry No. - 1310-73-2 Weight - 1.5%
TWA (mg/m3) - N/A STEL (mg/m3) - N/A Ceiling (mg/m3) - 2
Carcinogen - No

Chemical Name(s) - Monoethanolamine
CAS Registry No. - 141-43-5 Weight - 2-7%
TWA (mg/m3) - 8 STEL (mg/m3) - 15 Ceiling (mg/m3) - N/A
Carcinogen - No

*This substance is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (SARA) and of 40 CFR 372.

SECTION III: PHYSICAL DATA

Boiling Point - 200 F
Specific Gravity (H2O = 1) - 1.02
Percent Solid by Weight - 8-9
Vapor Pressure - Unknown
Evaporation Rate (But. Ace. = 1) - <1
Vapor Density (Air = 1) - Unknown
Solubility in Water - Complete
Appearance and Odor - Clear liquid, fresh fragrance
Material Is - Liquid
pH - 13.5-13.7 (concentrate)

SECTION IV: FIRE & EXPLOSION HAZARD DATA

Flash Point - None
Method Used - ASTM - D56
Flammable Limits - N/A
Extinguishing Media - N/A
Special Fire Fighting Procedures - None
Unusual Fire and Explosion Hazards - None

SECTION V: HEALTH HAZARD DATA

Effects of Overexposure - Conditions to Avoid: Severe skin and eye

irritant.

Avoid prolonged skin contact and inhalation of vapors or mist.

Butoxyethanol

is absorbed through the skin which may affect the liver, kidneys, lymph and blood systems; inhalation may irritate throat and respiratory system.

Threshold Limit Value - Not established

Conditions Aggravated by Use - Unknown

Primary Routes of Entry: Skin Contact, Inhalation

Emergency and First Aid Procedures -

Eyes: Remove contact lenses. Flush eyes with water for at least 15 minutes. Call a physician immediately.

Skin: Flush skin with soap and water.

Ingestion: If swallowed, do NOT induce vomiting. Give large quantities

of water. Call a physician immediately.

Never give anything by mouth to an unconscious person.

SECTION VI: REACTIVITY DATA

Stability: Stable X

Incompatibility (Materials to Avoid) - Strong acids and strong oxidizing agents

Hazardous Decomposition Products - None known

Hazardous Polymerization: Will Not Occur X

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled - Small quantities

can be flushed with water into sanitary sewer; large quantities should be

absorbed and disposed of in accordance with state and local regulations.

Waste Disposal Method - Same as above

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type) - None required

Ventilation - Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

Protective Gloves (Specify Type) - Solvent resistant gloves

Eye Protection (Specify Type) - Approved safety glasses with side shield

Other Protective Equipment - Under certain conditions, alkali resistant aprons and boots are suggested.

SECTION IX: SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storing - Do not freeze, do not store above 120 F.

Other Precautions - None

Spartan Chemical Company, Inc. - SHINELINE EMULSIFIER PLUS

Ref: 29 CFR 1910:1200 (OSHA)

NAME: Thomas J. Mitchell

TITLE: Director of Research

DATE: July 18, 1996

SUPERCEDES: July 12, 1993

MATERIAL SAFETY DATA SHEET**NFPA RATING:** Health = 0 Flammability = 0 Reactivity = 0**HMS RATING:** Health = 0 Flammability = 0 Reactivity = 0**SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (0617A)****Manufacturer's Name:** HILLYARD INDUSTRIES**Product Name:** SEAL 341**Address:** 302 North Fourth Street**Date Prepared:** June 7, 1994

St. Joseph, MO 64501

Prepared by: Regulatory Affairs Department**Emergency Telephone No.:** (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)**Other information calls:** (816)233-1321(Ext. 303)**SECTION II -- INGREDIENTS/IDENTITY INFORMATION**

Components (Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Zinc oxide ⁽¹⁾	1314-13-2	5 mg/M ³	5 mg/M ³	N/A	0.2-0.5
Water	7732-18-5	none	none	N/A	—
Acrylic copolymer	unknown to Hillyard	not established	not established	N/A	—
Styrene acrylic emulsion	unknown to Hillyard	not established	not established	N/A	—
Tributoxyethyl phosphate*	78-51-3	not established	not established	N/A	—
Diethylene glycol monoethyl ether*	111-90-0	not established	not established	N/A	1-2
Diethylene glycol mono methyl ether* ⁽²⁾	111-77-3	not established	not established	N/A	1-2

⁽¹⁾ Regulated by OSHA and the following states: FL., IL., LA., MA., NJ.⁽²⁾ Regulated by the following states: FL., PA., RI.

*This product contains the following chemicals subject to the reporting requirements of SARA Title III, Section 313, and 40 CFR Part 372: Tributoxyethyl phosphate, Diethylene glycol monoethyl ether and Diethylene glycol mono methyl ether.

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: (739 mm Hg.) 198.26 °F **Specific Gravity (H₂O = 1):** 25°C = 1.04 & 39°C = 1.03
Vapor Pressure (mm Hg.): 21.1 **Percent Volatile by Volume (%):** 77.8
Vapor Density (AIR = 1): 1.1 **Evaporation Rate (ethyl ether = 1):** slower than 1
Solubility in Water: appreciable **Appearance and Odor:** milky emulsion: non-objectionable odor

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA**Flash point:** none (Tag Closed Cup) **Flammable Limits:** LEL = N/A UEL = N/A**Extinguishing Media:** N/A**Special Fire Fighting Procedures:** None**Unusual Fire and Explosion Hazards:** Material may spatter if temperature exceeds boiling point. Polymer film can burn.**SECTION V -- PHYSICAL HAZARDS****Stability:** Stable **Conditions to Avoid:** N/A**Incompatibility (Materials to Avoid):** None known**Hazardous Decomposition Products or Byproducts:** Thermal decomposition may yield acrylic monomers (avoid temperatures above 177 °C/350 °F). Thermal decomposition is dependent on time and temperature.**Hazardous Polymerization:** Will not occur **Conditions to Avoid:** N/A**SECTION VI -- HEALTH HAZARD DATA****Routes of entry:** Inhalation? N/A Skin? N/A Ingestion? N/A**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. Mild eye irritation.
2. None known.

SECTION VI -- HEALTH HAZARD DATA cont.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater or equal to 0.1%.

Signs and Symptoms of Exposure: None known.

Medical Conditions Generally Aggravated by Exposure: None known.

Emergency and First Aid Procedures: If splashed into eyes flush with water for 15 minutes; if irritation persists get medical attention.

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Pick up with mop or wet vac and wash away with water. Ventilate area of spill or leak. Transfer liquids and diking material to separate suitable containers for recovery or disposal. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.

Waste Disposal Method: Spills should be picked up with wet vac or absorbent material. Dispose of liquid per federal, state and local regulations. Waste from normal product use may be sewerred to a public owned treatment works (POTW) in compliance with applicable federal, state and local requirements.

Precautions To Be Taken In Handling And Storing: Freezing of product may rupture container. Product shelf life is best retained by storage at 45-100 °F temperatures.

Other Precautions: Inhalation exposure to spray mist should be maintained at less than 10 mg/M³ per eight hour exposure (TWA limit established for nuisance dust).

SECTION VIII -- CONTROL MEASURES:

Respiratory Protection (Specify Type): When airborne exposure guidelines and/or comfort levels may be exceeded, use an approved air-purifying respirator.

Ventilation:

Local Exhaust = Not required **Mechanical (General) =** Suggested **Special =** N/A **Other =** N/A

Protective Gloves: None required for brief contact **Eye Protection:** Chemical goggles (contact may cause pain, though it is unlikely to cause injury).

Other Protective Clothing or Equipment: Use good personal hygiene procedures.

Work / Hygienic Practices: Do not take internally; wash contaminated clothing before reuse.

SECTION IX - TRANSPORTATION INFORMATION:

Applicable regulations: 49 CFR = no; IMCO = no; IATA = no.

Proper shipping name: Liquid Floor Wax & Polish

UN No.: not applicable; **Limited Qty.:** not applicable; **Hazard Class:** not applicable.

Labels required: not required **DOT Exception:** not applicable

EPA Hazardous waste number / code: not listed

Hazardous waste characteristics:

Ignitability = not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable.

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.

NFPA RATING: Health = 2 Flammability = 0 Reactivity = 0
 HMIS RATING: Health = /2 Flammability = 1 Reactivity = 0

SECTION I - IDENTITY AND MANUFACTURER'S INFORMATION (513N-90C)

Manufacturer's Name: HILLYARD INDUSTRIES
 Address: 302 North Fourth Street
 St. Joseph, MO 64501

Product Name: SANITIZER

Date Prepared: April 8, 2003

Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816) 233-1321 (Ext. 8285)

<http://www.hillyard.com>

SECTION II - INGREDIENTS/IDENTITY INFORMATION

Components

(Specific Chemical Identity:

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Didecyl dimethyl ammonium chloride	7173-51-5	not established	N/A	N/A	2.31
n-Alkyl (C ₁₄ 50%, C ₁₂ 40%, C ₁₆ 10%) dimethyl benzyl ammonium chloride	8001-54-5	not established	N/A	N/A	1.54
Ethanol	64-17-5	1000ppm	1000ppm	N/A	< 1
Deionized water	7732-18-5	none	N/A	N/A	---

VOC (Concentrate) = 0.96%; VOC (Minimum Dilution) = 0.004%

SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 118°F	Specific Gravity (H ₂ O = 1): 25°C = 1.00 & 39°C = 1.00
Vapor Pressure (mm Hg.): 17.6	Percent Volatile by Volume (%): 93-96%
Vapor Density (AIR = 1): 0.6	Evaporation Rate (ethyl ether = 1): slower than 1
Solubility in Water: complete	Appearance and Odor: clear, golden yellow liquid; non-objectionable odor
pH of concentrate: 6.0 - 8.0	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash point: >200°F (Tag Closed Cup) Flammable Limits: LEL = Not known UEL = Not known

Extinguishing Media: Alcohol foam, carbon dioxide, dry chemical, water

Special Fire Fighting Procedures: Must wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.

Unusual Fire and Explosion Hazards: Products of combustion are toxic. Heated solvent vapors can travel to an ignition source and flash back.

SECTION V - PHYSICAL HAZARDS

Stability: Stable

Conditions to Avoid: None known

Incompatibility (Materials to Avoid): None known

Hazardous Decomposition Products or Byproducts: Thermal decomposition may produce toxic vapors/fumes of Hydrogen chloride, amines, and other organic materials, and oxides of carbon and nitrogen

Hazardous Polymerization: Will not occur Conditions to Avoid: None known to Hillyard

SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? yes Skin? yes Eye? Yes Ingestion? no

HEALTH HAZARDS (1. Acute and 2. Chronic)

1 Product produces severe eye and skin burns in the concentrate. Do not get in eyes, on skin or on clothing. Wear protective eyewear (goggles, face shield or safety glasses), protective clothing and rubber gloves. Wash thoroughly with soap and water after handling. Harmful if swallowed. Remove contaminated clothing and wash clothing before reuse. This product has an Oral LD50 (rat) = 1850mg/kg.; and a dermal LD50 (rabbit) = 4430mg/kg. The skin irritation (rabbit) = severe irritant (primary irritation); eye irritation (rabbit) = severe irritant. When diluted essentially not an eye irritant and not expected to be skin irritant when similar formula was diluted 1:64 with 3.8 % actives and pH of 13. 2. None known to Hillyard.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No

I.A.R.C. Monographs = No

OSHA = No

Signs and Symptoms of Exposure: Based upon available animal toxicity information, it is anticipated that the concentrated material will be corrosive to the skin and eyes upon direct or prolonged contact. Solvent vapors or mists of products can produce irritation of mucous membranes. Ingestion can produce immediate burning pain in the mouth, throat, and abdomen; severe swelling of the larynx; skeletal muscle paralysis affecting the ability to breathe; circulatory shock; and/or convulsions. May be fatal. Exposure to ethyl alcohol concentrations of over 1,000 ppm may cause headaches, irritation of the eyes, nose and throat, and, if continued for long period of time drowsiness and lassitude, loss of appetite and inability to concentrate.

SECTION VI -- HEALTH HAZARD DATA continued

Medical Conditions Generally Aggravated by Exposure: None known to manufacturer.

Emergency and First Aid Procedures: **Eyes:** Flush with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Get immediate medical attention. If physician is not available, flush for additional 15 minutes and then transport victim to medical care. **Skin:** Wash with large amounts of running water, and soap if available, for 15 minutes; remove contaminated clothing and shoes. Get immediate medical attention. Wash clothing and decontaminated shoes before reuse. **Ingestion:** If swallowed, immediately give 3-4 glasses of milk (if unavailable, give water). DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Have physician determine if patient's condition allows for induction of vomiting or evacuation of the stomach. Do not give anything by mouth to a convulsing or unconscious person. **Inhalation:** Remove from area to fresh air. If not breathing, clear airway and start artificial respiration. If victim is having trouble breathing, give supplemental oxygen, if available. Get immediate medical attention.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Supplemental oxygen and other measures to support breathing may be needed to combat circulatory shock. Persistent convulsions may be controlled by the cautious intravenous injection of a short acting barbiturate drug.

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Danger! Corrosive material. Floors may become slippery. Wear appropriate protective gear and NIOSH/MSHA approved respirator where mists or vapors of unknown concentrations may be generated (self-contained breathing apparatus preferred). Wash thoroughly with soap and water after handling. Dike and contain spill with inert material (sand, earth, etc.) and transfer the liquid and solid separately to containers of recovery or disposal. Keep spill out of sewers and open bodies of water.

Waste Disposal Method: Dispose of in compliance with all federal, state and local laws and regulations. Incineration is the preferred method.

Precautions To Be Taken In Handling And Storing: Keep away from children.

Other Precautions: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning & Community Right to Know Act of 1986 and 40 CFR Part 372.

SECTION VIII -- CONTROL MEASURES

Ventilation: In processes where mists or vapors must be generated, proper ventilation must be provided in accordance with good ventilation practices. **Respiratory Protection (Specify Type):** Where mist or vapors are generated by the process or if recommended TWA/TWA for ethyl alcohol is exceeded, a NIOSH/MSHA jointly approved respirator is advised in the absence of proper environmental controls. **Protective Gloves:** Rubber or neoprene, when needed, to prevent skin contact. **Eye Protection:** Wear chemical splash goggles where there is a potential for eye contact. Use safety glasses with side shields under normal use conditions. **Other Protective Clothing or Equipment:** Eyewash, safety shower, protective clothing (long sleeves, coveralls or other, as appropriate), when needed to prevent skin contact with concentrate. **Work / Hygienic Practices:** Wash hands thoroughly after handling.

Precautions for storage and handling: Store at temperatures below 1400°F. Keep containers closed until used. Do not contaminate drinking water, food or feed by storage or disposal.

SECTION IX - TRANSPORTATION INFORMATION

Applicable regulations: 49 CFR = No; IMCO = No; IATA = No

Proper shipping name: Cleaning Compound; **UN No.:** Not applicable; **Limited Qty.:** Not applicable;

Hazard Class: Not applicable

Labels required: Not required **Exception:** Not applicable

EPA Hazardous waste number/code: Not listed

Hazardous waste characteristics: **Ignitability** = Not applicable; **Corrosivity** = Not applicable; **Reactivity** = Not applicable

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.

700069



MATERIAL SAFETY DATA SHEET

SECTION 1 - MANUFACTURER OR SUPPLIER DATA

 MSDS NUMBER
100068

MANUFACTURER'S NAME & MAILING ADDRESS U S Chemical Corporation 316 Hart Street Watertown, Wisconsin 53094 USA	PREPARED BY D. E. Kenas	SIGNATURE <i>David E. Kenas</i>
EMERGENCY TELEPHONE NO. (24 HOUR SERVICE) Medical Emergency ONLY: 1-800-851-7145 Ext. 075	TITLE Quality Assurance Manager	DATE 1-4-02
PRODUCT INFORMATION TELEPHONE NO. (8 AM TO 5 PM CST. MON - FRI) Product Information: 1-800-558-9566		

SECTION 2 - IDENTITY OF MATERIAL

PRODUCT NAME SANITIZER E.S.			
PRODUCT DESCRIPTION Chlorine Sanitizer (Oxidizing Agent) [EPA Registered]		FORMULA Proprietary Blend	CHEMICAL FAMILY N.A.
REGULATED IDENTIFICATION	DOT PROPER SHIPPING NAME HYPOCHLORITE SOLUTION		
	SHIPPING ID NUMBER UN1791	PACKING GROUP III	HAZARD CLASS 8 (CORROSIVE MATERIAL)

SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT N.A.	SPECIFIC GRAVITY (H ₂ O = 1) 1.140	PHYSICAL FORM Liquid	COLOR Yellow
VAPOR PRESSURE (mm Hg) N.A.	MELTING POINT N.A.	SOLUBILITY IN WATER Complete	SCENT None Added
VAPOR DENSITY (AIR = 1) N.A.	EVAPORATION RATE (BUTYL ACETATE = 1) N.A.	pH 2500 ppm SOLUTION N.A.	pH CONCENTRATE Greater than 12.0
OTHER Non-Scented, however, a slight chlorine odor is present.			

SECTION 4 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS (CHEMICAL NAME: COMMON NAME)	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	PERCENT WT/WT
Sodium Hypochlorite: Bleach	.5 ppm TWA	.5 ppm TWA	1 ppm STEL	6.4
CAS Registry Number 7681-52-9	As Chlorine	As Chlorine	As Chlorine (ACGIH/OSHA)	

This product contains no other ingredient considered hazardous according to the criteria of 29 CFR 1910.1200, OSHA. However, this product contains chemicals which may be subject to reporting requirements according to the criteria of SARA Title III, 40 CFR, Part 370, Section 311 and Section 312.

STATE RIGHT TO KNOW INFORMATION

THIS PRODUCT CONTAINS: WATER/7732-18-5, SODIUM HYPOCHLORITE/7681-52-9

NFPA RATING: Health-3/Flammability-0/Reactivity-1/OXY See Section 5 for Protective Equipment.
 HMIS RATING: Health-3/Flammability-0/Reactivity-1/OXY See Section 5 for Protective Equipment.

CARCINOGENICITY:

This product does not contain any known carcinogens or anticipated carcinogens according to the criteria of the NTP Annual Report on Carcinogens, IARC Monographs, and OSHA 29 CFR 1910, Subpart Z.

(CONTINUED IN SECTIONS 5 TO 8)

SECTION 5 - SAFE USAGE DATA

PROTECTIVE EQUIPMENT TYPES	EYES Splash-proof safety glasses, safety goggles, and an eye-wash station.	
	RESPIRATORY None required with normal use.	GLOVES Rubber or Neoprene.
	OTHER Wear full-cover protective clothing to prevent repeated or prolonged contact.	
VENTILATION	GENERAL MECHANICAL Satisfactory. Maintain adequate ventilation. Keep levels below recommended TLV.	
	LOCAL EXHAUST Not ordinarily needed. Avoid inhalation of mists containing this product.	
PRECAUTIONS	HANDLING & STORAGE Follow all label directions. Instruct personnel about proper use, hazards, precautions, and first-aid measures. Avoid inhalation, ingestion and contact with skin and eyes.	
	Rotate stock regularly. Handle carefully to avoid damaging container. Keep container closed.	
	Recommended storage temperature below 85°F to maximize shelf-life. Keep out of children's reach.	

SECTION 6 - HEALTH HAZARD DATA

EFFECTS OF EXPOSURE	INHALATION Corrosive. Inhalation of mist may cause irritation to nose, throat and mucous membranes, pulmonary irritation, pulmonary edema, tissue damage and chemical burns.	
	INGESTION Corrosive. Harmful or fatal if swallowed. May cause nausea, vomiting, and severe tissue damage to digestive tract. Corrosive to mouth, throat, stomach and to other tissues.	
	SKIN & EYES SKIN: Corrosive. Contact may cause severe irritation, dermatitis, and chemical burns. EYES: Corrosive. Causes eye burns. May cause temporary or permanent vision loss and blindness.	
	ACUTE & CHRONIC ACUTE: Corrosive to all body tissues. Harmful skin contact may not cause immediate pain. Permanent eye damage may result without immediate first aid treatment. CHRONIC: None Known.	
ROUTES OF ENTRY	INGESTION-X SKIN ABSORPTION-X SKIN-X EYES-X INHALATION-X	TARGET ORGANS Eyes, Skin, Respiratory System.

SECTION 7 - PHYSICAL HAZARD DATA

FLAMMABILITY	LEL = N.A. UEL = N.A.	FLASH POINT = N.A.	METHOD USED = N.A.
STABILITY	STABLE	X	CONDITIONS TO AVOID Avoid mixing with any other cleaning product. Mix only with water. Avoid temperatures above 100°F. Recommended storage temperature is below 85°F.
	UNSTABLE		HAZARDOUS DECOMPOSITION PRODUCTS Hypochlorous acid, chlorine, hydrochloric acid, and hydrazine. Composition depends upon temperatures and decrease in pH.
HAZARDOUS POLYMERIZATION	MAY OCCUR	X	CONDITIONS TO AVOID
	WILL NOT OCCUR		N.A.
INCOMPATIBILITY	MATERIALS TO AVOID Hydrochloric acid and other acidic materials, reducing agents, oxidizable and combustible organics, various metals, hydrocarbons, ammonia, amines, and other nitrogen compounds.		

SECTION 8 - EMERGENCY RESPONSE DATA

FIRE	EXTINGUISHING MEDIA For fires in area, use appropriate media. For example: Water spray, dry chemical, carbon dioxide, or alcohol foam.
	SPECIAL PROCEDURES Evacuate area of unprotected personnel. Wear protective clothing including a NIOSH-approved self-contained breathing apparatus.
	UNUSUAL HAZARDS Decomposition products may cause containers to explode. Chlorine containing gases can be produced. Vigorous reaction possible with organic materials.
FIRST AID MEASURES	INGESTION: Do not induce vomiting. If patient is conscious and can swallow, administer milk or water. SKIN: Remove contaminated clothes, flood with water for 15 minutes. EYES: Flood with lukewarm (not hot) water poured from a large glass 2 or 3 inches from eyes. Remove contacts. Have patient blink as much as possible while flooding the eyes. Continue for 15 minutes. INHALATION: Move victim to fresh air. Give artificial respiration if patient is not breathing. ADMINISTER FIRST AID TREATMENT AS STATED ABOVE, THEN CALL 1-800-851-7145 Ext 075 OR CONTACT PHYSICIAN FOR FURTHER MEDICAL INSTRUCTIONS.
SPILLS 100 lbs.	STEPS TO BE TAKEN Wear proper protective equipment including rubber boots. Stop leak if you can do so without risk. Dike or dam large spills. Ventilate area if needed. Soak up with sand or other non-combustible inert absorbent materials. Flush area with water and follow with normal clean-up procedures. Keep combustibles away! Be careful as spills are slippery.
	WASTE DISPOSAL METHOD Comply with all federal, state, and local regulations. Consult state and local authorities for restrictions on disposal of chemical waste. If approved, may be diluted and drained to a municipal sewer or waste treatment plant. Rinse empty container thoroughly with water before discarding. Please recycle empty container whenever possible.

THE DATA IN THIS MATERIAL SAFETY DATA SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND DOES NOT RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR PROCESS. THE DATA CONTAINED IS BELIEVED TO BE ACCURATE, HOWEVER, SINCE USE CONDITIONS VARY AND ARE OUTSIDE OUR CONTROL, THE MANUFACTURER MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, AND ASSUMES NO LIABILITY FOR FAILURE TO FOLLOW PRODUCT USE DIRECTIONS AND SAFETY PRECAUTIONS.

SPARTAN CHEMICAL COMPANY, INC. - MATERIAL SAFETY DATA SHEET

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label)
SANI-T-10

Manufacturer's Name - Spartan Chemical Company, Inc.
Emergency Telephone No. - 800/537-8990
Address - 110 N. Westwood Ave., Toledo, OH 43607

NFPA RATINGS: Health-3 Fire-0 React-0
HMIS RATINGS: Health-3 Fire-0 React-0 Pers. Prot.-B

SECTION II: HAZARDOUS INGREDIENTS

Chemical Name(s) - Alkyl dimethyl benzyl ammonium chloride
CAS Registry No. - 68391-01-5 Weight 5.0%
TWA (mg/m3) - N/A STEL (mg/m3) - N/A Ceiling (mg/m3) - N/A
Carcinogen - No

Chemical Name(s) - Alkyl dimethyl ethyl benzyl ammonium chloride
CAS Registry No. - 68956-79-6 Weight 5.0%
TWA (mg/m3) - N/A STEL (mg/m3) - N/A Ceiling (mg/m3) - N/A
Carcinogen - No

SECTION III: PHYSICAL DATA

Boiling Point - 210 F
Specific Gravity (H2O = 1) - 0.992
Percent Solid by Weight - 10-11
Vapor Pressure - 17 mm Hg @ 75 F
Evaporation Rate (But. Ace. = 1) - <1
Vapor Density (Air = 1) - Unknown
Solubility in Water - Complete
Appearance and Odor - Water clear, non-viscous liquid, mild odor
Material Is - Liquid
pH - 7.0-8.0

SECTION IV: FIRE & EXPLOSION HAZARD DATA

Flash Point - None
Method Used - ASTM - D56
Flammable Limits - N/A
Extinguishing Media - None
Special Fire Fighting Procedures - None
Unusual Fire and Explosion Hazards - None

SECTION V: HEALTH HAZARD DATA

Effects of Overexposure - Conditions to Avoid:
Ingestion: Harmful or fatal if swallowed. Concentrated product causes severe eye and skin damage. Do not get in eyes, on skin or on clothing.
Acute oral LD50 5.5 g/kg, rats.
Threshold Limit Value - Not Established
Conditions Aggravated by Use - Unknown
Primary Routes of Entry: Skin Contact
 Emergency and First Aid Procedures -

Eyes: Remove contact lenses. In case of contact, immediately flush eyes with water for at least 15 minutes. Call a physician.

Skin: In case of skin contact, immediately flush with water for at least 15 minutes. Remove and wash contaminated clothing before reuse.

Ingestion: If swallowed, promptly drink a large quantity of milk, egg whites, gelatin solution; or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.

Note to Physician:

Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

SECTION VI: REACTIVITY DATA

Stability: Stable X

Incompatibility (Materials to Avoid) - Strong oxidizers

Hazardous Decomposition Products - CO, CO₂

Hazardous Polymerization: Will Not Occur X

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled - Small quantities may be flushed into sanitary sewer. Larger quantities should be contained.

Waste Disposal Method - Same as above.

Container Disposal: Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type) - None

Ventilation - Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

Protective Gloves (Specify Type) - Rubber or other water-proof gloves

Eye Protection (Specify Type) - Goggles or face shield

Other Protective Equipment - None

SECTION IX: SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storing - Keep from freezing.
Other Precautions - None

Spartan Chemical Company, Inc. - SANI-T-10
Ref: 29 CFR 1910:1200 (OSHA)

NAME: Thomas J. Mitchell

TITLE: Director of Research

DATE: July 18, 1996

SUPERCEDES: July 13, 1993

SCC7/96 Copyrighted: Spartan Chemical Company, Inc.

**FOR CHEMICAL EMERGENCY
DURING TRANSPORTATION ONLY**
 CHEMICAL
 1-800-535-5053
 24 HOURS A DAY / 7 DAYS A WEEK

RNO7

Data Sheet For: RUST NIX TILE RED
 Manufactured By: REVERE
 Report Printed: 05/24/1993 11:08:21

Product's ID #: RNO7 Printed: 05/24/1993 11:08:21

MATERIAL SAFETY DATA SHEET

Section II - Hazardous Ingredients (continued)
 Ingredient | Percent | CAS Number
 IRON(III) OXIDE | > 15.00 | 1309-37-1
 Common Names and Synonyms
 PEL: NO INFO | TLV: NO INFO
 Other Limits Recommended: NONE

Section III - Physical/Chemical Characteristics
 Boiling Point: 240-390 F | Specific Gravity: N/A
 Vapor Pressure: 6.0 | Melting Point: N/A
 Vapor Density: HEAVIER | Evaporation Rate: SLOWER
 SOLUBILITY IN WATER
 INSOLUBLE
 APPEARANCE AND ODOR
 RED LIQUID, HYDROCARBON ODDOR

Section IV - Fire And Explosion Hazard Data
 Flash Point: 104 F | Limits: Lel: 0.8% | Uel: 5.0%
 EXTINGUISHING MEDIA
 WATER FOG, DRY CHEMICAL, CARBON DIOXIDE, FOAM
 SPECIAL FIREFIGHTING PROCEDURES
 EVACUATE HAZARD AREA OF UNPROTECTED PERSONNEL, WEAR PROPER
 PROTECTIVE CLOTHING INCLUDING A NIOSH APPROVED SELFCONTAINED
 BREATHING APPARATUS. COOL FIRE-EXPOSED CONTAINERS WITH WATER
 UNUSUAL FIRE AND EXPLOSION HAZARDS
 VAPORS HEAVIER THAN AIR MAY ACCUMULATE IN LOW AREAS OR AREAS
 INADEQUATELY VENTILATED. VAPORS MAY TRAVEL ALONG THE GROUND
 (Continued on next page)

Identity (As used on label and list) | Note: Blank fields are not permitted
 RUST NIX TILE RED
 Section I
 Manufacturer's Name | Emergency Phone #
 REVERE | 1-800-535-5053
 Address | Information Phone #
 4529 INDUSTRIAL PARKWAY | 1-800-321-1976
 City, State, Zip Code | Date Prepared
 CLEVELAND, OH 44135 | NOV. 30, 1990

Section II - Hazardous Ingredients
 Ingredient | Percent | CAS Number
 MINERAL SPIRITS | > 60.00 | 64742-48-9
 Common Names and Synonyms
 MINERAL SPIRITS
 PEL: 500 PPM | TLV: 200 PPM STEL
 Other Limits Recommended: 100 PPM TWA

Ingredient | Percent | CAS Number
 ALKYD RESIN | > 55.00 | 67762-07-6
 Common Names and Synonyms
 ALKYD RESIN (ALSO CAS #64070-93-7 15% OF ABOVE)
 PEL: NO INFO. | TLV: NO INFO.
 Other Limits Recommended: NONE
 Section II continued on next page

Section IV - Fire And Explosion Hazard Data (continued)
UNUSUAL FIRE AND EXPLOSION HAZARDS (Cont.)
TO BE IGNITED AT LOCATIONS DISTANT FROM THE HANDLING SITE.

Section V - Reactivity Data
STABILITY: Stable
CONDITIONS TO AVOID
AVOID HEAT, SPARKS AND OPEN FLAME.
INCOMPATIBILITY (MATERIALS TO AVOID)
NONE

HAZARDOUS DECOMPOSITION PRODUCTS
NONE
HAZARDOUS POLYMERIZATION: Will Not Occur
CONDITIONS TO AVOID
NONE.

Section VI - Health Hazard Data
CARCINOGENICITY | NTP? | IARC? | OSHA REGULATED
NO | NO | NO | NO
Effects and Hazards of Overexposure (Acute and Chronic)

EFFECTS AND HAZARDS OF EYE CONTACT
SHORT-TERM CONTACT MAY RESULT IN SLIGHT EYE IRRITATION.
PROLONGED AND REPEATED CONTACT MAY BE MORE IRRITATING.
EFFECTS AND HAZARDS OF SKIN CONTACT
PROLONGED/REPEATED LIQUID CONTACT CAN CAUSE DEFAATTING/DRYING
OF SKIN WHICH MAY RESULT IN SKIN IRRITATION/DERMATITIS.

EFFECTS AND HAZARDS OF INHALATION (BREATHING)
HIGH CONCENTRATIONS OR PROLONGED EXPOSURE TO LOWER CONCENTRATIONS MAY BE SLIGHTLY IRRITATING TO MUCOUS MEMBRANES.
(Continued on next page)

Section VI continued on next page

Section VI - Health Hazard Data (continued)
EFFECTS AND HAZARDS OF INHALATION (BREATHING)(Cont.)
EFFECTS OF OVEREXPOSURE: ACUTE TOXICITY; OVEREXPOSURE CAN LEAD TO CENTRAL NERVOUS SYSTEM DEPRESSION PRODUCING SUCH EFFECTS AS HEADACHE, DIZZINESS, NAUSEA AND LOSS OF CONSCIOUSNESS.

EFFECTS AND HAZARDS OF INGESTION (SWALLOWING)
CAN CAUSE GASTRO-INTESTINAL IRRITATION, VOMITING AND DIARRHEA
ASPIRATION OF MATERIAL INTO THE LUNGS CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL.
Emergency And First Aid Procedures

TREATMENT FOR EYE CONTACT
FLUSH WITH WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN.
GET MEDICAL ATTENTION.

TREATMENT FOR SKIN CONTACT
WASH WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING AND SHOES. DO NOT REUSE UNTIL CLEANED. IF PERSISTENT IRRITATION OCCURS, GET MEDICAL ATTENTION.

TREATMENT FOR INHALATION (BREATHING)
REMOVE VICTIM TO FRESH AIR AND PROVIDE OXYGEN IF BREATHING IS DIFFICULT. GIVE ARTIFICIAL RESPIRATION IF NOT BREATHING.
GET MEDICAL ATTENTION.

TREATMENT FOR INGESTION (SWALLOWING)
IF SWALLOWED, DO NOT INDUCE VOMITING!!!

Section VII - Precautions for Safe Handling and Use
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
WARNING! FLAMMABLE.
ELIMINATE ALL IGNITION SOURCES. HANDLING EQUIPMENT MUST BE GROUNDED TO PREVENT SPARKING. LARGE SPILLS; EVACUATE THE HAZARD AREA OF UNPROTECTED PERSONNEL. WEAR APPROPRIATE RESPIRATOR AND PROTECTIVE CLOTHING. DIKE AND CONTAIN.

WASTE DISPOSAL METHOD
PUT CONTAMINATED MATERIAL IN SUITABLE CONTAINERS FOR DISPOSAL
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
(Continued on next page)

Section VII continued on next page

Section VII - Precautions for Safe Handling and Use (continued) |
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING(Cont.) |
KEEP AWAY FROM HEAT, SPARKS, OPEN FLAME. KEEP CONTAINERS TIGHT |
LY CLOSED. STORE AWAY FROM STRONG OXIDIZING AGENTS IN A DRY |
PLACE WITH ADEQUATE EXPLOSION-PROOF VENTILATION GROUND EQUIP |
MENT TO PREVENT ACCUMULATION OF STATIC CHARGE. IF POURING OR |
TRANSFERING MATERIALS, CONTAINERS MUST BE BONDED AND GROUNDED |
OTHER PRECAUTIONS |
DO NOT WELD, HEAT, DRILL ON OR NEAR CONTAINER; EVEN EMPTIED |
CONTAINERS CAN CONTAIN EXPLOSIVE VAPORS. PROVIDE RESPIRATORY |
PROTECTION AGAINST SMOKE AND FUMES GENERATED DURING BURNING |
OR DUSTS GENERATED DURING REMOVAL OF DRY COATINGS. |

Section VIII - Control Measures |
RESPIRATORY PROTECTION |
IF EXPOSURE EXCEEDS OCCUPATIONAL EXPOSURE LIMITS(SECTION II) |
USE A NIOSH - APPROVED RESPIRATOR TO PREVENT OVER EXPOSURE. |
Ventilation |
LOCAL EXHAUST VENTILATION |
SUFFICIENT VENTILATION, IN VOLUME AND PATTERN, SHOULD BE |
PROVIDED TO KEEP AIR CONTAMINATION BELOW CURRENT APPLICABLE |
OSHA PERMISSIBLE EXPOSURE LIMIT OR ACGHI'S TLV LIMIT. |
SPECIAL VENTILATION |
NONE |
MECHANICAL (GENERAL) VENTILATION |
SEE ABOVE |
OTHER VENTILATION |
SEE ABOVE |
PROTECTIVE GLOVES |
RECOMMENDED FOR PROLONGED OR REPEATED CONTACT. |
EYE PROTECTION |
WEAR CHEMICAL GOGGLES TO PREVENT EYE CONTACT. |

Section VIII continued on next page

Section VIII - Control Measures (continued) |
OTHER PROTECTIVE EQUIPMENT |
WEAR PROTECTIVE CLOTHING AS REQUIRED TO PREVENT SKIN CONTACT |
AND HYGIENIC PRACTICES |
WASH W/SOAP, WATER BEFORE EATING, DRINKING, SMOKING OR USING |
TOILET FACILITIES. LAUNDRY CONTAMINATED CLOTHING BEFORE REUSE |

LOCEY
SWIM POOL CO.
 6625 LOVERS LANE KALAMAZOO, MICHIGAN
 (616) 327-1553

"MINERAL CLEAR"

MATERIAL SAFETY DATA SHEET

RUST AND SCALE CONTROL

SECTION I - IDENTIFICATION

MANUFACTURER'S NAME..... Haviland Products Company
 ADDRESS (STREET, CITY, STATE, ZIP) 421 Ann St., N.W., Grand Rapids, MI 49504
 PHONE NUMBER..... (616) 361-6691
 EMERGENCY PHONE NUMBER..... CHEMTREC (800) 424-9300
 EFFECTIVE DATE..... 1/1/95
 TRADE NAME..... RUST AND SCALE CONTROL
 CHEMICAL FAMILY..... Miscellaneous Blend

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	OSHA/PEL	ACGIH/TLV (Units)	PROD. CAS #
1-Hydroxyethylidene-1,1-Diphosphonic Acid	Not Established	Not Established	2609-21-4

SECTION III - PHYSICAL DATA

BOILING POINT..... 108°C
 FREEZING POINT..... <-25°C
 VAPOR PRESSURE (mm Hg)..... No Information Available
 VAPOR DENSITY (Air=1)..... No Information Available
 SOLUBILITY IN H₂O..... Completely
 APPEARANCE/ODOR..... Pale Yellow Liquid; slight odor
 SPECIFIC GRAVITY (H₂O=1)..... 1.23 @ 20°C
 PH..... 1% Solution: <2

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT..... Not Flammable
 LOWER EXPLOSIVE LIMIT (% by Volume) Not Applicable
 UPPER EXPLOSIVE LIMIT (% by Volume) Not Applicable
 EXTINGUISH MEDIA..... As for surrounding Area.
 SPECIAL FIRE FIGHTING PROCEDURES... None Currently Known
 UNUSUAL FIRE HAZARD..... None Currently Known

SECTION V - HEALTH HAZARD DATA

CARCINOGENICITY..... None
 NTP..... No
 IARC..... No
 OVER EXPOSURE EFFECTS..... Irritation to eyes.
 PRIMARY ROUTE(S) OF ENTRY..... Inhalation; Eye Contact

MATERIAL SAFETY DATA SHEET

RUST AND SCALE CONTROL

FIRST AID PROCEDURES..... In case of eye contact: Flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water; wash contaminated clothing before reuse. If inhaled: Remove to fresh air.

EXPOSURE AGGRAVATED MEDICAL CONDITIONS None Currently Known

SECTION VI - REACTIVITY DATA

CHEMICAL STABILITY..... Stable

CONDITIONS TO AVOID..... Avoid contact with concentrated caustics; will result in the evolution of heat.

INCOMPATIBLE MATERIALS..... None Currently Known

DECOMPOSITION PRODUCTS..... Phosphines may form after all of the water has been removed. CO, CO₂, and oxides of nitrogen may also be formed.

HAZARDOUS POLYMERIZATION..... Will Not Occur

POLYMERIZATION AVOID..... Not Applicable

SECTION VII - SPILL OR LEAK PROCEDURE

FOR SPILL..... Flush with water or neutralize with lime or soda ash and flush to sewer.

WASTE DISPOSAL METHOD..... Dispose of by flushing into the sewer with large amounts of water. Comply with all federal, state and local regulations.

SECTION VIII - SPECIAL PROTECTION

RESPIRATORY PROTECTION..... None Required for Normal Use

VENTILATION..... None Required for Normal Use

PROTECTIVE GLOVES..... Rubber or other impervious materials.

EYE PROTECTION..... Chemical splash proof goggles.

OTHER PROTECTIVE EQUIPMENT..... A safety shower and eye bath should be available. For operations where spills or splashing may occur, use an impervious body covering and boots.

HANDLING AND STORAGE..... Store in cool, dry, well ventilated area.

SECTION IX - SPECIAL PRECAUTIONS

HAZARD CLASS..... Corrosive Material

DOT SHIPPING NAME..... WATER TREATMENT COMPOUND

UN NUMBER..... NONE

REPORTABLE QUANTITY (RQ)..... Not Listed

MATERIAL SAFETY DATA SHEET
RUST AND SCALE CONTROL

REFERENCES: ZZ1RTSCL



MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

NAME: RTU SANITIZER
USE: QUAT SANITIZER
LABEL: ARRAY
MSDS # 105793R GFS REORDER # 190230

USCHEMICAL, 316 HART STREET, WATERTOWN, WI 53094 USA
MEDICAL EMERGENCY #: 1-800-851-7145 EXT. 075 USA
SPILL EMERGENCY #: 1-800-424-9300 USA
PRODUCT INFORMATION #: 1-800-558-9566 (8 A.M. TO 5 P.M. CST MONDAY TO FRIDAY)
INTERNET ADDRESS: WWW.USCHEMICAL.COM
REVIEWED 6-22-07 REVISED 6-22-07 SECTION REVISED: 1

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: CAUTION! MAY BE MODERATELY IRRITATING TO EYES.

PRINCIPLE ROUTES OF EXPOSURE: EYES, SKIN, INGESTION, INHALATION.

POTENTIAL ACUTE HEALTH EFFECTS

EYES: MAY BE MODERATELY IRRITATING TO EYES.

SKIN: MAY BE MILDLY IRRITATING TO SKIN.

INHALATION: MAY BE IRRITATING TO NOSE, THROAT AND RESPIRATORY TRACT.

INGESTION: MAY BE IRRITATING TO MOUTH, THROAT AND STOMACH. MAY CAUSE ABDOMINAL DISCOMFORT, NAUSEA, VOMITING AND DIARRHEA.

MEDICAL CONDITIONS AGGRAVATED: PERSONS WITH PRE-EXISTING SKIN DISORDERS MAY BE MORE SUSCEPTABLE TO IRRITATING EFFECTS.

3. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT	CAS #	% BY WT	LC50/LD50
OCTYL DECYL DIMETHYL AMMONIUM CHLORIDE	68424-95-3	0.0060	N.AV.
DIOCTYL DIMETHYL AMMONIUM CHLORIDE	5538-94-3	0.0024	N.AV.
DIDECYL DIMETHYL AMMONIUM CHLORIDE	7173-51-5	0.0036	N.AV.
N-ALKYL DIMETHYL BENZYL AMMONIUM CHLORIDE	68424-85-1	0.0080	N.AV.

STATE RIGHT TO KNOW: EXEMPT

4. FIRST AID MEASURES

Page 2 of 4

EYES: HOLD EYE OPEN AND RINSE SLOWLY AND GENTLY WITH WATER FOR 15 – 20 MINUTES. REMOVE CONTACT LENSES, IF PRESENT, AFTER FIRST FIVE MINUTES, THEN CONTINUE RINSING THE EYE.

SKIN: RINSE SKIN WITH PLENTY OF WATER.

INHALATION: MOVE PERSON TO FRESH AIR. IF PERSON IS NOT BREATHING, CALL 911 OR AN AMBULANCE, THEN GIVE ARTIFICIAL RESPIRATION.

INGESTION: CALL A POISON CENTER OR DOCTOR IMMEDIATELY FOR TREATMENT ADVICE. HAVE PERSON SIP A GLASS OF WATER IF ABLE TO SWALLOW. DO NOT INDUCE VOMITING UNLESS TOLD TO DO SO BY THE POISON CONTROL CENTER OR DOCTOR. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

ADMINISTER FIRST AID TREATMENT AS STATED ABOVE, THEN CALL 1-800-851-7145 EXT. 075 OR CONTACT PHYSICIAN FOR FURTHER MEDICAL INSTRUCTIONS.

NOTE TO PHYSICIAN: CALL 1-800-851-7145 EXT. 075 FOR ASSISTANCE WITH THE MANAGEMENT OF EXPOSURES.

5. FIRE-FIGHTING MEASURES

FLAMMABILITY: NO HAZARD.

FLASH POINT: N.A.P.

PRODUCTS OF COMBUSTION: SEE SECTION 10.

SUITABLE EXTINGUISHING MEDIA: FOR FIRES IN AREA, USE APPROPRIATE MEDIA. FOR EXAMPLE: WATER SPRAY, DRY CHEMICAL, CARBON DIOXIDE, OR ALCOHOL FOAM.

SPECIFIC HAZARDS: N.A.P.

SPECIFIC METHODS: NORMAL FIRE FIGHTING PROCEDURES MAY BE USED.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: SEE SECTION 8.

SPILL RESPONSE: EVACUATE UNPROTECTED PERSONNEL FROM AREA. WEAR PROPER PROTECTIVE EQUIPMENT INCLUDING RUBBER BOOTS. VENTILATE AREA IF NEEDED. STOP LEAK IF YOU CAN DO SO WITHOUT RISK. DIKE OR DAM LARGE SPILLS. AVOID DIRECT DISCHARGE TO SEWER AND SURFACE WATERS. PUMP TO CONTAINER OR SOAK UP WITH NON-COMBUSTIBLE INERT ABSORBENT MATERIALS. AFTER SPILL COLLECTION, FLUSH AREA WITH WATER AND FOLLOW WITH NORMAL CLEAN-UP PROCEDURES. BE CAREFUL AS SPILLS ARE SLIPPERY.

7. HANDLING AND STORAGE

HANDLING: FOLLOW ALL LABEL DIRECTIONS. INSTRUCT PERSONNEL ABOUT PROPER USE, HAZARDS, PRECAUTIONS, AND FIRST AID MEASURES.

AVOID INGESTION AND CONTACT WITH EYES. DO NOT TASTE OR SWALLOW.

REMOVE AND WASH CONTAMINATED CLOTHING AND FOOTWEAR BEFORE RE-USE.

PRODUCT RESIDUE MAY REMAIN ON OR IN EMPTY CONTAINERS.

HANDLE CAREFULLY TO AVOID DAMAGING CONTAINER.

STORAGE: ROTATE STOCK REGULARLY. KEEP CONTAINER CLOSED WHEN NOT IN USE. AVOID TEMPERATURES BELOW 35°F OR ABOVE 120°F. PROTECT FROM FREEZING. STORAGE AT AMBIENT TEMPERATURES IN A DRY AREA OUT OF DIRECT SUNLIGHT IS RECOMMENDED. KEEP AWAY FROM FOOD AND DRINK. KEEP OUT OF CHILDREN'S REACH.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Page 3 of 4

EXPOSURE LIMITS: N.A.V.**ENGINEERING CONTROLS:** NONE REQUIRED. GENERAL ROOM VENTILATION IS ADEQUATE.**PERSONAL PROTECTION****EYES:** SAFETY GLASSES WITH SIDE SHIELDS RECOMMENDED IF SPRAYING.**HANDS:** FOR PROLONGED OR REPEATED CONTACT WITH SKIN: RUBBER GLOVES.**RESPIRATORY:** N.A.P.**FEET:** N.A.P.**BODY:** N.A.P.**9. PHYSICAL AND CHEMICAL PROPERTIES****COLOR:** LIGHT ORANGE**ODOR :** NONE**pH CONCENTRATE:** 10.0**pH @ 2500 PPM SOLUTION:** N.A.P.**pH @ USE DILUTION:** N.A.P.**PHYSICAL STATE:** LIQUID**SPECIFIC GRAVITY:** 1.000**VISCOSITY:** NON-VISCOUS**BOILING POINT:** N.A.P.**MELTING POINT:** N.A.P.**FLASH POINT:** N.A.P.**UEL:** N.A.P.**LEL:** N.A.P.**EVAPORATION RATE:** N.A.P.**ODOR THRESHOLD:** N.A.P.**VAPOR PRESSURE:** N.A.P.**VAPOR DENSITY:** N. AP.**COEFF. OIL/WATER:** N.A.P.**WATER SOLUBILITY:** COMPLETE**OTHER:** N.A.P.**10. STABILITY AND REACTIVITY****STABLE:** YES**CONDITIONS TO AVOID:** AVOID TEMPERATURES BELOW 35°F OR ABOVE 120°F.**MATERIALS TO AVOID:** AVOID MIXING DIRECTLY WITH ANY OTHER CLEANING PRODUCT. AVOID OXIDIZING AGENTS. MIX ONLY WITH WATER.**DECOMPOSITION PRODUCTS:** FIRE OR MIXING WITH INCOMPATIBLE MATERIALS MAY PRODUCE OXIDES OF CARBON AND OTHER TOXIC OR IRRITATING FUMES.**POSSIBILITY OF HAZARDOUS REACTIONS:** N.A.P.**11. TOXICOLOGICAL INFORMATION****ACUTE EFFECTS:** SEE SECTION 2.**CHRONIC EFFECTS:** NONE KNOWN. NO REPORTABLE CARCINOGENS, MUTAGENS, SENSITIZERS, SYNERGISTIC MATERIALS, TERATOGENS, OR REPRODUCTIVE TOXINS.**LC50/LD50:** N.A.V.**TARGET ORGANS:** EYES, SKIN, RESPIRATORY SYSTEM.**OTHER TOXIC EFFECTS:** NONE KNOWN.

12. ECOLOGICAL INFORMATION

Page 4 of 4

NOT AVAILABLE.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: COMPLY WITH ALL FEDERAL, STATE, PROVINCIAL AND LOCAL LAWS AND REGULATIONS. CONSULT STATE AND LOCAL AUTHORITIES FOR RESTRICTIONS ON DISPOSAL OF CHEMICAL WASTE. MANAGE CHEMICAL WASTES THROUGH AN APPROVED WASTE TREATMENT FACILITY. DO NOT REUSE EMPTY CONTAINER. RINSE EMPTY CONTAINER THOROUGHLY WITH WATER BEFORE DISCARDING CONTAINER IN ACCORDANCE WITH CURRENT LOCAL COMMUNITY CODES. PLEASE RECYCLE EMPTY CONTAINER WHENEVER POSSIBLE.

14. TRANSPORT INFORMATION

DOT/TDG: NOT REGULATED

DOT RQ: N.AP.

DOT ERG #: N.AP.

15. REGULATORY INFORMATION

EPA CERCLA RQ: N.AP.

EPA REGISTERED: YES

EPA %VOC: 0.00

OSHA HAZARDOUS: YES

PHOSPHORUS CONTENT: 0.00%

PROPOSITION 65: N.AP.

SARA 311/312 HAZARDS: ACUTE

SARA 313 CHEMICALS: N.AP.

STATE RIGHT TO KNOW: SEE SECTION 3 FOR STATE RTK CHEMICAL NAMES.

TSCA INVENTORY STATUS: ALL COMPONENTS ARE LISTED ON THE INVENTORY.

16. OTHER INFORMATION

NFPA RATING: HEALTH-2/FLAMMABILITY-0/REACTIVITY-0/SPECIAL HAZARD-N.AP.

HMIS RATING: HEALTH-2/FLAMMABILITY-0/REACTIVITY-0/PERSONAL PROTECTION-SEE 8.0

N.AV. = NOT AVAILABLE N.AP. = NOT APPLICABLE

PREPARED BY: HEALTH AND SAFETY

NOTICE TO READER

THIS DOCUMENT HAS BEEN PREPARED USING DATA FROM SOURCES CONSIDERED TECHNICALLY RELIABLE. IT DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY OF THE INFORMATION CONTAINED WITHIN. ACTUAL CONDITIONS OF USE AND HANDLING ARE BEYOND SELLER'S CONTROL. USER IS RESPONSIBLE FOR EVALUATING ALL AVAILABLE INFORMATION WHEN USING PRODUCT FOR ANY PARTICULAR USE AND TO COMPLY WITH ALL FEDERAL, STATE, PROVINCIAL AND LOCAL LAWS AND REGULATIONS.

Material Safety Data Sheet

1. Chemical Product and Company Identification

DESCRIPTION: ROSS NO WRINKLE RUBBER CEMENT
PRODUCT TYPE: NATURAL RUBBER
APPLICATION: 00044, 00231, 00232, 00233, 00234, 59100, 59500

• Manufacturer/Supplier Information

MSDS Prepared by:
Elmer's Products, Inc.
1000 Kingsmill Parkway
Columbus, OH 43229
Emergency Phone Number
Poison Control Center
1-800-228-5635 ext 22
For additional health, safety or regulatory information, call 614-225-7695.
Call 1-800-848-9400 to place an order or request additional MSDSs.

2. Composition, Information on Ingredients

The ingredients listed below have been associated with one or more immediate and/or delayed(*) health hazards. Risk of damage and effects depends upon duration and level of exposure. BEFORE USING, HANDLING, OR EXPOSURE TO THESE INGREDIENTS, READ AND UNDERSTAND THE MSDS.

110-54-3 *Hexane

* by weight
10-30

3. Hazards Identification

3.1 Emergency Overview

Appearance Pale yellow, translucent liquid
Odor Hydrocarbon solvent

WARNING!

FLAMMABLE LIQUID AND VAPOR

May be harmful if inhaled.

Can cause central nervous system depression.

May be harmful if absorbed through skin.

Eye irritant.

• HMIS Rating

HEALTH = 2 (moderate)
FLAMMABILITY = 3 (serious)
REACTIVITY = 0 (minimal)
CHRONIC = *

3.2 Potential Health Effects

• Immediate Hazards

INGESTION: Not expected to be harmful under normal conditions of use.
If accidentally swallowed, burns or irritation to mucous membranes, esophagus or GI tract can result.

INHALATION: May be harmful if inhaled. Liquid or vapor may cause irritation of nose, throat and lungs.
Can cause central nervous system depression.

SKIN May be harmful if absorbed through skin. May cause irritation on prolonged or repeated contact.

EYES: Causes irritation.

Hexane 110-54-3
Can cause central nervous system depression. Signs and symptoms may include headache, dizziness, nausea, vomiting, unconsciousness and even asphyxiation.

• Delayed Hazards

Hexane 110-54-3
Suspect reproductive hazard. May cause male reproductive disorders based on animal data.
Chronic exposures may cause peripheral neuropathy.
-- See Footnote C.
Footnote C: As of the date of issuance of this document, this material has not been listed by NTP, classified by IARC nor regulated by OSHA as a carcinogen.

4. First Aid Measures

INGESTION: If accidentally swallowed, dilute by drinking large quantities of water. Immediately contact poison control center or hospital emergency room for any other additional treatment directions.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Call a physician.

SKIN: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing and shoes before reuse.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held apart during irrigation to insure water contact with entire surface of eyes and lids. Call a physician.

5. Fire Fighting Measures

Autoignition Temperature 225 deg C
Upper/Lower Flammable Limits 1.0/7.5 vol %
Up/Lower Explosive Limits, % by Vol Not available
Flash Point -21.6 deg C
FLAMMABLE LIQUID AND VAPOR.
Keep liquid and vapor away from heat, sparks, flame and other ignition sources including, but not limited to, pilot lights, heaters, cigarettes, electric motors and static discharge. Vapor is heavier than air and may settle in low places or travel outward to a source of ignition and flashback.

In case of fire, use dry chemical, foam or CO₂. Water may be ineffective, but should be used to keep fire-exposed containers cool.

6. Accidental Release Measures

Eliminate all ignition sources. Soak up with absorbent material and remove to a chemical disposal area. Prevent entry into natural bodies of water.

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing.

Wash thoroughly after handling.

INHALATION: Avoid breathing vapor. Use with adequate ventilation.

SKIN: Avoid prolonged contact with skin and clothing.

EYES: Avoid contact with eyes.

7.2 Storage

Store in a cool, dry place.

Keep containers tightly closed.

Keep away from heat, sparks, flame and other ignition sources.

Use with adequate ventilation.

8. Exposure Controls/Personal Protection

8.1 Exposure Controls

ENGINEERING CONTROLS: The following exposure control techniques may be used to effectively minimize employee exposure: local exhaust ventilation, enclosed system design, process isolation and remote control in combination with appropriate use of personal protective equipment and prudent work practices. These techniques may not necessarily address all issues pertaining to your operations. We, therefore, recommend that you consult with experts of your choice to determine whether or not your programs are adequate.

If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should be provided to keep air contaminant concentration levels below acceptable criteria.

8.2 Personal Protection

Where air contaminants can exceed acceptable criteria, use NIOSH/MSHA approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminants in air in accordance with OSHA laws and regulations or other applicable standards or guidelines, including ANSI standards regarding respiratory protection. Use goggles if contact is likely. Wear impervious gloves as required to prevent skin contact.

8.3 Exposure Guidelines

Hexane 110-54-3
 ACGIH TLV: Skin - 50 ppm (176 mg/m³) TWA
 OSHA PEL: 500 ppm (1800 mg/m³) TWA
 REMANDED PEL: 50 ppm (180 mg/m³) TWA
 OSHA 1989 PEL remanded, but in effect in some states

9. Physical and Chemical Properties

Percent Volatiles	85
pH @ 25 C	Not applicable
Specific Gravity	.686
Appearance	Pale yellow, translucent liquid
Autoignition Temperature	225 deg C
Boiling Point	68 deg C
Vapor Density (Air=1)	> 1
Vapor Pressure, mm Hg @ 20 C	125
Evaporation Rate (Butyl Acetate=1)	> 1
Upper/Lower Flammable Limits	1.0/7.5 vol %
Up/Lower Explosive Limits, % by Vol	Not available
Flash Point	-21.6 deg C
Freezing Point	-95 deg C
Odor	Hydrocarbon solvent
Odor Threshold, ppm	Not available
Solubility in Water	Negligible
Coefficient of Water/Oil Distrib.	Not available

10. Stability and Reactivity

Normally stable as defined in NFPA 704-12(4-3.1).

• Conditions to Avoid:

Exposure to heat, flame and incompatibles.

• Incompatibilities:

Acids, bases, amines.

• **Decomposition products may include:**

CO, CO2.

• **Hazardous polymerization:**

Will not occur.

• **Other Hazards:**

None known to Borden.

11. Toxicological Information

See Section 3 Hazards Identification information.
Hexane 110-54-3
LC50: Not available
LD50: orl-rat-28700 ug/kg (Sax)

12. Ecological Information

Not determined.

13. Disposal Considerations

Recover free liquid. Absorb residue and dispose of according to local, state/provincial, and federal requirements.
Empty container: May contain explosive vapors. DO NOT cut, puncture or weld on or nearby.

14. Transport Information

14.1 U.S. Department of Transportation (DOT)

The data provided in this section is for information only and may not be specific to your package size. You will need to apply the appropriate regulations to properly classify your shipment for transportation.
Flammable Liquid.

14.2 Canadian Transportation of Dangerous Goods (TDG)

Not determined.

15. Regulatory Information (Selected Regulations)

15.1 U.S. Federal Regulations

- **OSHA Hazard Communication Standard 29CFR1910.1200**

This material is a "health hazard" and/or a "physical hazard" as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

- **SARA Title III: Section 311/312**

Fire hazard
Immediate health hazard
Delayed health hazard

- **SARA Title III Section 313 and 40 CFR Part 372**

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

n-Hexane

110-54-3 15.00%

- **TSCA Section 8(b) Inventory**

All reportable chemical substances are listed on the TSCA Inventory. We rely on certifications of compliance from our suppliers for chemical substances not manufactured by Borden.

15.2 Canadian Regulations

- **Workplace Hazardous Materials Information System (WHMIS)**

This product has been classified in accordance with the hazard

criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by the CPR.

CLASS D, DIV 1B
CLASS D, DIV 2B
CLASS B, DIV 2

• Canadian Environmental Protection Act (CEPA)

All reportable chemical substances are listed on the Domestic Substances List (DSL) or otherwise comply with CEPA new substance notification requirements.

• National Pollutant Release Inventory (NPRI)

This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory.

Hexane 110-54-3 15.00%

16. Other Information

CL (Cautionary Labeling): Products bearing the CL (Cautionary Labeling) Seal of The Art & Creative Materials Institute, Inc. (ACMI) are certified to be properly labeled in a program of toxicological evaluation by a medical expert. This program is reviewed by ACMI's Toxicological Advisory Board. These products are certified by ACMI to be labeled in accordance with the chronic hazard labeling standard, ASTM D-4236 and Federal Law, P.L. 100-695.

• User's Responsibility

The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS) require that the information contained on these sheets be made available to your workers. Educate and train your workers regarding OSHA and WHMIS precautions. Instruct your workers to handle this product properly. Consult with appropriate experts to guard against hazards associated with use of this product and its ingredients.

• Disclaimer

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

CUR ISSUE 24-JAN-01

PREVIOUS ISSUE: 08-SEP-00

Material Safety Data Sheet

ROP-205 ADHESIVE

ROPPE.
Flooring. Capabilities.

This Material Safety Data Sheet Complies with
29 CFR 1910.1200 OSHA Hazard
Communication Standard

SECTION I: MATERIAL IDENTIFICATION AND USE

Material Name/Identifier: ROP-205-A

Description: Solvent-free wall base adhesive

Manufactured for: Roppe Corporation
1602 N Union Street
Fostoria, Ohio 44830

Emergency telephone number: 1-800-537-9527

Telephone number for information:
(419) 435-1546

Date Prepared: October 2001

SECTION II: HAZARDOUS INGREDIENTS

This product contains no hazardous ingredients
as defined by the OSHA Hazard communication
Standard -- 29 CFR 1920.1200.

SECTION III: PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance: Beige paste

Odor: Acrylic odor

Melting Point: NA

Boiling Point: >212 degrees F (>100 degrees C)

Vapor Pressure (mmHg): Same as water

Specific Gravity (water = 1): 1.0

Solubility in Water: Infinitely dilutable

Vapor Density (air = 1): 1.4

Evaporation Rate: Same as water

Tracer Color: Green

SECTION IV: FIRE AND EXPLOSION DATA

Flammable limits: NA

Flash Point (method used): NA

Extinguishing Media: Product will not burn until
all water content has evaporated. For dried
solids, use water spray, foam, CO² or dry
chemical.

Special fire fighting procedures: As a precau-
tion, firefighters should utilize a self-contained
breathing apparatus.

Unusual fire and explosion hazards:
Decomposition by-product may be toxic.

SECTION V: REACTIVITY DATA

Stability:

Stable Conditions to Avoid: None known

Incompatibility (Materials to avoid): None

Hazardous Decomposition or By-Products:
None Known

Hazardous polymerization: May occur

Conditions to avoid: None Known

SECTION VI: HEALTH HAZARD DATA

Route(s) of Entry: Inhalation, skin, ingestion

Acute: May cause minor irritation to sensitive
individuals.

Chronic: None Known

Carcinogenicity: NO

Signs and Symptoms of Exposure: Slight irri-
tation to skin, eyes, or throat.

Medical Conditions Generally Aggravated by
Exposure: None Known

Emergency and first aid procedures:

Ingestion: Give 3 to 4 glasses of water to dilute.
Do not induce vomiting. Do not give anything
by mouth to an unconscious person. Call a
physician immediately.

Inhalation: Remove patient to fresh air.

Skin Contact: Avoid prolonged contact with
skin. Wash with warm water and soap.

Eye Contact: Flush eyes with water for at least
15 minutes. If irritation persists, contact a
physician.

SECTION VII: SPILL OR LEAK PROCEDURE

Steps to be taken if material is released or
spilled: Keep bystanders away. Surface may be
slippery. Contain spill with inert, absorbent
material. Shovel into drum or other appropriate
container.

MATERIAL SAFETY DATA SHEET

■ MANUFACTURER'S NAME

Adhesive Industries Mfg. Co.
14295 Don Julian
City of Industry, CA 91745
(800) 841-4941

10950 S. Pipeline Road
Euless, TX 76040
(800) 841-6657

413 Virgil Drive
Dalton, GA 30721
(800) 241-0528

■ 24 HOUR EMERGENCY:

CHEMTREC (800) 424-9300

HMSIS:	0	Date prepared:	
Health:	G	November, 1994	
Reactivity:	0	Prepared by:	
Flammability:	G	I. Benient	
Perf. Prot. Equip:	0		

■ PRODUCT IDENTIFICATION:

Product Number:	G-4400
Product Class:	H ₂ O Emulsion Latex Adhesive
Product Name:	Multi-Purpose Adhesive
Trade Name:	G-4400 Earth Pro Solvent-Free Multi-Purpose

■ HAZARDOUS INGREDIENTS:

None

■ PHYSICAL DATA:

Boiling Point (°F)	190°-200° F
Vapor Density:	heavier than air
Evaporation Rate:	1 (1=N Butyl Acetate)
Appearance and Odor:	light cream, latex
Specific Gravity (H ₂ O=1):	1.16
Percent Volatile By Volume:	35%
Solubility In Water	completely when wet
V.O.C.	0 Grams/Liter
	Calculated

■ FIRE AND EXPLOSION HAZARD DATA:

Flammable Limits:	Boils w/o flashing
Flash Point (method used):	200°F-SETA C.C.
Flammability Classification:	OSHA: None
	DOT: None
Extinguishing Media:	CO ₂ , chemical foam, water fog
Special Firefighting Procedures:	Wear self contained breathing gear when in confined area.

■ HEALTH HAZARD DATA:

Threshold Limit Value	None
Effects of Overexposure:	None

Emergency and First Aid Procedure: Keep out of eyes. Flush with water for 10-15 minutes. If irritation continues, consult a physician. May cause slight irritation of the skin. Wash with soap and water. Do not induce vomiting if swallowed. Consult a physician.

■ REACTIVITY DATA:

Conditions to Avoid:	Excessive heat or cold
Stability:	Stable
Incompatibility (materials to avoid):	None known
Hazardous Decomposition Products:	When dry may produce CO, H ₂ O, CO ₂ , NXO from burning aromatic hydrocarbons.
Hazardous Polymerization:	Will not occur

■ SPILL OR LEAK PROCEDURES:

Respiratory Protection:	Not required
Ventilation:	Local ventilation
Protective Gloves:	None
Eye Protection:	Recommended
Other Protective Equipment:	None
Hygienic Practices:	Wash with soap and water after exposure

■ SPECIAL PRECAUTIONS:

Precautions to be taken in handling and storing: Store inside at a temperature of 60°F to 100°F. Do not allow product to freeze. Other precautions: None

■ TRANSPORTATION DATA:

No special requirements needed.

■ DISCLAIMER:

This Material Safety Data Sheet was prepared to protect against any reasonable exposure to consumers or employees arising out of the intended use of the product and to provide them with information regarding potential hazards contained in the product. Under varied circumstances the hazardous ingredients may pose a lesser or greater hazard. Because the scientific data contained in these sheets was obtained from tests performed by agencies other than Adhesive Industries Manufacturing, the company cannot guarantee its accuracy. Adhesive Industries Manufacturing makes no warranty of any kind, expressed or implied. The User must assume all risk and liability resulting from reliance on the information contained on this Material Safety Data Sheet and the use of this product, whether used in combination with other products or singly.



Data Sheet AY-773
Revised November 1998

Rite-Qwik

Material Safety Data Sheet

Product Information

Trade Names or Synonyms: Rite-Qwik
Formula: Proprietary, Confidentiality Required
Chemical Family: Water scale solvent

This revised report complies with MSDS and is in accordance with 29 CFR 1910.1200-1500 Hazardous Communication Act effective 25 November 1985 including Subpart Z. Furthermore, this report complies with all current WHMIS and Canadian Government Regulations.

Hazardous Ingredients

Material or Component	TLV (p.p.m.)	Approximate %
Hydrogen Chloride, Aqueous	5	Less than 10%

Note: Material is aqueous organic salt solution and as such should NOT be considered hazardous under normal use conditions.

Note: Laboratory tests indicate material to be BIODEGRADABLE. USDA approved for use in beverage, pharmaceutical, bottling, poultry and other food processing plants. USFDA has no jurisdiction over this product, since it never comes in direct contact with food.

Physical Data

Boiling Point:	101°C	Percent volatile by volume:	99.6
Solubility in water:	Miscible	Appearance:	Dark Liquid
Specific Gravity, (water=1):	1.045	Odor:	Characteristic
Vapor pressure:	30 Torr.	Evaporation Rate, (water=1):	Slow
Vapor Density, (Air=1):	Greater than 1	Physical State:	Liquid

Fire and Explosion Hazard Data

Flash Point:	No flash point, extinguishes flame
Extinguishing Media:	Does not support combustion
Special Fire Fighting Procedures:	None - water will control, as will CO ₂ and dry chemicals
Unusual Fire & Explosion Hazards:	Non-combustible or explosive breathing apparatus recommended
Health:	0
Flammability:	0
Reactivity:	0
Personal Protection:	B

11. It is recommended, but not mandatory, that the **Rite-Qwik** solution be thoroughly mixed before using. Some settling of a black precipitate may occur, resulting in an amber colored liquid, but has no negative affects upon the performance of the solution.
12. The solution has a specific gravity of 1.045.
13. The solution has vaporization temperature of 213°F / 100°C.
14. The solution does NOT have an open or closed cup flash point.
15. The solution does not require neutralizers, as it is free rinsing with water.
16. **Rite-Qwik** is an electrolyte, as are most cleaning agents. An electrolyte is any liquid that will transfer small electrical currents. Examples: salt water, vinegar, Coca-Cola. An electrolyte may cause plating in some types of equipment. This means a transfer of small amounts of one metal onto another metal according to the nobility chart. In some instances, a thin coating of copper may be plated onto a steel drum while circulating an electrolyte such as **Rite-Qwik**. The only time plating occurs is when two different metals are in an electrolyte solution.
17. The solution has the ability to dissolve deposits from some equipment while in operation and without shutdown, if auxiliary coolers are incorporated.
18. The solution has the properties to be mailed or shipped by any private or commercial carrier without restrictions. Air carriers for emergency deliveries may ship **Rite-Qwik** the same day.
19. The solution is packaged and shipped in 5-gallon jugs, 30 and 55-gallon non-returnable drums.
20. Do not circulate material for more than a four-hour period without consulting the manufacturer. Most **Rite-Qwik** cleaning applications can be accomplished within an average of two to four hours. Please use material only as directed.
21. The foregoing specifications are applicable to our product, **Rite-Qwik**, when used according to instructions that are available upon request and in NO WAY are intended to cover other uses or applications by the purchaser.

The solution is biodegradable with a BOD value of 16 mg/liter. This allows for expended solution to be disposed of through regular sewers.

USDA has approved *Rite-Qwik*, for use in plants under their jurisdiction; Publication Number 1419 U.S. Printing Office.



Bulletin No. AY-146

Rite-Qwik Scale Remover

Rite-Qwik Specifications:

1. *Rite-Qwik* is a non-hazardous, non-corrosive, non-flammable, non-injurious, non-toxic, yet fully *biodegradable* solvent, heavily fortified with wetting and penetrating agents which actually dissolves water scale, lime, mud, rust and other water formed deposits from water operated equipment.
2. *Rite-Qwik* should be used as directed and at any temperature within the operating limits between 0°F / -18°C and 180°F / 82°C. If the solution does freeze, slush or thicken at the lower operating temperatures, and then thaws, there will be no performance reducing results. Please consult the manufacturer when temperatures above 180° F are encountered.
3. The solution does not deteriorate, oxidize, saponify, thicken or lose effectiveness for at least five years.
4. Although almost any chemical reaction will react faster under elevated temperatures, *Rite-Qwik* should be applied at ambient temperature (50°F / 10°C and 75°F / 24°C) with full effectiveness and results obtainable.
5. The solution is exothermic, but does not develop a substantial increase in temperature while dissolving water scale, lime, mud, rust or other water formed deposits.
6. *Rite-Qwik* has the ability to dissolve approximately two pounds (1 Kilo) of calcium carbonate scale per U.S. gallon while at 70°F / 21°C, and in concentrated form. If the *Rite-Qwik* is diluted, it will still dissolve two pounds per gallon, but will require additional circulating time.
7. The concentrated solution can be held, safely, in the open hand without deleterious affects.
8. The solution is of a pleasant or characteristic odor, very similar to roasted almonds, and does not exude any obnoxious or unpleasant or toxic vapors.
9. *Rite-Qwik* does not corrode, erode, attack, oxidize or have other deleterious affects on virtually any metal or material such as:

**COPPER
RUBBER**

**FIBER
STEEL**

**LEATHER
TITANIUM**

**IRON
LEAD**

or other materials found in heat exchangers, vacuum pumps, evaporators, condensers, and/or other water-cooled water heated or water operated equipment when used as directed.

10. The exception when using 100% concentrated (non-diluted) *Rite-Qwik* is magnesium, zinc and aluminum, which could oxidize or pit. Furthermore, polished chrome and some alloys of stainless steel could become discolored. It is therefore not recommended for use with concentrated solutions. The rule of thumb is that if the alloy is designed for use in a water system (aluminum engine block, aluminum mold, etc.), the alloy should be compatible with the *Rite-Qwik* solution. Otherwise, it is recommended the *Rite-Qwik* be diluted 50% or more with water when cleaning.

11. It is recommended, but not mandatory, that the *Rite-Qwik* solution be thoroughly mixed before using. Some settling of a black precipitate may occur, resulting in an amber colored liquid, but has no negative affects upon the performance of the solution.
12. The solution has a specific gravity of 1.045.
13. The solution has vaporization temperature of 213°F / 100°C.
14. The solution does NOT have an open or closed cup flash point.
15. The solution does not require neutralizers, as it is free rinsing with water.
16. *Rite-Qwik* is an electrolyte, as are most cleaning agents. An electrolyte is any liquid that will transfer small electrical currents. Examples: salt water, vinegar, Coca-Cola. An electrolyte may cause plating in some types of equipment. This means a transfer of small amounts of one metal onto another metal according to the nobility chart. In some instances, a thin coating of copper may be plated onto a steel drum while circulating an electrolyte such as *Rite-Qwik*. The only time plating occurs is when two different metals are in an electrolyte solution.
17. The solution has the ability to dissolve deposits from some equipment while in operation and without shutdown, if auxiliary coolers are incorporated.
18. The solution has the properties to be mailed or shipped by any private or commercial carrier without restrictions. Air carriers for emergency deliveries may ship *Rite-Qwik* the same day.
19. The solution is packaged and shipped in 5-gallon jugs, 30 and 55-gallon non-returnable drums.
20. Do not circulate material for more than a four-hour period without consulting the manufacturer. Most *Rite-Qwik* cleaning applications can be accomplished within an average of two to four hours. Please use material only as directed.
21. The foregoing specifications are applicable to our product, *Rite-Qwik*, when used according to instructions that are available upon request and in NO WAY are intended to cover other uses or applications by the purchaser.

The solution is biodegradable with a BOD value of 16 mg/liter. This allows for expended solution to be disposed of through regular sewers.

USDA has approved *Rite-Qwik*, for use in plants under their jurisdiction; Publication Number 1419 U.S. Printing Office.

(185400)

Material Safety Data Sheet
May be used to comply with
OSHA's Hazard Communication Standard,
29 CFR 1910.1200. Standard must be
consulted for specific requirements.

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-Mandatory Form)
Form Approved
OMB No. 1218-0072



IDENTITY (As Used on Label and List)
Rim Cages, Urinal Blocks & Screens

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name Tolco Corporation	Emergency Telephone Number 419-241-1113
Address (Number, Street, City, State, and ZIP Code) 1920 Linwood Ave Toledo, OH 43624	Telephone Number for information 419-241-1113
	Date Prepared 4-1-99
	Signature of Preparer (optional)

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
None				
Right to Know Information		CAS #		
Borax - 5 Mole		01303-96-4		
Polyethylene Glycol Distearate		09005-08-7		
Hydrogenated Cottonseed Oil		68334-00-9		
Tetronic 908		11111-34-5		
Perfume		Mixture		

Section III — Physical/Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H ₂ O = 1)	N/A
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A
Solubility in Water	Soluble		
Appearance and Odor	Dye colored block with pleasant fragrance		

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	N/A	Flammable Limits	N/A	LEL	UEL
Extinguishing Media	Water				
Special Fire Fighting Procedures	None				
Unusual Fire and Explosion Hazards	None				

Section V -- Reactivity Data

Stability	Unstable		Conditions to Avoid None
	Stable	X	

Incompatibility (Materials to Avoid) None

Hazardous Decomposition or Byproducts None

Hazardous Polymerization	May Occur		Conditions to Avoid None
	Will Not Occur	X	

Section VI -- Health Hazard Data

Route(s) of Entry: Inhalation? N/E Skin? N/E Ingestion? N/E

Health Hazards (Acute and Chronic) None

Carcinogenicity: None NTP? IARC Monographs? OSHA Regulated?

Signs and Symptoms of Exposure None

Medical Conditions Generally Aggravated by Exposure None

Emergency and First Aid Procedures On contact with skin or eyes, wash with running water. Eyes should be washed for at least 15 minutes. If ingested, induce vomiting and consult physician.

Section VII -- Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled

Sweep up and discard into sewer.

Waste Disposal Method

Precautions to Be Taken in Handling and Storing

Store in a dry area.

Other Precautions

Section VIII -- Control Measures

Respiratory Protection (Specify Type) N/A

Ventilation	Local Exhaust	Recommended	Special
	Mechanical (General)		Other

Protective Gloves Recommended Eye Protection Recommended

Other Protective Clothing or Equipment None

Work/Hygienic Practices

(108900)

Betco Corporation

Material Safety Data Sheet

N/A=Not Applicable

(Prepared According To 29 CFR 1910.1200)

Effective Date: 2/2/98

SECTION 1 - PRODUCT IDENTIFICATION

Product Number: 026
 Product Name: Residual Insecticide Spray
 Generic Name:
 Supplier's Name:
 Supplier's Address:

Chemical Family: N/A
 Formula: N/A

NPCA Hazardous Materials Identification System

Health	2
Flammability	4
Reactivity	0
Maximum Personal Protection	B

SECTION 2 - INGREDIENTS

CHEMICAL NAME	CAS NO.	WT.%	PEL	TWA-TLV	STEL-TLV	CARCINOGEN
Water	7732-18-5	to 100	N/A	N/A	N/A	No
Liquified Petroleum Gas	68476-85-7	20 to 30	1000 ppm	1000 ppm	N/A	No
Petroleum Distillates	64742-48-9	5 to 10	100 ppm	500 ppm	N/A	No
Sodium Benzoate	532-32-1	0 to 5				No
Chlorpyrifos	2921-88-2	0.5				No
Piperonyl Butoxide	51-03-6	0.260				No
Pyrethrins	8003-34-7	0.052	5 mg/m3	5 mg/m3	N/A	No

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372:

CAS#	Chemical Name	Percent by Weight
51-03-6	Piperonyl Butoxide	.260

SECTION 3 - PHYSICAL DATA

Boiling Range: N/A
 Vapor Pressure: 35 psig @ 58°F
 % Volatile: 95+
 Solubility in Water: Nil
 Physical Description: Aerosol spray with characteristic odor.

Specific Gravity: N/A
 Vapor Density: (Air=1):>1
 pH: N/A
 Evaporation Rate: (Water=1):>1

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Concentrate Flash Point (Method): None to boiling. (TCC)
 Propellant Flash Point (Method): -117°F (COC)
 Flash Point (Method): N/A
 Extinguishing Media: Water, dry chemical, foam, or CO2.
 Special Fire Fighting Procedures: N/A
 Unusual Fire and Explosion Hazards: Heated cans may burst.

Explosive Limits
 Upper: 8.4
 Lower: 1.6

SECTION 5 - REACTIVITY DATA

Stability: Stable.
 Incompatibility (Materials to Avoid): Strong oxidizers.

Hazardous Polymerization: Will not occur.

Hazardous Decomposition Products: HCL, CO, and phosgene possible if burned.

SECTION 6 - STORAGE AND HANDLING INFORMATION

Precautions to be Taken in Handling and Storage:
 Keep out of reach of children. Do not store above 120°F.
 Store in well ventilated area. For institutional and commercial use.

SECTION 7 - HEALTH HAZARDS AND FIRST AID

Effects of Overexposure:

Primary Route of Entry:

Skin: Skin irritant. Prolonged or repeated contact may cause drying, flaking, or

Eyes:

Inhalation:

Ingestion:

First Aid Procedures:

Skin: R

Eyes:

Inhalation:

ingestion:

SECTION 8 - SPECIAL PROTECTION INFORMATION

Respiratory Protection:

Protective Gloves:

Other Protective Equipment:

Ventilation:

Eye Protection:

SECTION 9 - SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled:

Waste Disposal Method:

MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 2 Flammability = 0 Reactivity = 0
 HMIS RATING: Health = 2 Flammability = 1 Reactivity = 0

SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (507N-45C)

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: RE-JUV-NAL

Address: 302 North Fourth Street
 St. Joseph, MO 64501

Date Prepared: February 4, 2002

Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816) 233-1321 (Ext. 8285)

<http://www.hillyard.com>

SECTION II -- INGREDIENTS/IDENTITY INFORMATION

Components

(Specific Chemical Identity:

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Didecyl dimethyl ammonium chloride	7173-51-5	not established	N/A	N/A	2.54
n-Alkyl (C ₁₄ 50%, C ₁₂ 40%, C ₁₆ 10%) dimethyl benzyl ammonium chloride	8001-54-5	not established	N/A	N/A	1.69
Octyl dimethyl amine oxide	2605-78-9	not established	N/A	N/A	---
Edtate Disodium	139-33-3	not established	N/A	N/A	---
Deionized water	7732-18-5	none	N/A	N/A	---

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 210°F Specific Gravity (H₂O = 1): 25°C = 1.00 & 39°C = 1.00
 Vapor Pressure (mm Hg.): 17.6 Percent Volatile by Volume (%): 94.7
 Vapor Density (AIR = 1): 0.6 Evaporation Rate (ethyl ether = 1): slower than 1
 Solubility in Water: complete Appearance and Odor: clear, reddish-orange liquid; floral odor
 pH of concentrate: 7.2 - 8.2

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: >200°F (Tag Closed Cup) Flammable Limits: LEL = Not applicable UEL = Not applicable
 Extinguishing Media: Foam, alcohol foam, carbon dioxide, dry chemical, water
 Special Fire Fighting Procedures: Must wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.
 Unusual Fire and Explosion Hazards: Products of combustion are toxic.

SECTION V -- PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: N/A
 Incompatibility (Materials to Avoid): Strong oxidizing and reducing agents.
 Hazardous Decomposition Products or Byproducts: Thermal decomposition may produce toxic vapors/fumes of Hydrogen chloride, amines, and other organic materials, and oxides of carbon and nitrogen
 Hazardous Polymerization: Will not occur Conditions to Avoid: None known to Hillyard

SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? yes Skin? yes Eye? Yes Ingestion? yes

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. From previous experience with a 2 oz. per gallon alkaline quat, the oral LD50 (rat): 1850 mg/kg; Dermal LD50 (Rabbit): 4430 mg/kg.; Eye: Diluted product 1:64 (rabbit) essentially non-irritating; Skin irritation: Diluted product 1:64 (rabbit) Non-irritating Inhalation of fine fog mist can cause irritation of mucous membranes. Fine fog mist application is not recommended. 2. None known to Hillyard.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

Signs and Symptoms of Exposure: Direct eye contact with concentrate can cause severe eye irritation; and direct skin contact will produce severe irritation, which upon prolonged contact may produce burns. Overexposure to fine fog mist of product can produce irritation of the mucous membranes. Ingestion can produce immediate burning pain in the mouth, throat and abdomen; severe swelling of the larynx; skeletal muscle paralysis affecting the ability to breathe; circulatory shock; and /or convulsions.

SECTION VI -- HEALTH HAZARD DATA continued:

Medical Conditions Generally Aggravated by Exposure: None known to manufacturer.

Emergency and First Aid Procedures: Eyes: Flush with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Get immediate medical attention. If physician is not available, flush for additional 15 minutes and then transport victim to medical care. Skin: Wash with large amounts of running water, and soap if available, for 15 minutes; Remove contaminated clothing and shoes. Get immediate medical attention. Wash clothing and decontaminated shoes before reuse. Ingestion: If swallowed, immediately give 3-4 glasses of milk (if unavailable, give water). DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Have physician determine if patient's condition allows for induction of vomiting or evacuation of the stomach. Do not give anything by mouth to a convulsing or unconscious person. Inhalation: Remove from area to fresh air. If not breathing, clear airway and start artificial respiration. If victim is having trouble breathing, give supplemental oxygen, if available. Get immediate medical attention. NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Supplemental oxygen and other measures to support breathing may be needed to combat circulatory shock. Persistent convulsions may be controlled by the cautious intravenous injection of a short acting barbiturate drug.

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Caution. Floors may become slippery. Wear appropriate protective gear and respiratory protection where mist or vapors of unknown concentrations may be generated (self-contained breathing apparatus preferred). Dike and contain spill with inert material (sand, earth, etc.) and transfer the liquid and solid separately to containers of recovery or disposal. Keep spill out of sewers and open bodies of water.

Waste Disposal Method: Dispose of in compliance with all federal, state and local laws and regulations. Incineration is the preferred method.

Precautions To Be Taken In Handling And Storing: Keep away from children.

Other Precautions: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning & Community Right to Know Act of 1986 and 40 CFR Part 372.

SECTION VIII -- CONTROL MEASURES

Ventilation: In processes where mists or vapors must be generated, proper ventilation must be provided in accordance with good ventilation practices. **Respiratory Protection (Specify Type):** In processes where mists or vapors may be generated, a NIOSH/MSHA jointly approved respirator is advised in the absence of proper environmental controls. **Protective Gloves:** Rubber or neoprene, when needed, to prevent skin contact with concentrate. **Eye Protection:** Wear chemical splash goggles where there is a potential for eye contact. Use safety glasses with side shields under normal use conditions. **Other Protective Clothing or Equipment:** Eye wash; safety shower, protective clothing (long sleeves, coveralls or other, as appropriate), when needed to prevent skin contact with concentrate. **Work / Hygienic Practices:** Wash hands thoroughly after handling.

SECTION IX - TRANSPORTATION INFORMATION

Applicable regulations: 49 CFR = No; IMCO = No; IATA = No

Proper shipping name: Cleaning Compound; **UN No.:** Not applicable; **Limited Qty.:** Not applicable;

Hazard Class: Not applicable

Labels required: Not required **Exception:** Not applicable

EPA Hazardous waste number/code: Not listed

Hazardous waste characteristics: **Ignitability** = Not applicable; **Corrosivity** = Not applicable; **Reactivity** = Not applicable

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET. The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate. THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.

(133000)

MATERIAL SAFETY DATA SHEET**NFPA RATING:** Health = 3 Flammability = 0 Reactivity = 0**HMIS RATING:** Health = 3 Flammability = 0 Reactivity = 0**SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (0442C)****Manufacturer's Name:** HILLYARD INDUSTRIES**Product Name:** RE-JUV-NAL 165**Address:** 302 North Fourth Street
St. Joseph, MO 64501**Date Prepared:** May 13, 1994**Prepared by:** Regulatory Affairs Department**Emergency Telephone No.:** (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)**Other information calls:** (816)233-1321(Ext. 303)**SECTION II -- INGREDIENTS/IDENTITY INFORMATION****Components**

(Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Octyl Decyl Dimethyl Ammonium Chloride Dioctyl Dimethyl Ammonium Chloride Didecyl Dimethyl Ammonium Chloride OR Di-N-Alkyl (C ₈ /C ₁₀ -50%; C ₁₀ /C ₁₀ -30%; C ₈ /C ₈ -20%) dimethyl ammonium chloride	68424-95-3	not established	not established	N/A	1.08
Alkyl (C ₁₄ , 50%; C ₁₂ , 40%; C ₁₆ , 10%) Dimethyl Benzyl Ammonium Chloride	68424-85-1	not established	not established	N/A	0.72
Ethanol	64-17-5	1000 ppm	1000ppm	N/A	less than 2%
Sodium metasilicate	6434-92-0	not established	not established	2 mg/m ³	0.2 - 0.7
Water	7732-18-5	none	none	N/A	---
Tetrasodium ethylene diamine tetraacetate	64-02-8	not established	not established	N/A	---
Nonylphenol Ethoxylate	9016-45-9	not established	not established	N/A	---

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 738 mm 202°F **Specific Gravity (H₂O = 1):** 25°C = 1.01 & 39°C = 1.01
Vapor Pressure (mm Hg.): 17.6 **Percent Volatile by Volume (%):** 92.6
Vapor Density (AIR = 1): less than 1 **Evaporation Rate (ethyl ether = 1):** slower than 1
Solubility in Water: appreciable **Appearance and Odor:** red liquid; floral odor
pH of concentrate: 12.4-13.4

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA**Flash point:** None to boiling (T.C.C.) **Flammable Limits:** LEL = N/A UEL = N/A**Extinguishing Media:** Water, dry chemical, carbon dioxide, foam**Special Fire Fighting Procedures:** Wear MSHA/NIOSH approved self-contained breathing apparatus. Cool fire-exposed containers with water spray.**Unusual Fire and Explosion Hazards:** Products of combustion are toxic.**SECTION V -- PHYSICAL HAZARDS****Stability:** Stable **Conditions to Avoid:** Do not mix with anionic cleaners.**Incompatibility (Materials to Avoid):** Oxidizing materials**Hazardous Decomposition Products or Byproducts:** Carbon dioxide, carbon monoxide, ammonia, nitrous oxides, hydrogen chloride**Hazardous Polymerization:** Will not occur **Conditions to Avoid:** none known**SECTION VI -- HEALTH HAZARD DATA****Routes of entry:** Inhalation? yes Skin? yes Ingestion? yes**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. Concentrate is corrosive to all body tissue with which it comes in contact.
2. Prolonged and repeated exposure to the skin may produce dermatitis. Fine fog mist application is not recommended.

SECTION VI -- HEALTH HAZARD DATA cont.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

Signs and Symptoms of Exposure: Direct eye contact can cause severe damage; repeated skin contact can cause severe irritation; concentrate is corrosive to eyes and skin. Ingestion of concentrate: immediate burning pain in mouth, throat, abdomen and severe swelling of larynx, skeletal muscle paralysis and affecting the ability to breathe.

Medical Conditions Generally Aggravated by Exposure: Skin problems such as industrial dermatitis.

Emergency and First Aid Procedures: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. For eyes call a physician. Remove and wash contaminated clothing before reuse. If swallowed, drink promptly a large quantity of egg whites, gelatin solution or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately. Note to physician: Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Dike and contain spill with inert material (sand, earth, etc.) and transfer liquid and solid separately to containers for recovery or disposal. Small spills: Flush with water and pick up with wet vac or mop when on inside flooring. The pH of the concentrate is 12.4-13.4, thus concentrate is defined as corrosive per EPA Hazardous Waste Classification; when diluted with normal tap water for use to pH below 12.5 is not corrosive per EPA definition but still a pesticide waste.

Waste Disposal Method: Pesticide wastes are acutely hazardous. Do not contaminate water, food or feed by storage or disposal. If these wastes cannot be disposed of by use according to label instructions contact you state pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Office for guidance.

Precautions To Be Taken In Handling And Storing: Do not store on side. Avoid creasing or impacting of side walls of package.

Other Precautions: Container disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities by burning. If burned stay out of smoke. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and 40 CFR Part 372.

SECTION VIII -- CONTROL MEASURES:

Respiratory Protection (Specify Type): None normally required. If exposed to fine mist droplets of less than 15 microns, a NIOSH/MSHA approved respirator should be worn.

Ventilation: 10 air changes per hour recommended

Local Exhaust = N/A **Mechanical (General) =** recommended **Special =** N/A **Other =** N/A

Protective Gloves: rubber or neoprene with concentrate **Eye Protection:** chemical goggles or face shield with concentrate

Other Protective Clothing or Equipment: None

Work / Hygienic Practices: Wash thoroughly after handling.

SECTION IX - TRANSPORTATION INFORMATION:

Applicable regulations: 49 CFR = no; IMCO = no; IATA = no.

Proper shipping name: Cleaning Compound

UN No.: not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable

Labels required: not required **DOT Exception:** not applicable

EPA Hazardous waste number/code: not listed

Hazardous waste characteristics:

Ignitability = not applicable; **Corrosivity =** yes; **Reactivity =** not applicable.

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MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 1 Flammability = 2 Reactivity = 0

HMIS RATING: Health = 1 Flammability = 2 Reactivity = 0

SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (492N-46B)

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: QUICK & CLEAN CITRUS-SCRUB

Address: 302 North Fourth Street

Date Prepared: December 16, 1998

St. Joseph, MO 64501

Prepared by: Regulatory Affairs Department

Emergency Telephone (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816) 233-1321 (Ext. 2303)

SECTION II -- INGREDIENTS/IDENTITY INFORMATION**Components**

(Specific Chemical Identity:

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS	
				RECOMMENDED	%
d-Limonene	5989-27-5	not established	not established	N.A.	3-8
Water	7732-18-5	none	none	N.A.	---
Butanedioic acid, sulfo- 1,4- dihexyl ester, sodium salt	3006-15-3	not established	not established	N.A.	---
Cationic Surfactant	72968-37-7	not established	not established	N.A.	---
Nonionic Surfactant	67700-94-4	not established	not established	N.A.	---
Amphoteric Surfactant	94441-92-6	not established	not established	N.A.	---

V.O.C. = 5.6%

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 739 mm Hg 210°F

Specific Gravity (H₂O = 1): 25°C = 0.99 & 39°C = 0.99

Vapor Pressure (mm Hg.): 17.4

Percent Volatile by Volume (%): 91%

Vapor Density (AIR = 1): 0.84

Evaporation Rate (ethyl ether = 1): Slower than 1

Solubility in Water: complete

Appearance and Odor: Clear orange liquid, citrus odor

pH (concentrate) = 6-8

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: 125°F corrected (T.C.C.)

Flammable Limits: LEL = 1% UEL = N.A.

Extinguishing Media: Alcohol foam, dry chemical, carbon dioxide

Special Fire Fighting Procedures: Water spray may be ineffective, but may be used to cool closed containers. Class II fire procedures; wear NIOSH approved respirator and full protective gear.

Unusual Fire and Explosion Hazards: None known to Hillyard Industries.

SECTION V -- PHYSICAL HAZARDS

Stability: Stable

Conditions to Avoid: Heat and flame.

Incompatibility (Materials to Avoid): Strong oxidizing material.

Hazardous Decomposition Products or Byproducts: As with any organic materials, combustion will produce carbon dioxide and probably carbon monoxide.

Hazardous Polymerization: Will not occur

Conditions to Avoid: None known to manufacturer

SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? no Ingestion? LD50 greater than 5 g/kg

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Prolonged skin contact may produce irritation or mild eye irritation. Ingestion can cause nausea, vomiting and gastrointestinal irritation. 2. None known to Hillyard Industries.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monograms = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

SECTION VI -- HEALTH HAZARD DATA continued

Signs and Symptoms of Exposure: May cause irritation to skin and mild eye irritation.

Medical Conditions Generally Aggravated by Exposure: Open cuts and sores may be irritated by contact.

Emergency and First Aid Procedures: In case of contact with eyes or skin, flush with plenty of water for 15 minutes; remove contact lenses then flush eyes with water again. Remove contaminated clothing. Call a physician if irritation persists. Wash clothing before reuse.

SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Absorb large spills with floor dry material. Small spills should be flushed with water and pick up with mop.

Waste Disposal Method: Dispose of in accordance with state or local regulations.

EPA Hazardous Waste Classification: Ignitable Liquid. Incinerate in approved facility; do not incinerate closed container.

Precautions To Be Taken In Handling And Storing: Keep container closed when not in use. Since empty packages retain product residue, follow label warnings even after package is empty.

Other Precautions: Do not dispose of in storm drains or streams. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and 40 CFR Part 372.

SECTION VIII -- CONTROL MEASURES

Respiratory Protection (Specify Type): Not normally required with adequate ventilation.

Ventilation:

Local Exhaust = Normally adequate **Mechanical (General) =** Recommended **Special =** N/A **Other =** N/A

Protective Gloves: Impervious gloves with concentrate. **Eye Protection:** Splash goggles with concentrate.

Other Protective Clothing or Equipment: Handle as a combustible liquid.

Work / Hygienic Practices: Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling; wash clothing before reuse.

SECTION IX - TRANSPORTATION INFORMATION

APPLICABLE REGULATIONS: CFR = No; IMCO = Yes; IATA = Yes.

DOT SHIPPING DESCRIPTION ON BILL OF LADING:

Proper shipping name: Cleaning Compound

UN No.: not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable

Labels required: not required **DOT Exception:** not applicable

Hazardous waste characteristics:

Ignitability = Yes; **Corrosivity =** not applicable; **Reactivity =** not applicable.

IMCO AND IATA SHIPPING DESCRIPTION ON BILL OF LADING:

Proper shipping name = FLAMMABLE LIQUID, N.O.S. (d-Limonene), 3.3, UN1993, PG III

Package Marking = FLAMMABLE LIQUID, N.O.S. (d-Limonene), UN1993

Package Label = Flammable **Hazard Class =** 3.3 **Package Group =** III

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ITEM: 4T889 - EXTINGUISHER 10 LB

PICK REQ: 1109656098

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS: A5858

This MSDS should be attached or kept with the respective product with which it is associated.

MATERIAL SAFETY DATA SHEET - A5858

Associated Grainger Item: 4T889 - EXTINGUISHER 10 LB

PYRO-CHEM(R*)

MATERIAL SAFETY DATA SHEET

MAY BE USED TO COMPLY WITH OSHA'S HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. STANDARD MUST BE CONSULTED FOR SPECIFIC REQUIREMENTS.

U.S. DEPARTMENT OF LABOR
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
(NON-MANDATORY FORM)
FORM APPROVED
OMB NO. 1218-0072

IDENTITY (AS USED ON LABEL AND LIST): PYRO-CHEM ABC MULTIPURPOSE

NOTE:
BLANK SPACES ARE NOT PERMITTED. IF ANY ITEM IS NOT APPLICABLE OR NO INFORMATION IS AVAILABLE, THE SPACE MUST BE MARKED TO INDICATE THAT.

SECTION I

MANUFACTURER'S NAME: PYRO-CHEM

ADDRESS (NUMBER, STREET, CITY, STATE, AND ZIP CODE):
ONE STAMTON STREET
MARINETTE, WISCONSIN 54143

EMERGENCY TELEPHONE NUMBER:
CHEMTREC: (800) 424-9300 OR (703) 527-3887

TELEPHONE NUMBER FOR INFORMATION: (715) 732-3465

DATE PREPARED:

REVISED: JANUARY, 2002

SIGNATURE OF PREPARER (OPTIONAL):

SECTION II - INGREDIENTS/IDENTITY INFORMATION

PART A - HAZARDOUS INGREDIENTS

PRINCIPAL HAZARDOUS COMPONENT(S) (CHEMICAL AND COMMON NAME(S)):	WT. %	CAS NO.	ACGIH TLV	ACUTE TOXICITY DATA
MICA	1-4	12001-26-2	10 MG/MB	NDA
AMORPHOUS SILICA	0.2-1.5	7631-86-9	10 MG/MB	NDA

PART B - OTHER INGREDIENTS

OTHER COMPONENT(S) (CHEMICAL AND COMMON NAME(S)):	WT. %	CAS NO.	ACGIH TLV	ACUTE TOXICITY DATA
MONOAMMONIUM PHOSPHATE	80-95	7772-76-1	N/E	ORAL LD50 (RAT) 5750 MG/KG
AMMONIUM SULFATE	5-15	7783-20-2	N/E	ORAL LD50 (RAT) 3000 MG/KG
ATTAPULGUS CLAY	1-4	8031-18-3	N/E	NDA
METHYL HYDROGEN POLYSILOXANE	0.3-1.5	68037-59-2	N/E	NDA

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: NOT APPLICABLE

SPECIFIC GRAVITY (H2O=1): N.A.

VAPOR PRESSURE (MM HG.): N.A.

MELTING POINT: N.A.

VAPOR DENSITY (AIR=1): N.A.

EVAPORATION RATE (BUTYL ACETATE=1): N.A.

SOLUBILITY IN WATER: LIMITED

APPEARANCE AND ODOR: ODORLESS FINE YELLOW POWDER

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): NOT COMBUSTIBLE

FLAMMABLE LIMITS: N.A.

LEL: N.A.

UEL: N.A.

EXTINGUISHING MEDIA: NOT COMBUSTIBLE

SPECIAL FIRE FIGHTING PROCEDURES: NOT COMBUSTIBLE

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE

SECTION V - REACTIVITY DATA

STABILITY:

UNSTABLE ()
STABLE (X)
CONDITIONS TO AVOID:

INCOMPATIBILITY (MATERIALS TO AVOID): ALKALINE COMPOUNDS

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:
AMMONIA GENERATION UNDER ALKALINE CONDITIONS

HAZARDOUS POLYMERIZATION:
MAY OCCUR ()
WILL NOT OCCUR (X)
CONDITIONS TO AVOID:

SECTION VI - HEALTH HAZARD DATA

ROUTE(S) OF ENTRY:

INHALATION?

YES

SKIN?

YES

INGESTION?

HEALTH HAZARDS (ACUTE AND CHRONIC):

INHALATION MAY IRRITATE RESPIRATORY TRACT; CONTACT MAY CAUSE IRRITATION OF SKIN AND EYES

CARCINOGENICITY:

NTP?

NO

IARC MONOGRAPHS?

NO

OSHA REGULATED?

NO

SIGNS AND SYMPTOMS OF EXPOSURE:

SLIGHT TO SEVERE IRRITATION OF EYES, SKIN AND/OR RESPIRATORY TRACT DEPENDING UPON DEGREE AND DURATION OF EXPOSURE

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
SKIN SENSITIVITY; RESPIRATORY DISORDER

EMERGENCY AND FIRST AID PROCEDURES:

EYES: FLUSH WITH COPIOUS AMOUNT OF WATER.

SKIN: WASH WELL WITH WATER.

INHALATION:

REMOVE FROM AREA OF EXPOSURE. OBTAIN MEDICAL CARE FOR IRRITATION, DISCOMFORT OR GROSS INGESTION.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

WASTE DISPOSAL METHOD:

CONSULT WITH FEDERAL, STATE OR LOCAL ENVIRONMENTAL REGULATORY AGENCIES FOR ACCEPTABLE DISPOSAL PROCEDURES.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:

STORE IN CLOSED CONTAINERS, KEEP DRY AND AT MODERATE TEMPERATURES.

OTHER PRECAUTIONS: AVOID CONTAMINATION WITH ALKALINE MATERIALS.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION (SPECIFY TYPE): NIOSH/MSHA APPROVED DUST RESPIRATOR

VENTILATION:

LOCAL EXHAUST: WHEN REQUIRED FOR DUST CONTROL

MECHANICAL (GENERAL):

SPECIAL:

OTHER:

PROTECTIVE GLOVES:

EYE PROTECTION: SAFETY GOGGLES

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: WASHING FACILITIES

WORK/HYGENIC PRACTICES: NORMAL CARE AND AWARENESS

THIS PRODUCT DATA IS SUPPLIED AS STIPULATED BY THE OSHA "RIGHT TO KNOW" REGULATION 29 CFR 1910.1200 AND IS OFFERED IN GOOD FAITH AS TYPICAL AND N/A AS A PRODUCT SPECIFICATION. THE INFORMATION CONTAINED HEREIN IS BASED ON AVAILABLE DATA AND IS BELIEVED TO BE TRUE AND ACCURATE. NO WARRANTY, EXPRESSED OR IMPLIED, REGARDING THE ACCURACY OF THIS DATA, HAZARDS CONNECTED WITH THE USE OF THE MATERIAL, OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF, IS MADE. PYRO-CHEM ASSUMES NO RESPONSIBILITY FOR DAMAGE OR INJURY FROM THE USE OF THE PRODUCT DESCRIBED HEREIN.

N/A = NOT APPLICABLE
N/E = NONE ESTABLISHED
NDA = NO DATA AVAILABLE

(REPRODUCE LOCALLY)

OSHA 174, SEPT. 1985

*USGPO 1966-491-529/45775

ORDER: 1109656098

ITEM: 4T889 - EXTINGUISHER 10 LB

HAZMAT: 4T889

HAZARD MATERIAL WARNING SHEET (HAZMAT)

When shipment is complete, retain for daily Hazmat audit

GRAINGER SHIPPING INFORMATION

STOCK # : 4T889
MSDS # : A5858
FREIGHT CODE : 0930
DOT PROPER SHIP NAME : FIRE EXTINGUISHERS

UPS RESTRICTIONS : DO NOT SHIP UPS.

HAZARDOUS CLASS NUMBER : 2.2
UN ID # : 1044
PACKING GROUP :
SHIPPING LABEL : NON-FLAMMABLE GAS
LIMITED QUANTITY : Y
CARTON INSTRUCTIONS : CAN REPACK IN GRAINGER S CARTON
EXCEPTION :
DOT/UPS EXEMPTION NO. :
COMMENTS 1 : HAZARDOUS MATERIAL. DO NOT SHIP AIR!!
COMMENTS 2 : "INNER PACKAGES COMPLY" LABEL 2S593 REQUIRED.
SHIPPING-PAPERS : AUTOMATED BILL OF LADING REQUIRED.
PLACARD OFFERED ? YES () NO () PLEASE MARK ONE
ERG TO ACCOMPANY SHIPMENT



192315

Date: 15 October 2001
Supercedes: 11 October 2000**MATERIAL SAFETY DATA SHEET****IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300****1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:**Product Name: **PURELL® INSTANT HAND SANITIZER**Company Name & Address: GOJO Industries, Inc.
One GOJO Plaza, Suite 500
Akron, OH 44311Emergency Phone: **1-800-424-9300 CHEMTREC**
Non-Emergency Phone: (330) 255-6000
MSDS Request Phone: (330) 255-6000 x8804**2. INFORMATION ON INGREDIENTS:**

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
Ethyl Alcohol	64-17-5	1000 ppm	1000 ppm	62
Isopropanol	67-63-0	400 ppm	400 ppm	<5

Other ingredient(s) with notification requirements:	CAS NUMBER	List
Ethyl Alcohol	64-17-5	MA 1; NJ 1S; PA 1; CN 2
Isopropanol	67-63-0	MA 1; NJ 1S; CN 1

3. HAZARDS IDENTIFICATION:**EMERGENCY OVERVIEW**

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:HMIS: Health 1 Flammability 3 Reactivity 0 Personal Protection NoneEye Contact: May cause eye irritation.
Skin Contact: No irritation or reaction expected.
Inhalation: Not applicable.
Ingestion: May cause upset stomach, nausea (Abnormal entry route).
Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.**4. FIRST AID MEASURES:**Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact physician.
Skin Contact: Not applicable.
Inhalation: Not applicable.
Ingestion: Do not induce vomiting. Contact a physician or Poison Control Center.



Date:
Supersedes:

15 October 2001
06 June 2001

4424

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:

Product Name: **PROVON® PERINEAL WASH**

Company Name & Address: **GOJO Industries, Inc.
One GOJO Plaza, Suite 500
Akron, OH 44311**

Emergency Phone: **1-800-424-9300 CHEMTREC**

Non-Emergency Phone: **(330) 255-6000**

MSDS Request Phone: **(330) 255-6000 x8804**

2. INFORMATION ON INGREDIENTS:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
None				

Other ingredient(s) with notification requirements:	CAS NUMBER	List
None		

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW
When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 0 Flammability 0 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.
Skin Contact: No irritation or reaction expected.
Inhalation: Not applicable.
Ingestion: May cause upset stomach, nausea (Abnormal entry route).
Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

4. FIRST AID MEASURES:

Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for 5 minutes. If condition worsens or irritation persists, contact physician.
Skin Contact: Not applicable.
Inhalation: Not applicable.
Ingestion: Do not induce vomiting. Contact a physician or Poison Control Center.

PROVON® PERINEAL WASH

Page 2 of 2

5. FIRE FIGHTING MEASURES:

NFPA:

Health 0 Fire 0 Reactivity 0

Flashpoint °F/°C (PMCC method): Not determined.
 Unusual Fire and Explosion Hazards: None known.
 Special Fire Fighting Procedures: None known.
 Extinguishing Media: X Water Fog X Alcohol Foam X CO₂ X Dry Chemical ___ Other

6. ACCIDENTAL RELEASE MEASURES:

No special requirements. Water clean up and rinse. CAUTION - WILL CAUSE SLIPPERY SURFACES.

7. HANDLING AND STORAGE:

Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye Protection: None required under normal conditions.
 Skin Protection: None required under normal conditions.
 Respiratory Protection: None required under normal conditions.
 Ventilation: None required under normal conditions.
 Protective Equipment or Clothing: None required under normal conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance and Odor: Green clear liquid, herbal fragrance.
 pH (undiluted): 6.0 - 7.0
 VOC, %: 0

10. STABILITY AND REACTIVITY:

Stable/Non reactive product.

11. TOXICOLOGICAL INFORMATION:

No acute or chronic toxic effects expected when used according to directions.

12. ECOLOGICAL CONSIDERATIONS:

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

13. DISPOSAL CONSIDERATIONS:

No special considerations when disposed according to local, state and Federal regulations.

14. TRANSPORT INFORMATION:

Not classified as a hazardous material.

15. REGULATORY AND OTHER INFORMATION:

Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.
 Notice: The information herein is based on data considered to be accurate as of the date of preparation of this material safety data sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The user assumes all liability for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

THE JOHN GIRVAN
COMPANY, INC.

11730 PHILLIPS HIGHWAY JACKSONVILLE FL 32256

PROTEAM PRODUCTS
MATERIAL SAFETY DATA SHEET

EFFECTIVE DATE: 01/01/95

INFORMATION ON THIS FORM IS FURNISHED SOLELY FOR THE PURPOSE OF COMPLIANCE WITH THE OSHA act of 1970 AND SHALL NOT BE USED FOR ANY OTHER PURPOSE. USE OR DISSEMINATION OF ALL OR ANY PART OF THIS INFORMATION FOR ANY OTHER PURPOSE MAY RESULT IN A VIOLATION OF LAW OR CONSTITUTE GROUNDS FOR LEGAL ACTION

SECTION I

MANUFACTURERS NAME

THE JOHN GIRVAN CO

EMERGENCY TELEPHONE NO

1-800-356-6460

CHEMTREC 1-800-424-9300

TRADE NAMES AND SYNONYMS

PROTEAM METAL MAGIC *METAL MAGIC*

CHEMICAL NAME AND SYNONYMS

PROPRIETARY

CHEMICAL FAMILY

PHOSPHONIC ACID

FORMULA

1-HYDROXYETHYLIDENE-1, 1-DIPHOSPHONIC ACID

SECTION II - HAZARDOUS INGREDIENTS

COMPONENT

1-HYDROXYETHYLIDENE-1, 1-DIPHOSPHONIC ACID
(PROPRIETARY) CAS # 2809-21-4

%

50

HAZARD DATA

CAUSES EYE IRRITATION

INERT

50

SECTION III - PHYSICAL DATA

BOILING POINT

>212 F

SPECIFIC GRAVITY (H₂O=1)

~1.48

VAPOR PRESSURE (mmHg)

N/A

VAPOR DENSITY (AIR=1)

N/A

SOLUBILITY IN WATER

COMPLETELY

APPEARANCE AND ODOR

CLEAR LIQUID - MILD ODOR

SECTION IV - FIRE & EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED)

NONE BELOW 212 F

FLAMMABLE LIMITS

N/A

EXTINGUISHING MEDIA

WATER FOG - CARBON DIOXIDE - FOAM - DRY CHEMICAL

SPECIAL FIRE FIGHTING PROCEDURES

WEAR SELF CONTAINED BREATHING APPARATUS

UNUSUAL FIRE AND EXPLOSION HAZARDS

NONE

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

N/A

TOXICITY

ACUTE ORAL LD₅₀ = 3.1g/kg ACUTE DERMAL LD₅₀ IS GREATER THAN 10 g/kg
NOT LISTED ON OSHA'S CARCINOGENIC LIST

EFFECTS OF OVER EXPOSURE

CORROSIVE TO SKIN AND EYES

SECTION V - HEALTH HAZARD DATA (cont.)

EMERGENCY AND FIRST AID PROCEDURES

EYES: FLUSH WITH WATER FOR 15 MINUTES, SEEK MEDICAL ATTENTION
SKIN: WASH WITH SOAP AND WATER, SEEK MEDICAL ATTENTION IF IRRITATION OCCURS
INHALATION: REMOVE TO FRESH AIR

SECTION VI - REACTIVITY DATA

STABILITY

STABLE

CONDITIONS TO AVOID

NONE

INCOMPATIBILITY

STRONG ALKALI

HAZARDOUS DECOMPOSITION PRODUCTS

PHOSPHOROUS COMPOUNDS AND OXIDES OF NITROGEN MAY BE RELEASED

HAZARDOUS POLYMERIZATION

WILL NOT OCCUR

CONDITIONS TO AVOID

NONE

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

NEUTRALIZE SPILL WITH SODIUM CARBONATE - SHOVEL MATERIAL INTO SUITABLE CONTAINER
RINSE AREA THOROUGHLY WITH WATER

WASTE DISPOSAL METHOD

FLUSH MATERIAL TO A SEWER IF ALLOWED BY LOCAL REGULATIONS IF NOT SEND TO AN APPROVED
DISPOSAL FACILITY

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION

NOT NORMALLY REQUIRED UNLESS MISTING OCCURS

VENTILATION

LOCAL EXHAUST
USE IF MISTING OCCURS

SPECIAL
NONE

MECHANICAL

USE FOR GENERAL AREA CONTROL

OTHER

NONE

PROTECTIVE GLOVES

RUBBER OR PLASTIC GLOVES

EYE PROTECTION

GOGGLES

OTHER PROTECTIVE EQUIPMENT

WEAR LONG-SLEEVE CLOTHING

SECTION IX - SPECIAL PRECAUTIONS

OTHER PRECAUTIONS

NONE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

DO NOT STORE CLOSE TO DRY CHEMICALS PROTECT FROM FREEZING

THIS INFORMATION SUPPLIED ABOVE IS PRESENTED IN GOOD FAITH AND HAS BEEN DERIVED FROM SOURCES BELIEVED TO BE RELIABLE, HOWEVER NO WARRANTY EXPRESS OR IMPLIED IS EXTENDED REGARDING ITS ACCURACY OR THE RESULTS TO BE OBTAINED FROM ITS USE SINCE CONDITIONS OF USE ARE BEYOND OUR CONTROL. ALL RISKS ARE ASSUMED BY THE USER.

(211700)

MORGRO INC. **MATERIAL SAFETY DATA SHEET**

=====

PRO-LINK PREMIUM ICE MELTER

Date Prepared: April 1, 2001

Morgro Inc. 1-800-221-1049
145 W. Central Ave
SLC, Utah 84107

=====

SECTION 2. HAZARADOUS INGREDIENTS INFORMATION

HAZARDOUS COMPONENTS: Contains no hazardous ingredients as defined in OSHA 2 tables or the Canadian W.H.I.M.I.S. regulations.

=====

SECTION 3. PHYSICAL /CHEMICAL CHARACTERISTICS

BOILING PT.	N.A.	DENSITY	60#/Cubic Ft.
VAPOR PRESS.	N.A.	MELTING PT.	N.A.
VAPOR DENS.	N.A.	EVAPORATION RATE	N.A.
SOL. IN WATER	Highly Soluble		
APPEARANCE	Green Granule		

=====

SECTION 4. FIRE AND EXPLOSION HAZARD DATA

FLASH PT.	N.A.	FLAMMABLE LIMITS	N.A.
		LEL & UEL	N.A.

EXTINGUISHING MEDIA Water/Foam
SPECIAL FIRE FIGHTING PROCEDURES None
UNUSUAL FIRE AND EXPLOSION HAZARDS None

=====

SECTION 5. REACTIVITY DATA NFPA HAZARD RATING

STABILITY	Stable	0-Least	1-Slight
			2-Moderate 3-High
			4-Extreme
CONDITIONS TO AVOID	None		
INCOMPATIBILITY	N.A.		
HAZARDOUS DECOMPOSITION	N.A.	Health	1
OR BY PRODUCTS		Flammability	0
HAZARDOUS BY PRODUCTS	NONE	Reactivity	0
		Personal Protect.	0

=====

SECTION 6. HEALTH HAZARD

Routes of Entry

Inhalation	N. A.
Skin	N. A.
Ingestion	N. A.

Health Hazards None Known

MORGRO INC. **MATERIAL SAFETY DATA SHEET**

=====
PRO-LINK PREMIUM ICE MELTER

Date Prepared: April 1, 2001

Morgro Inc. 1-800-221-1049
145 W. Central Ave
SLC, Utah 84107

Page -2-

=====
CARCINOGENICITY

NTP N. A.
LARC MONOGRAPHS N. A.
OSHA REGULATED N. A.
SYMPTOMS OF EXPOS. N. A.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE None Known

EMERGENCY AND FIRST AID PROCEDURES

Wash off with water.
In case of eye contact, flush eyes with running water.
If ingested, induce vomiting.

=====
SECTION 7. PRECAUTIONS FOR SAFE USE AND HANDLING

SPIILLS Sweep up and wash down with water.
DISPOSAL Discard in normal waste disposal in accordance with local regulations.
HANDLING & STORAGE Store in dry area. Wash hands after handling.

=====
SECTION 8. CONTROL MEASURES

RESPIRATORY PROTECTION Normal Ventilation
VENTILATION Normal Ventilation
PROTECTIVE CLOTHING

Gloves Optional
Eye Protection Optional
Other None

WORK PRACTICES Wash hands after handling.

=====
SECTION 9. PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS

Store in dry ventilated area.

=====
SECTION 10. REFERENCES

Mixture of inorganic compounds

Magnesium Chloride 7786-30-3
Sodium Chloride 7646-14-5 Corrosion Inhibitor

193274

Date:
Supercedes:07 June 2002
None (New)**MATERIAL SAFETY DATA SHEET****IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300****1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:**

Product Name: **PRO-LINK PINK FOAMER**
 PRO-LINK
 Company Name & Address: 510 CHAPMAN ST
 CANTON, MA 02021
 Emergency Phone: 1-800-424-9300 CHEMTREC
 Non-Emergency Phone: 781-828-9550
 MSDS Request Phone: 781-828-9550

2. INFORMATION ON INGREDIENTS:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
None				

Other ingredient(s) with notification requirements:	CAS NUMBER	List
None		

3. HAZARDS IDENTIFICATION:**EMERGENCY OVERVIEW**

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 1 Flammability 0 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.
 Skin Contact: No irritation or reaction expected.
 Inhalation: Not applicable.
 Ingestion: May cause upset stomach, nausea (Abnormal entry route).
 Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

4. FIRST AID MEASURES:

Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact physician.
 Skin Contact: Not applicable.
 Inhalation: Not applicable.
 Ingestion: Do not induce vomiting. Contact a physician or Poison Control Center.

5. FIRE FIGHTING MEASURES:

NFPA: Health 0 Fire 0 Reactivity 0

Flashpoint °F/°C (PMCC method): Not applicable
 Unusual Fire and Explosion Hazards: None known.
 Special Fire Fighting Procedures: None known.
 Extinguishing Media: X Water Fog X Alcohol Foam X CO₂ X Dry Chemical Other

6. ACCIDENTAL RELEASE MEASURES:

No special requirements. Water clean up and rinse. CAUTION – WILL CAUSE SLIPPERY SURFACES.

7. HANDLING AND STORAGE:

Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye Protection: None required under normal conditions.
 Skin Protection: None required under normal conditions.
 Respiratory Protection: None required under normal conditions.
 Ventilation: None required under normal conditions.
 Protective Equipment or Clothing: None required under normal conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance and Odor: Clear pink liquid with fruity fragrance
 pH (undiluted): 5.5 - 6.5
 VOC, %: 0

10. STABILITY AND REACTIVITY:

Stable/Non reactive product.

11. TOXICOLOGICAL INFORMATION:

No acute or chronic toxic effects expected when used according to directions.

12. ECOLOGICAL CONSIDERATIONS:

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

13. DISPOSAL CONSIDERATIONS:

No special considerations when disposed according to local, state and Federal regulations.

14. TRANSPORT INFORMATION:

Not classified as a hazardous material.

15. REGULATORY AND OTHER INFORMATION:

Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.
 Notice: The information herein is based on data considered to be accurate as of the date of preparation of this material safety data sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The user assumes all liability for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

193255

MATERIAL SAFETY DATA SHEET

IN CASE OF EMERGENCY CALL CHEMTREC AT 1-800-424-9300

1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:

Product Name: **PRO-LINK HAIR & BODY FOAMER**
 PRO-LINK
 Company Name & Address: 510 CHAPMAN ST.
 CANTON, MA 02021
 Emergency Phone: **1-800-424-9300 CHEMTREC**
 Non-Emergency Phone: 781-828-9550
 MSDS Request Phone: 781-828-9550

2. INFORMATION ON INGREDIENTS:

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
None				

Other ingredient(s) with notification requirements:	CAS NUMBER	List
None		

3. HAZARDS IDENTIFICATION:

EMERGENCY OVERVIEW

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

Potential Health Effects:

HMIS: Health 1 Flammability 0 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.
 Skin Contact: No irritation or reaction expected.
 Inhalation: Not applicable.
 Ingestion: May cause upset stomach, nausea (Abnormal entry route).
 Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

4. FIRST AID MEASURES:

Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact physician.
 Skin Contact: Not applicable.
 Inhalation: Not applicable.
 Ingestion: Do not induce vomiting. Contact a physician or Poison Control Center.

5. FIRE FIGHTING MEASURES:NFPA: Health 0 Fire 0 Reactivity 0

Flashpoint °F/°C (PMCC method): Not applicable

Unusual Fire and Explosion Hazards: None known.

Special Fire Fighting Procedures: None known.

Extinguishing Media: X Water Fog X Alcohol Foam X CO₂ X Dry Chemical Other**6. ACCIDENTAL RELEASE MEASURES:**

No special requirements. Water clean up and rinse. CAUTION – WILL CAUSE SLIPPERY SURFACES.

7. HANDLING AND STORAGE:

Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION:

Eye Protection: None required under normal conditions.

Skin Protection: None required under normal conditions.

Respiratory Protection: None required under normal conditions.

Ventilation: None required under normal conditions.

Protective Equipment or Clothing: None required under normal conditions.

9. PHYSICAL AND CHEMICAL PROPERTIES:

Appearance and Odor: Clear green liquid with cucumber melon fragrance

pH (undiluted): 5.5 - 6.5

VOC, %: 0

10. STABILITY AND REACTIVITY:

Stable/Non reactive product.

11. TOXICOLOGICAL INFORMATION:

No acute or chronic toxic effects expected when used according to directions.

12. ECOLOGICAL CONSIDERATIONS:

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

13. DISPOSAL CONSIDERATIONS:

No special considerations when disposed according to local, state and Federal regulations.

14. TRANSPORT INFORMATION:

Not classified as a hazardous material.

15. REGULATORY AND OTHER INFORMATION:

Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.

Notice: The information herein is based on data considered to be accurate as of the date of preparation of this material safety data sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The user assumes all liability for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

SPARTAN CHEMICAL COMPANY, INC. - MATERIAL SAFETY FDATA SHEET

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label)
PREMIUM WOOD POLISH (RTU)

Manufacturer's Name - Spartan Chemical Company, Inc.
Emergency Telephone No. - 800/537-8990
Address - 110 N. Westwood Ave., Toledo, OH 43607

NFPA RATINGS: Health-0 Fire-0 React-0
HMIS RATINGS: Health-0 Fire-0 React-0 Pers. Prot.-A

SECTION II: HAZARDOUS INGREDIENTS

No Hazardous Ingredients at 1% or Greater Concentration

SECTION III: PHYSICAL DATA

Boiling Point - 210-212 F
Specific Gravity (H₂O = 1) - 0.975
Percent Solid by Weight - 7.5-8.5
Vapor Pressure - 18 mm Hg @ 75 F
Evaporation Rate (But. Ace. = 1) - <1
Vapor Density (Air = 1) - Unknown
Solubility in Water - Forms an emulsion
Appearance and Odor - Milky white liquid, citrus fragrance
Material Is - Liquid
pH - 7.2-7.8

SECTION IV: FIRE & EXPLOSION HAZARD DATA

Flash Point - None
Method Used - ASTM - D56
Flammable Limits - N/A
Extinguishing Media - N/A
Special Fire Fighting Procedures - None
Unusual Fire and Explosion Hazards - None

SECTION V: HEALTH HAZARD DATA

Effects of Overexposure - Conditions to Avoid: May cause eye irritation.

Long or repeated contact with skin may cause slight to moderate irritation.

Conditions Aggravated by Use - Unknown

Primary Routes of Entry: Skin Contact

Emergency and First Aid Procedures -

Eyes: Remove contact lenses. In case of contact, immediately flush eyes

with water for at least 15 minutes. If irritation persists, call a physician.

Skin: Flush skin with water for at least 15 minutes. If irritation persists, call a physician.

SECTION VI: REACTIVITY DATA

Stability: Stable X

Incompatibility (Materials to Avoid) - Oxidants

Hazardous Decomposition Products - SiO₂, CO₂ and traces of incompletely
burned carbon products
Hazardous Polymerization: Will Not Occur X

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled - Small
amounts may
be flushed with large amounts of water into sanitary sewer system.
Large
amounts should be disposed of in accordance with local, state and
federal
regulations.
Waste Disposal Method - Same as above

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type) - Not normally required
Ventilation - Good general ventilation should be sufficient for most
conditions. Local exhaust ventilation may be necessary for some
operations.
Protective Gloves (Specify Type) - None required
Eye Protection (Specify Type) - Safety glasses
Other Protective Equipment - None required

SECTION IX: SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storing - None
Other Precautions - None

Spartan Chemical Company, Inc. - PREMIUM WOOD POLISH (RTU)
Ref: 29 CFR 1910:1200 (OSHA)

NAME: Thomas J. Mitchell
TITLE: Director of Research
DATE: July 18, 1996
SUPERCEDES: September 30, 1994

SCC7/96 Copyrighted: Spartan Chemical Company, Inc.
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SECTION 1MANUFACTURED BY
ADDRESSARROW CHEMICAL PRODUCTS, INC.
2067 ST ANNE
DETROIT, MI 48216
INFOTRAC 800-535-5053
313-237-0277
7-30-99EMERGENCY TELEPHONE
TELEPHONE FOR INFORMATION
DATESECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

CHEMICAL INGREDIENTS ARE NOT HAZARDOUS BY OSHA HAZARD COMMUNICATION STANDARD.

SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT	216 F.
VAPOR PRESSURE	LIKE WATER
VAPOR DENSITY (AIR =1)	0.7
SPECIFIC GRAVITY (H ₂ O=1)	1.03
EVAPORATION RATE (butyl acetate = 1)	1
SOLUBILITY IN WATER	COMPLETE
APPEARANCE AND ODOR	PINK, FRESH FRAGRANCE

SECTION 4 - FIRE AND EXPLOSION HAZARD DATAFLASH POINT - NO DATA
FLAMMABLE LIMITS - NO DATA
EXTINGUISHING MEDIA - WILL NOT BURN
SPECIAL FIRE FIGHTING PROCEDURES - WILL NOT BURN
UNUSUAL FIRE AND EXPLOSION HAZARDS - NONE KNOWNSECTION 5 - REACTIVITY DATASTABILITY - STABLE
CONDITIONS TO AVOID - NONE KNOWN
INCOMPATIBILITY (MATERIALS TO AVOID) - NONE KNOWN
HAZARDOUS DECOMPOSITION OR BYPRODUCTS - NONE KNOWN
HAZARDOUS POLYMERIZATION - WILL NOT OCCUR
CONDITIONS TO AVOID - NONE KNOWNSECTION 6 - HEALTH HAZARD DATAROUTES OF ENTRY: ACCIDENTAL INGESTION
HEALTH HAZARDS (ACUTE AND CHRONIC): ACUTE - EYE IRRITANT
CARCINOGENICITY: NTP, IARC MONOGRAPHS, OSHA REGULATED? NO

SIGNS AND SYMPTOMS OF EXPOSURE - CONTACT WITH EYES WILL CAUSE IRRITATION.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE - NONE

EMERGENCY AND FIRST AID PROCEDURES:EYES: IMMEDIATELY FLUSH EYES WITH RUNNING WATER FOR 15 MINUTES. IF IRRITATION PERSISTS CONSULT A PHYSICIAN.
SWALLOWING: IMMEDIATELY DRINK AT LEAST 2 GLASSES OF MILK OR WATER, INDUCE VOMITING, AND CONSULT A PHYSICIAN.
SKIN: IF IRRITATING TO SKIN, FLUSH WITH WATER.SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USESTEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED - COLLECT EXCESS WITH A MOP AND FLUSH AREA WITH WATER. BE SURE TO DRY THOROUGHLY AS AREA WILL BE SLIPPERY.
WASTE DISPOSAL METHOD - MAY BE FLUSHED IN DRAIN
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING - STORE IN A COOL, DRY PLACE. KEEP CONTAINER CLOSED WHEN NOT IN USE, DO NOT GET IN EYES, DO NOT INGEST, USE NORMAL HOUSEKEEPING PROCEDURES.SECTION 8 - CONTROL MEASURESRESPIRATORY PROTECTION - NOT NEEDED
VENTILATION - NOT APPLICABLE
PROTECTIVE GLOVES - RUBBER OR PVC RECOMMENDED
EYE PROTECTION - AVOID EYE CONTACT
OTHER PROTECTIVE EQUIPMENT - NONE NEEDED

(185410)

FP#Para

Material Safety Data Sheet

Section 1 Chemical Product & Company Information

Emergency Contact: (Spill/Release) (800) 424-9300
Information Number: (419) 531-9741

Manufactured By:
Fresh Products
4010 South Avenue
Toledo, OH 43615

Product Name: Para Blocks and Crystals
Product Numbers: 12-4, 12-4PS, 24-4, 144-4, 12-3, 12-3PS, 36-3, 144-3,
12-4BB, 12-3.5BB, 6-24, 6-24HU, 12-24, 12-24HU, 36-24, 36-24HU,
6-16, 6-16HU, 12-16, 12-16HU, 36-16, 36-16HU, 24-4MC2, 1-20, 35-C,
12-USPB

Section 2 Composition/Information on Ingredients

Paradichlorobenzene C.A.S. # 106-46-7
Percent >99% OSHA PEL: 75 PPM ACGIH: 10 PPM
Other Limits: ACGIH-STEL: 110 PPM

Section 3 Hazards Identifications

HMIS Codes:
Health: 2 Flammability: 2 Reactivity: 0
Flash Point: 125 degrees F (Tag closed cup)
Flammability Limits: Not Established
LEL: 2.5 UEL: Not Established

Section 4 First Aid Measures

Emergency and First Aid Procedures:
Eyes: Remove contact lenses. Flush eyes with water for 15 minutes.
Skin: Wash affected area with soap and water
Inhalation: Remove to fresh air
Ingestion: Rinse mouth, DO NOT induce vomiting. Give plenty of water or milk. Contact a physician.
It is advisable to call your local poison control center, so they can advise the patient.

Section 5 Fire Fighting Measures

Extinguishing Media: Water spray, carbon dioxide, dry chemical
Special Fire Fighting Procedures: Full protective equipment, including pressure demand self-contained breathing apparatus and turnout equipment should be worn by fire fighters and others exposed to combustion by products.
Unusual Fire & Explosion Hazards: None known

Section 6 Accidental Release Measures

Steps to be taken in case of material release or spill: Scoop up and place in closed container. Allow residue to evaporate.

Section 7 Handling and Storage

Precautions to be taken in handling and storing: Store in tightly sealed container, away from heat and flame. Avoid exposure to concentrations in excess of recommended limits.
Other Precautions: Do not wear contact lenses when handling paradichlorobenzene. Always practice good housekeeping and hygienic measures. Clean up spills immediately.

Section 8 Exposure Controls/Personal Protection

Ventilation: Local Exhaust: Use in well ventilated areas
Special: Not Applicable
Mechanical: Not Applicable
Other: Not Applicable
Protective Gloves: None when used as directed
Eye Protection: Do not touch eyes with para contaminated hands
Other Protective Clothing or Equipment: None
Work/Hygiene Practices: Wash with soap and water after coming in contact with product.

Section 9 Physical and Chemical Properties

Boiling Point: 345.2 degrees F
Vapor Pressure: 0.6 mmHg
Vapor Density (Air=1): 5.1
Specific Gravity (Water=1): 1.245-1.250
Melting Point: -127 degrees F
Evaporations Rate: (Butyl Acetate = 1) <1
Solubility in water: 0.008% by weight
Appearance: Crystalline solid, various colors and fragrances

Section 10 Stability and Reactivity

Stability: Stable
Conditions to Avoid: None
Incompatible Materials: None known
Hazardous Decomposition Products: Oxides of carbon, smoke, soot, hydrogen chloride and phosgene when burned.
Hazardous Polymerization: Will not occur

Section 11 Toxicological Information

Routes of Entry:
Inhalation: Yes Skin: Yes Eyes: No Ingestion: Unlikely
Health hazards (acute & chronic): Exposure to concentrations above permissible limits cause depression of the central nervous system.
Eyes: May cause irritation
Skin: May cause irritation
Ingestion: Depression of central nervous system
Inhalation: Depression of central nervous system
Carcinogenicity: Inhalation studies indicate paradichlorobenzene in group C carcinogen category, possible human carcinogen.
Signs & Symptoms of Exposure:
Eyes and Skin: Irritation, redness
Ingestion/Inhalation: Headaches, dizziness, nausea, feeling of drunkenness and cardiac sensitization maybe experienced by some individuals when exposure exceeds permissible limits.
Medical conditions generally aggravated by exposure: None known

Section 12 Ecological Information

Not Established

Section 13 Disposal Considerations

Waste Disposal Method: Dispose only in accordance with applicable federal, state and local laws and regulations.

Section 14 Transport Information

DOT Classifications: Non Hazardous

Section 15 Regulatory Information

None Required

Section 16 Other Information

None Required

Paradichlorobenzene is subject to the reporting requirement of Section 313 of the emergency planning and community right to know act of 1986 and CFR: (Sara, Title III).

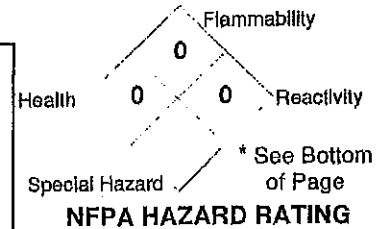
This compound appears on California's proposition 65 list of chemicals (CodeC) and is listed as a toxic chemical by the state of Florida.

Date Prepared: December 15, 2000
By: Alex Isarov, Ph.D./Chief Chemist

MATERIAL SAFETY DATA SHEET

65

Manufactured by:
ANDERSON Chemical Company
 Litchfield, Minnesota 55355-1041
 (320) 693-2477



Product Name: **Oxy Boost**

24-HOUR EMERGENCY PHONE #: 1-800-424-9300 (CHEMTREC)

Revised: 12/6/1998 kma
 Supersedes: 9/11/1996

I. IDENTIFICATION

Chemical Name And Synonyms:

Hydrogen Peroxide

DOT Shipping Name

Not applicable

Chemical Family:

Oxidizer

DOT Hazard Class & I.D. Number

Not applicable

PG

II. HAZARDOUS INGREDIENTS

Component	CAS NO.	%	TLV	PEL	Toxic	Hazard
Hydrogen Peroxide	7722-84-1	<8.0	1 ppm	1 ppm	NA	Oxidizer, irritant to eyes, nose, throat and lungs.

*Toxic chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR

NA: Not applicable

III. PHYSICAL DATA

Boiling Point: >212°F.

Specific Gravity: 1.035

Appearance: Clear, colorless liquid

Form: Liquid

pH, 1% Soln.: 5.5

Solubility In Water: Complete

Odor: None

IV. FIRE AND EXPLOSION HAZARD DATA

Flashpoint: Not Applicable

Extinguishing Media: Water, water fog, CO2

Special Fire

Fighting Procedures: Any tank or container surrounded by fire should be flooded with water for cooling. If hydrogen peroxide is leaking, wear full protective clothing and NIOSH certified breathing apparatus.

Unusual

Fire And Explosion Hazards: Hydrogen peroxide itself is noncombustible. On decomposition, it releases oxygen which may intensify a fire.

V. HEALTH HAZARD DATA

Carcinogenic: The raw materials used in this product are not considered to be a carcinogen by ACGIH and OSHA.

Effects Of Possible irritant to eyes and skin.

Over-exposure:

Emergency And First

Aid Procedures: **EYES:** Flush immediately with water for 15 minutes, raise eyelids for complete rinsing. If irritation occurs and persists, GET PROMPT MEDICAL ATTENTION.

SKIN: Flush with water for 15 minutes. If irritation occurs and persists, GET MEDICAL ATTENTION. Remove contaminated clothing and wash before reuse.

INGESTION: Give several glasses of water. Do not induce vomiting. GET IMMEDIATE MEDICAL ATTENTION. Never give anything by mouth to an unconscious person.

VI. REACTIVITY DATA

Stability - Unstable: Stable:

Conditions To Avoid: Excessive heat and contamination of any kind.

Incompatibility: Iron and other heavy metals, galvanized iron, coppers, copper alloys, rust, dirt, organics or other combustibles.
(Materials To Avoid)

Hazardous Decomposition Products: Oxygen which supports combustion.

VII. SPILL OR LEAK PROCEDURES

Steps To Be Taken In Case Material Is Released Or Spilled:

Dilute with water and hold in diked area until the hydrogen peroxide decomposes.

Waste Disposal Method: Dispose according to federal, state and local regulations. A usually acceptable method is to dilute with large amounts of water and allow the peroxide to decompose followed by discharge into a suitable treatment system.

VIII. SPECIAL PROTECTION INFORMATION

Respiratory Protection: Not required for normal use. If mist level is high, in excess of 10 ppm, wear NIOSH approved respirator.

Ventilation: As necessary to control mists in workplace at or below exposure guidelines. (1 ppm for 8 hour period)

Protective Gloves: Rubber

Eye Protection: Safety goggles

Protective Clothing: None

IX. SPECIAL PRECAUTIONS

Precautions To Be Taken In Handling And Storing:

Store in cool, dry area, with drum upright. Avoid damage to drum, avoid contamination.

Other Precautions: Wash after handling.

X. REVISED INFORMATION

MSDS Status: Name changed to private brand.

The opinions expressed herein are those of qualified experts within ANDERSON Chemical Company. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and these opinions and the conditions of use of the product are not within the control of ANDERSON Chemical Company, it is the user's obligation to determine the conditions of safe use of the product.

(102600)

NFPA Rating Health 2 Flammability 2 Reactivity 0 **HMS Rating** Health 2 Flammability 2 Reactivity 0

SECTION I

Material Safety Data Sheet This MSDS complies with OSHA's Hazard Comm. Standard 29 CFR 1910.1200 and OSHA Form 174		DOT Hazard Classification * Consumer commodity, ORM-D	
Distributed By: Hillyard Industries, Inc.		Identity (Trade Name) #1033 Stainless Steel Cleaner	
Address: P.O. Box 909		MSDS Number * 1033-99-1	
St. Joseph, MO 64502		Date Prepared: January 1, 1999	
Telephone (Information)	(816) 233-1321 (Ext.2303) http://www.hillyard.com	Prepared By: Regulatory Dept.	
Telephone (Emergency)	CHEMTREC (1-800-424-9300)	NOTE: Blank spaces are not permitted, if any item is not applicable or no information is available, the space must be marked to indicate that.	

SECTION II - Ingredients/Identify Information

Components (Specific Chemical Identity; Common Name(s))	CAS No.	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%(Opt.)
Isobutane	75-28-5	800 ppm	800 ppm		
Propane	74-98-6	1000 ppm	Asphyxiant		
Mineral spirits (exposure as mist)	64742-88-7	5 mg/m ³	5 mg/m ³		
Adepsine Oil	8042-47-5	None	None		
Lemon Oil	Mixture	None	None		
Water	7732-18-5	None	None		

under SARA Title III Sec. 313. Reference 40 CFR 372.

Any substance listed as hazardous by the States of California, Florida, Illinois, Michigan, New Jersey, Ohio, Pennsylvania or Texas is described above if known present in regulated concentrations.

SECTION III Physical/Chemical Characteristics

Bolling Point Concentrate	212° F	Specific Gravity (H ₂ O = 1) Concentrate	0.845
Pressure (psig. @ 70° F)	37 ± 5	Melting Point	No Data
Vapor Density (AIR = 1)	Greater than one (1)	Evaporation Rate (Butyl Acetate = 1)	No Data
Solubility in Water Soluble		pH	7 + 0.5

Appearance and Odor
White opaque lotion-like liquid with a lemon-lime scent in an aerosol can.

SECTION IV - Fire and Explosion Hazard Data

USA Flame Projection Test (ASTM D-3065) 0", No flashback; Not flammable	Flammable Limits No Data	LEL No Data	UEL No Data
--	-----------------------------	----------------	----------------

Extinguishing Media -
Treat as an oil fire. Use carbon dioxide, dry chemical, foam.

Special Fire Fighting Procedures - Use water spray to keep containers cool and vapors down. Do not allow runoff to enter sewers or public watercourses. Wear self-contained breathing apparatus in chemical fires.

Unusual Fire and Explosion Hazards -
Aerosol container (pressurized) may burst if heated over 120° F.

SECTION V - Reactivity Data

Stability	Unstable		Conditions to Avoid - Extreme heat, direct sunlight, and open flame
	Stable	X	

Incompatibility (Materials to Avoid) -

Strong acids and alkalis, oxidizers and selected amines.

Hazardous Decomposition or Byproducts -

Carbon monoxide, carbon dioxide, smoke, soot and various organic oxidation by-products.

Hazardous Polymerization	May Occur		Conditions to Avoid - None known
	Will Not Occur	X	

SECTION VI - Health Hazard Data

Route(s) of Entry	Eyes? Yes	Inhalation? Yes	Skin? Yes	Ingestion? Yes
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Health Hazards (Acute and Chronic) - Danger. Harmful or fatal if swallowed. Contains petroleum distillates. May cause eye and skin irritation. May be harmful if inhaled. Aspiration hazard if swallowed. Central nervous system effects if used without adequate ventilation. Use good chemical hygiene practices to avoid these hazards.

Carcinogenicity: None known	NTP? No	IARC Monographs? No	OSHA Regulated? No
--------------------------------	------------	------------------------	-----------------------

Signs and Symptoms of Exposure - Red, burning, irritated eyes. Cracked or dried skin. Dizziness, drowsiness, nausea or loss of coordination. Irritation of nose and throat.

Medical Conditions Generally Aggravated by Exposure -

Pre-existing lung or skin disorders.

Emergency and First Aid Procedures - **Eyes** - Flush with plenty of water for at least 15 minutes lifting eyelids to insure complete removal. Get immediate medical attention. **Ingestion** - Do not induce vomiting. Call a physician or poison control center immediately. **Inhalation** - Get to fresh air. If breathing has stopped, qualified personnel should administer artificial respiration. **Skin** - Wash with soap and water. If irritation arises and persists seek medical attention.

SECTION VII - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled - Caution, slip hazard. Wipe up small spills promptly with a towel or other absorbant material. For large spills, isolate traffic and ventilate area. Eliminate all ignition sources. Wear protective gear as necessary. Dike to prevent spread. Isolate and ventilate area. Wear appropriate protective equipment. For reuse vacuum up. Pick up with absorbant material. Place in suitable container for proper disposal.

Waste Disposal Method - Consult local, state and federal regulations. Do not puncture or incinerate container. Replace cap on empty can, wrap, then discard container if allowed by applicable statutes.

Precautions to be Taken in Handling and Storing - Do not swallow. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Avoid inhaling mist and vapors. Use with adequate ventilation. Store in a cool (under 120° F) dry location away from heat, sparks, open flame, and direct sunlight. Direct spray away from face.

Other Precautions - Follow label directions carefully. Keep out of reach of children. Do not deliberately concentrate and inhale vapors. Replace cap when not in use. Do not use around ignition sources such as heat, sparks, open flame, etc.

SECTION VIII - Control Measures

Respiratory Protection (Specify Type) - Not usually necessary. Use with adequate ventilation. If PELs or TLVs are exceeded (see Section II), use an approved NIOSH/MSHA respirator.

Ventilation	Local Exhaust	Not necessary	Special	None
	Mechanical (General) -	Yes	Other	None

Protective Gloves -

Yes. Impervious if contact possible.

Eye Protection -

Yes (approved safety glasses (Z87) or goggles)

Other Protective Clothing or Equipment -

Not usually necessary. If direct contact is possible, use face shield, boots, apron, etc. as necessary to avoid direct contact.

Work/Hygienic Practices -

Normal. Wash thoroughly before eating, drinking, smoking, using restrooms, etc.

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.

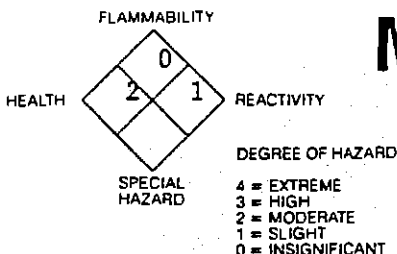
The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.



BioLab

Safety & Governmental Affairs
P.O. Box 1489, Decatur, GA 30031
(404) 378-1753 TWX 810-751-3318



Material Safety Data Sheet

F-0726

1. Identification

PRODUCT NAME: OMNI NEW IMPROVED SUR CL

CHEMICAL NAME: N/A Mixture

FORMULA: N/A Mixture

2. Hazardous Ingredients

	%	TLV	CAS NO.
Hydroxyacetic acid	1-3	Not Est.	64-19-7
Hydrochloric acid	2-5	5ppm	7647-01-0
Phosphoric acid	2-5	1mg/m3	7664-38-2
Nonylphenoxy Polyethoxyethanol	20-25	Not Est.	9016-45-9
Nonylphenoxy Polyethoxyethanol phosphate ester	15-20	Not Est.	51811-79-1

3. Health Hazards

FIRST AID AND ACUTE HEALTH HAZARDS:

EYE CONTACT: Avoid contact with eyes. Flush with water for at least 15 minutes. Contact a physician.

SKIN CONTACT: Wash area with water for 15 minutes. Contact a physician if irritation develops.

FOR INGESTION: Drink large quantities of water followed by milk of magnesia or any other antacid. Contact a physician.

INHALATION: Not likely to occur.

CHRONIC/LONG TERM HAZARDS: None Known

CARCINOGENICITY: None

4. Description And Physical Data

PHYSICAL FORM: Solid () SOLUBILITY IN WATER: Insoluble ()
 Liquid (X) Moderate ()
 Gas () Complete (X)

APPEARANCE: Red color; perfumed odor SPECIFIC GRAVITY 1.017

5. Fire And Explosion Hazard Data

FLASH POINT: None

EXTINGUISHING MEDIA: Water () Carbon dioxide ()
Dry chemical () Not Applicable (X)

SPECIAL FIRE FIGHTING PROCEDURES: None

UNUSUAL FIRE AND EXPLOSION HAZARDS: None

HAZARDOUS THERMAL DECOMPOSITION PRODUCTS: Hydrogen chloride, carbon monoxide, carbon dioxide

6. Reactivity Data

HAZARDOUS

POLYMERIZATION:

May Occur ()

Will Not Occur (X)

CONDITIONS

TO AVOID:

High Temperature ()

Poor Ventilation ()

Contamination ()

Moisture/High Humidity()

INCOMPATIBILITY

(MATERIALS TO AVOID):

Strong Oxidants ()

Alkali (X)

Moisture ()

Acids ()

Solvents ()

Other ()*

7. Spill Or Leak Procedures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Flush small spills to the sewer. Large spills should be neutralized with soda ash.

WASTE DISPOSAL METHOD: Flush to the sewer with large quantities of water after neutralization. Contact local authorities for assistance.

8. Special Protection Information

RESPIRATORY PROTECTION: None required.

VENTILATION: No special ventilation required.

EYE PROTECTION: Safety glasses with side shields are required when using this material.

SKIN PROTECTION: Rubber or vinyl gloves should be worn when handling this material. The use of a rubber or vinyl apron is recommended.

9. Special Precautions

THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372

PHOSPHORIC ACID CAS # 7664-38-2 3.75 % (By Weight)

HYDROCHLORIC ACID CAS # 7647-01-0 3.00 % (By Weight)

This information is given without a warranty or representation. We do not assume any legal responsibility for same, nor do we give permission, inducement or recommendation to practice any patented invention without a license. It is offered solely for your consideration, investigation and verification. Before using any product, read the label.

Signature: _____

Jane R. Brown

Regulatory Affairs Specialist

Date: 1-15-89

Supercedes: 8-26-87

rec from K.A.M
8-23-93

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME ORTMAN-McCAIN COMPANY		EMERGENCY TELEPHONE NO. 312-666-1636
ADDRESS (Number, Street, City, State, and ZIP Code) 1330 WEST WASHINGTON BOULEVARD - CHICAGO, ILLINOIS 60607		
CHEMICAL NAME AND SYNONYMS STARCH	TRADE NAME AND SYNONYMS OMC SPRAY POWDERS - ALL GRADES	
CHEMICAL FAMILY CARBOHYDRATE	FORMULA (C₆H₁₀O₅)	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	n/a	SPECIFIC GRAVITY (H ₂ O=1)	1.5-1.6
VAPOR PRESSURE (mm Hg.)	n/a	PERCENT VOLATILE BY VOLUME (%)	n/a
VAPOR DENSITY (AIR=1)	n/a	EVAPORATION RATE (_____ =1)	n/a
SOLUBILITY IN WATER Room Temp.	Negligible	Density 40 LBS/FT ³	
APPEARANCE AND ODOR	White Powder, Odorless To Slight Cereal Odor		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	360°C to 575°C	FLAMMABLE LIMITS	70M	Uel
EXTINGUISHING MEDIA	Ansul Dry Chemical Fire Extinguishers			
SPECIAL FIRE FIGHTING PROCEDURES	Common Sense - Avoid Creating Additional Dust That Would Cause Secondary Explosion.			
UNUSUAL FIRE AND EXPLOSION HAZARDS	Explosive In Specific Dust Concentrations Only.			

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE	n/a
EFFECTS OF OVEREXPOSURE	Unknown
EMERGENCY AND FIRST AID PROCEDURES	For Skin: Wash With Water. For Eyes: Use Any Standard Eye Wash Recommended By The Company Physician.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid)			
HAZARDOUS DECOMPOSITION PRODUCTS			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	Wash Down With Water, Sweep Or Vacuum
WASTE DISPOSAL METHOD	Land Fill, Standard Sewage Systems

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)	Dust Masks	
VENTILATION	LOCAL EXHAUST	SPECIAL
	MECHANICAL (General)	OTHER
PROTECTIVE GLOVES	Not Required	EYE PROTECTION
OTHER PROTECTIVE EQUIPMENT	Dust Proof Glasses	

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	Dust Tight Equipment, Proper Venting, Dust Proof Motors And Lighting, Non-combustible Storage Bins.
OTHER PRECAUTIONS	Adequate Sprinkler System. No Smoking Or Open Flame Permitted.

MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 0 Flammability = 0 Reactivity = 0

HMIS RATING: Health = 0 Flammability = 0 Reactivity = 0

SECTION I – IDENTITY AND MANUFACTURER'S INFORMATION (0531A)

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: NUTRA-RINSE

Address: 302 North Fourth Street
St. Joseph, MO 64501

Date Prepared: May 5, 1994

Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816)233-1321(Ext. 303)

SECTION II – INGREDIENTS/IDENTITY INFORMATION**Components**

(Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	N/A	N/A	N/A	---
Tetrasodium salt of EDTA	64-02-8	N/A	N/A	N/A	---
B-Alanine, N-(2-carboxyethyl)-N-[3-(decyloxy)propyl] monosodium salt	64972-19-6	N/A	N/A	N/A	---
Nonylphenol ethoxylate	9016-45-9	N/A	N/A	N/A	---

SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 216°F

Specific Gravity (H₂O = 1): 25°C = 1.04 & 39°C = 1.04

Vapor Pressure (mm Hg.): 17.6

Percent Volatile by Volume (%): 88.4

Vapor Density (AIR = 1): 0.6

Evaporation Rate (ethyl ether = 1): slower than 1

Solubility in Water: appreciable

Appearance and Odor: blue, clear liquid; non-objectionable odor

pH(Concentrate) = 6-7

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Flash point: None (T.C.C.)

Flammable Limits: LEL = N/A UEL = N/A

Extinguishing Media: N/A

Special Fire Fighting Procedures: None

Unusual Fire and Explosion Hazards: None

SECTION V – PHYSICAL HAZARDS

Stability: Stable

Conditions to Avoid: N/A

Incompatibility (Materials to Avoid): Aluminum and copper metal; strong oxidizers

Hazardous Decomposition Products or Byproducts: None known

Hazardous Polymerization: Will not occur

Conditions to Avoid: N/A

SECTION VI – HEALTH HAZARD DATA

Routes of entry: Inhalation? No Skin? No Ingestion? No

HEALTH HAZARDS (1. Acute and 2. Chronic)

1. None known

2. None known

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater or equal to 0.1%.

SECTION VI – HEALTH HAZARD DATA cont.

Signs and Symptoms of Exposure: None known

Medical Conditions Generally Aggravated by Exposure: None known

Emergency and First Aid Procedures: N/A

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Pick up with mop or wet vac and wash away with water.

Waste Disposal Method: Wash small quantities down sewer with large amount of water. Keep spills and cleaning runoffs out of municipal storm sewers and open bodies of water. Large spills should be picked up with wet vac or absorbent material. Landfill or incinerate solids. Dispose of liquid per local, state and federal regulations.

Precautions To Be Taken In Handling And Storing: Freezing of product may rupture container. Product shelf life is best retained by storage at 45-100 °F temperatures.

Other Precautions: Do not store or use in copper or aluminum containers. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR Part 372.

SECTION VIII – CONTROL MEASURES:

Respiratory Protection (Specify Type): None required

Ventilation: N/A

Local Exhaust = N/A **Mechanical (General) =** N/A **Special =** N/A **Other =** N/A

Protective Gloves: None required

Eye Protection: N/A

Other Protective Clothing or Equipment: None required

Work / Hygienic Practices: Rinse Nutra-Rinse off skin and clothing with water.

SECTION IX - TRANSPORTATION INFORMATION:

Applicable regulations: 49 CFR = no; IMCO = no; IATA = no

Proper shipping name: Cleaning compound

UN No.: not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable

Labels required: not required **DOT Exception:** not applicable

EPA Hazardous waste number / code: not listed

Hazardous waste characteristics:

Ignitability = not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable

DISCLAIMER OF WARRANTIES

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.

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700150



MATERIAL SAFETY DATA SHEET

SECTION 1 - MANUFACTURER OR SUPPLIER DATA

MSDS NUMBER

100474

MANUFACTURER'S NAME & MAILING ADDRESS U S Chemical Corporation 316 Hart Street Watertown, Wisconsin 53094 USA	PREPARED BY D. E. Kenas	SIGNATURE <i>David E. Kenas</i> R
EMERGENCY TELEPHONE NO. (24 HOUR SERVICE) Medical Emergency ONLY: 1-800-851-7145 Ext. 075	TITLE Quality Assurance Manager	DATE 1-4-02
PRODUCT INFORMATION TELEPHONE NO. (8 AM TO 5 PM CST, MON - FRI) Product Information: 1-800-558-9566		

SECTION 2 - IDENTITY OF MATERIAL

PRODUCT NAME NC ALL TEMP			
PRODUCT DESCRIPTION Alkaline Non-Chlorinated Mechanical Dishwash		FORMULA Proprietary Blend	CHEMICAL FAMILY N.A.
REGULATED IDENTIFICATION	DOT PROPER SHIPPING NAME CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (CONTAINS SODIUM HYDROXIDE)		
	SHIPPING ID NUMBER UN3266	PACKING GROUP II	HAZARD CLASS 8 (CORROSIVE MATERIAL)

SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT N.A.	SPECIFIC GRAVITY (H ₂ O = 1) 1.214	PHYSICAL FORM Liquid	COLOR Orange
VAPOR PRESSURE (mm Hg) N.A.	MELTING POINT N.A.	SOLUBILITY IN WATER Complete	SCENT None Added
VAPOR DENSITY (AIR = 1) N.A.	EVAPORATION RATE (BUTYL ACETATE = 1) N.A.	pH 2500 ppm SOLUTION N.A.	pH CONCENTRATE Greater than 13.0
OTHER Non-Viscous, Clear Solution.			

SECTION 4 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS (CHEMICAL NAME; COMMON NAME)	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	PERCENT WT/WT
Sodium Hydroxide: Caustic Soda CAS Registry Number 1310-73-2	2 mg/m³ Ceiling Limit	2 mg/m³ Ceiling Limit	None	13.0
Trisodium Nitriilotriacetate, Monohydrate CAS Registry Number 18662-53-8	Not Established	Not Established	Not Established	>1.0
<p>This product contains no other ingredient considered hazardous according to the criteria of 29 CFR 1910.1200, OSHA. However, this product contains chemicals which may be subject to reporting requirements according to the criteria of SARA Title III, 40 CFR, Part 370, Section 311 and Section 312.</p>				
<p>STATE RIGHT TO KNOW INFORMATION</p> <p>THIS PRODUCT CONTAINS: WATER/7732-18-5, SODIUM HYDROXIDE/1310-73-2, TRISODIUM NITRILOTRIACETATE MONOHYDRATE/18662-53-8</p>				
<p>NFPA RATING: Health-3/Flammability-0/Reactivity-1 See Section 5 for Protective Equipment.</p> <p>HMIS RATING: Health-3/Flammability-0/Reactivity-1 See Section 5 for Protective Equipment.</p>				
<p>CARCINOGENICITY:</p> <p>This product contains the Trisodium Salt, Monohydrate form of Nitriilotriacetic Acid, commonly known as NTA. Nitriilotriacetic Acid (CAS Registry Number 139-13-9) is a National Toxicology Program listed anticipated carcinogen and is identified as a hazardous chemical under the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200). However, the U. S. EPA has taken no action to restrict use of NTA in laundry detergents because "the risks of using laundry detergents containing NTA are not significant". (See the Nov. 3, 1980, Federal Register, Volume 45, pages 72778 - 72780). Therefore, we believe NTA has been shown to be safe for use under normal conditions in laundry detergents and industrial cleansers since there is not direct, prolonged human contact.</p>				

(CONTINUED IN SECTIONS 5 TO 8)

SECTION 5 - SAFE USAGE DATA

PROTECTIVE EQUIPMENT TYPES	EYES Splash-proof safety glasses, safety goggles, and an eye-wash station.	
	RESPIRATORY None required with normal use.	GLOVES Rubber or Neoprene. Long type if needed.
	OTHER Wear full-cover protective clothing to prevent repeated or prolonged contact.	
VENTILATION	GENERAL MECHANICAL Satisfactory. Maintain adequate ventilation. Keep levels below recommended TLV.	
	LOCAL EXHAUST Not ordinarily needed. Avoid inhalation of mists containing this product.	
PRECAUTIONS	HANDLING & STORAGE Follow all label directions. Instruct personnel about proper use, hazards, precautions, and first-aid measures. Avoid inhalation, ingestion and contact with skin and eyes.	
	Rotate stock regularly. Handle carefully to avoid damaging container. Keep container closed when not in use. Recommended storage temp below 100°F. Do not freeze. Keep out of children's reach.	

SECTION 6 - HEALTH HAZARD DATA

EFFECTS OF EXPOSURE	INHALATION Corrosive. Inhalation of mist may cause irritation to nose, throat and mucous membranes, pulmonary irritation, pulmonary edema, tissue damage and chemical burns.
	INGESTION Corrosive. Harmful or fatal if swallowed. May cause nausea, vomiting, and severe tissue damage to digestive tract. Corrosive to mouth, throat, stomach and to other tissues.
	SKIN & EYES SKIN: Corrosive. Contact may cause severe irritation, dermatitis, and chemical burns. EYES: Corrosive. Causes eye burns. May cause temporary or permanent vision loss and blindness.
	ACUTE & CHRONIC ACUTE: Corrosive to all body tissues. Harmful skin contact may not cause immediate pain. Permanent eye damage may result without immediate first aid treatment. CHRONIC: None Known.
ROUTES OF ENTRY	INGESTION-X SKIN ABSORPTION- TARGET ORGANS SKIN-X EYES-X INHALATION-X Eyes, Skin, Respiratory System.

SECTION 7 - PHYSICAL HAZARD DATA

FLAMMABILITY	LEL = N.A. UEL = N.A.	FLASH POINT = N.A.	METHOD USED = N.A.
STABILITY	STABLE	X	CONDITIONS TO AVOID Avoid mixing with any other cleaning product. Mix only with water. Do not store at high temperatures. Recommended storage temperature <100°F.
	UNSTABLE		HAZARDOUS DECOMPOSITION PRODUCTS Mixing with incompatible materials may produce hydrogen, carbon monoxide, carbon dioxide, and other toxic and irritating fumes.
HAZARDOUS POLYMERIZATION	MAY OCCUR	X	CONDITIONS TO AVOID
	WILL NOT OCCUR		N.A.
INCOMPATIBILITY	MATERIALS TO AVOID Acidic materials, organic chemicals, and various metals (Aluminum, magnesium, zinc, tin, brass or bronze) which can generate flammable hydrogen gas.		

SECTION 8 - EMERGENCY RESPONSE DATA

FIRE	EXTINGUISHING MEDIA For fires in area, use appropriate media. For example: Water spray, dry chemical, carbon dioxide, or alcohol foam.
	SPECIAL PROCEDURES Evacuate area of unprotected personnel. Wear protective clothing including a NIOSH-approved self-contained breathing apparatus.
	UNUSUAL HAZARDS Product may react with some metals such as aluminum, zinc, tin, etc., to release flammable hydrogen gas.
FIRST AID MEASURES	INGESTION: Do not induce vomiting. If patient is conscious and can swallow, administer milk or water. SKIN: Remove contaminated clothes, flood with water for 15 minutes. EYES: Flood with lukewarm (not hot) water poured from a large glass 2 or 3 inches from eyes. Remove contacts. Have patient blink as much as possible while flooding the eyes. Continue for 15 minutes. INHALATION: Move victim to fresh air. Give artificial respiration if patient is not breathing. ADMINISTER FIRST AID TREATMENT AS STATED ABOVE, THEN CALL 1-800-851-7145 Ext 075 OR CONTACT PHYSICIAN FOR FURTHER MEDICAL INSTRUCTIONS.
SPILLS	STEPS TO BE TAKEN Wear proper protective equipment including rubber boots. Stop leak if you can do so without risk. Dike or dam large spills. Ventilate area if needed. Soak up with sand or other non-combustible inert absorbent materials. Flush area with water and follow with normal clean-up procedures. Keep combustibles away! Be careful as spills are slippery.
WASTE DISPOSAL METHOD	Comply with all federal, state, and local regulations. Consult state and local authorities for restrictions on disposal of chemical waste. If approved, may be diluted and drained to a municipal sewer or waste treatment plant. Rinse empty container thoroughly with water before discarding. Please recycle empty container whenever possible.

THE DATA IN THIS MATERIAL SAFETY DATA SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND DOES NOT RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR PROCESS. THE DATA CONTAINED IS BELIEVED TO BE ACCURATE. HOWEVER, SINCE USE CONDITIONS VARY AND ARE OUTSIDE OUR CONTROL, THE MANUFACTURER MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, AND ASSUMES NO LIABILITY FOR FAILURE TO FOLLOW PRODUCT USE DIRECTIONS AND SAFETY PRECAUTIONS.

MATERIAL SAFETY DATA SHEET

MURIATIC ACID (HYDROCHLORIC ACID)

SECTION I - IDENTIFICATION

MANUFACTURER'S NAME..... Haviland Consumer Products Incorporated
 ADDRESS (STREET,CITY,STATE,ZIP) 421 Ann St., N.W., Grand Rapids, MI 49504
 PHONE NUMBER..... (616) 361-6691
 EMERGENCY PHONE NUMBER..... CHEMTREC (800) 424-9300
 EFFECTIVE DATE..... 7/7/99
 TRADE NAME..... MURIATIC ACID (HYDROCHLORIC ACID)
 CHEMICAL FAMILY..... Inorganic Acid

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	OSHA/PEL	ACGIH/TLV (Units)	PROD. CAS #
**Hydrochloric Acid (Hydrogen Chloride) (35.2% by wt)	5ppm ceiling	5ppm Ceiling	7647-01-0

**SEE NOTE UNDER
 "REFERENCES" AT END OF
 MSDS**

SECTION III - PHYSICAL DATA

BOILING POINT..... 144oF
 FREEZING POINT -29oF
 VAPOR PRESSURE (mm Hg)..... 84mm Hg @ 20oC
 VAPOR DENSITY (Air=1)..... 1.3
 SOLUBILITY IN H2O..... Very Soluble
 APPEARANCE/ODOR..... Clear, Colorless to Slightly Yellow Liquid;
 Pungent Odor
 SPECIFIC GRAVITY (H2O=1)..... 1.18
 PH..... Not Established

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT..... Will Not Burn
 LOWER EXPLOSIVE LIMIT (% by Volume) Not Applicable
 UPPER EXPLOSIVE LIMIT (% by Volume) Not Applicable
 EXTINGUISH MEDIA..... As for Surrounding Fire.
 SPECIAL FIRE FIGHTING PROCEDURES... Wear self contained breathing apparatus
 and full personal protective equipment
 when material is involved in fire.
 UNUSUAL FIRE HAZARD..... Reacts with most metals to produce
 flammable and explosive hydrogen gas.

MATERIAL SAFETY DATA SHEET

MURIATIC ACID (HYDROCHLORIC ACID)

SECTION V - HEALTH HAZARD DATA

CARCINOGENICITY..... None
NTP..... No
IARC..... No
OVER EXPOSURE EFFECTS..... Corrosive to all exposed body tissues, conjunctivitis, burns, redness of exposed tissues, coughing, burns, possible choking, headaches, dizziness, nausea, vomiting.
PRIMARY ROUTE(S) OF ENTRY..... Inhalation and Eye and Skin Contact
FIRST AID PROCEDURES..... In case of contact: Immediately flush eyes and skin with plenty of water for at least 15 minutes. For eyes get medical attention.

If inhaled: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting. If conscious, give large quantities of water to dilute. Call a Physician Immediately.

EXPOSURE AGGRAVATED MEDICAL CONDITIONS None Currently Known

SECTION VI - REACTIVITY DATA

CHEMICAL STABILITY..... Stable
CONDITIONS TO AVOID..... Not Applicable
INCOMPATIBLE MATERIALS..... Most metals, strong oxidizers, alkalies, amines, esters, carbonates, cyanides, sulfides.
DECOMPOSITION PRODUCTS..... Hydrogen gas, chlorine gas, hydrogen chloride gas.
HAZARDOUS POLYMERIZATION..... Will Not Occur
POLYMERIZATION AVOID..... Not Applicable

SECTION VII - SPILL OR LEAK PROCEDURE

FOR SPILL Cover the contaminated surface with Sodium Bicarbonate, Soda Ash or Lime. Mix and add water if necessary to form a slurry. Scoop up slurry and wash site with Sodium Bicarbonate Solution spill area.
WASTE DISPOSAL METHOD..... Neutralize with lime, limestone or soda ash. Dispose of in a licensed landfill or treatment facility. Comply with all federal, state and local regulations.

MATERIAL SAFETY DATA SHEET

MURIATIC ACID (HYDROCHLORIC ACID)

SECTION VIII - SPECIAL PROTECTION

RESPIRATORY PROTECTION..... NIOSH/MSHA approved respirator for hydrogen chloride gas and/or mist.
VENTILATION..... To maintain vapors below limits.
PROTECTIVE GLOVES..... Rubber or other impervious material.
EYE PROTECTION..... Splash proof chemical goggles.
OTHER PROTECTIVE EQUIPMENT..... For operations where spills or splashing may occur, use an impervious body covering and boots. A safety shower and eye bath should be available.
HANDLING AND STORAGE..... Store away from heat and strong alkalis. Wear protective equipment during handling.

SECTION IX - SPECIAL PRECAUTIONS

HAZARD CLASS..... Corrosive, 8, PG II
DOT SHIPPING NAME..... HYDROCHLORIC ACID, SOLUTION
ID NUMBER..... UN1789
REPORTABLE QUANTITY (RQ)..... 5,000LBS.

REFERENCES HMIS: H-3,F-0,R-0

ZZ1HYDAD

NOTE Hazardous Component(s) subject to reporting under 40 CFR 372 (SARA Title III, Sec. 313).

MATERIAL SAFETY DATA SHEET

MANUFACTURERS NAME: MOTSENBOCKER'S ADVANCED DEVELOPMENTS, INC (M.A.D., INC.)
ADDRESS: P.O. BOX 90947
CITY, STATE, ZIP: SAN DIEGO, CA 92169
PHONE: (619) 581-0222
FAX: (619) 483-6965
24 HOUR EMERGENCY NUMBER: CHEMTREC: (800) 424-9300
CODE: MLO2MSDS

* ATTN: SAFETY SUPERVISOR

DATE: 12/20/93
SUPERSEDES: 06/24/93
PAGE: 1

I. PRODUCT IDENTIFICATION

PRODUCT NAME: MOTSENBOCKER'S LIFT OFF #2 ADHESIVES, GREASE, OILY STAINS TAPE/STAIN REMOVER

CODE NO: 407-01 UPC CODE: (77448)- 52586
408-01 11291

PRODUCT TYPE: PETROLEUM BASED CLEANER

II. COMPOSITION

Table with 3 columns: INGREDIENTS, CAS. #, %WT., and TLV/STEL/PEL (ACGIH/IOSHA). Rows include TRADE SECRET, U.S. PATENT #4306989 & FOREIGN PATENT #1149190 (REF. CFR 29 SEC. 1910.1200), PROPRIETARY, and PROPRIETARY.

III. CHEMICAL AND PHYSICAL PROPERTIES

VAPOR PRESSURE : N/A
VAPOR DENSITY : HEAVIER THAN AIR
SOLUBILITY IN WATER : PARTIAL
APPEARANCE : COLORLESS LIQUID
SPECIFIC GRAVITY : 0.95
BOILING POINT : 160-360 DEG. F
PH : DOES NOT APPLY
ODOR : PUNGENT

IV. TOXICITY AND HEALTH HAZARD DATA

TOXICITY: SKIN IRRITANT
UPPER RESPIRATORY IRRITANT
CARCINOGENICITY: NTP :N
IARC MONOGRAPHS :N
OSHA REGULATED :N
HMIS HAZARD COMMUNICATION CODES: HAZARD (0) HEALTH (2) FIRE (1) REACTIVITY (0)
TLV: SEE SECTION II-COMPOSITION
PRIMARY ROUTES OF ENTRY: SKIN, INGESTION, INHALATION
EXISTING CONDITIONS AGGRAVATED BY EXPOSURE: NONE KNOWN
SYMPTOMS OF OVEREXPOSURE:
ACUTE: DIZZINESS, INCOORDINATION, INCREASED REACTION TIME, AND UNCONSCIOUSNESS.
CHRONIC: SEE TARGET ORGANS AND OTHER HEALTH EFFECTS IN SECTION II FOR CHRONIC OVEREXPOSURE SYMPTOMS.

EMERGENCY TREATMENT PROCEDURES:

INGESTION: DO NOT INDUCE VOMITING. CALL PHYSICIAN IMMEDIATELY.
INHALATION: REMOVE TO FRESH AIR. IF SYMPTOMS PERSIST, CALL PHYSICIAN.
SKIN CONTACT: WASH THOROUGHLY WITH LARGE QUANTITIES OF SOAP AND WATER.
EYE CONTACT: FLUSH WITH WATER FOR AT LEAST 15 MINUTES. OBTAIN MEDICAL ATTENTION.

PERSONAL PROTECTION:

EYES: WEAR SAFETY GLASSES OR GOGGLES.
SKIN: WEAR RUBBER OR PLASTIC GLOVES.
VENTILATION: SUFFICIENT TO MAINTAIN VAPOR CONCENTRATION BELOW TLV.

V. FLAMMABILITY AND EXPLOSIVE PROPERTIES

FLASH POINT: 160 DEG. F
EXPLOSIVE LIMITS (% BY VOLUME IN AIR) LOWER: 1 % UPPER: 11%
METHOD: PENSKY MARTEN CLOSED CUP
RECOMMENDED EXTINGUISHING AGENTS: CO2, DRY CHEMICAL, FOAM
HAZARDOUS PRODUCTS FORMED BY FIRE OR THERMAL DECOMPOSITION:
CO, CO2, HYDROGEN CHLORIDE, PHOSGENE GAS
UNUSUAL FIRE OR EXPLOSION HAZARDS:
WATER MAY BE INEFFECTIVE
COMPRESSED GASSES:
NAME: DOES NOT APPLY
PRESSURE AT ROOM TEMPERATURE: DOES NOT APPLY

VI. REACTIVITY DATA

STABILITY: IXI STABLE I I UNSTABLE
HAZARDOUS POLYMERIZATION: I I MAY OCCUR IXI WILL NOT OCCUR
HAZARDOUS DECOMPOSITION PRODUCTS (NON-THERMAL) : NONE KNOWN
INCOMPATIBILITY: STRONG CAUSTICS, OXIDIZERS, CHEMICALLY ACTIVE METALS, & OPEN FLAMES.

VII. SPILL OR LEAK AND DISPOSAL PROCEDURES

STEPS TO BE TAKEN IN CASE OF SPILL OR LEAK:
CONTAIN SPILL USING INERT ABSORBENT. WEAR THE PROPER PROTECTIVE CLOTHING REMOVE ALL
IGNITION SOURCES. AVOID CONTACT WITH OXIDIZERS. ABSORB SPILL USING INERT ABSORBENT. DO NOT
ALLOW MATERIAL TO ENTER WATER WAYS.
RECOMMENDED METHODS OF DISPOSAL: INCINERATE ACCORDING TO FEDERAL, STATE AND LOCAL
REGULATIONS.
CERCLA REPORTABLE QTY (IN LBS): N/A
RCRA HAZARDOUS WASTE NO.: N/A

VIII. STORAGE AND HANDLING PROCEDURES

STORAGE: STORE IN COOL, DRY PLACE
HANDLING: KEEP AWAY FROM CHILDREN, AVOID BREATHING VAPORS. WEAR A NOISH APPROVED
RESPIRATOR FOR EXTENDED USE OR IN CONFINED AREAS. WEAR PROTECTIVE GLOVES.

IX. SHIPPING REGULATIONS

DOT TYPE OR CLASS: ORM-D
PROPER SHIPPING NAME: CONSUMER COMMODITY
IATA TYPE OR CLASS: NOT AVAILABLE
PROPER SHIPPING NAME: NOT AVAILABLE
IMCO TYPE OR CLASS: NOT AVAILABLE
PROPER SHIPPING NAME: NOT AVAILABLE
UN #: N/A PAGE: N/A



Mitsubishi Imaging (MPM), Inc.

SilverMaster Stabilizer (SDP-ST)

Material Safety Data Sheet

Stabilizer (ST)

SECTION 1: PRODUCT IDENTIFICATION AND USE

Product Name: Mitsubishi SLM-ST Stabilizer

Product Identification Number (PIN): 60-18609-003

Formula: Aqueous Mixture

Manufacturer / Supplier: Mitsubishi Imaging (MPM), Inc. - 555 Theodore Fremd Avenue - Rye, NY 10580

Emergency Telephone Number: Chemtrec (800) 424-9300

SECTION 2: HAZARDOUS INGREDIENTS

Principal Components(s)	Cas Reg #	OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)	% WT (w/w)
Potassium Phosphate, Monobasic	7778-77-0	N/A	N/A	1~5
Sodium Sulfite	7757-83-7	N/A	N/A	< 1
Water	7732-18-5	N/A	N/A	To make 100

Dot Shipping Name: Non-hazardous aqueous solution

Hazard Class: N/A

ID#

P.G.:

NRPA Rating: Health - 1

Flammability: - 0

Reactivity: - 0

SECTION 3: PHYSICAL DATA

pH: 5.6

Specific Gravity: 1.07

Solubility in Water: Good

Boiling Point: Approx. 100° C

Melting Point: <-4° Celsius

Evaporation Rate: N/A

Volatile Organic Content: 0 lbs. / Gallon

Vapor Pressure: N/A

Percent Volatility (as water): 60-100

Vapor Density: N/A

Appearance and Odor: Clear, Odorless Solution

SECTION 4: FIRE AND EXPLOSION DATA

Flammable Properties: No. No flashpoint

Flammable Limit: None

LEL: N/A

UEL: N/A

Extinguishing Media: Carbon dioxide, Dry chemical, Dry sand.

Special Fire Fighting Procedures: Evacuate personnel to a safe area. Firefighters should wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual Fire Hazards: None

SECTION 5: REACTIVITY DATA

Stability: Stable

Conditions to Avoid: None

Incompatibility: Strong Oxidants

Hazardous Decomposition: Combustion will produce COx, SOx and NOx gases

Hazardous Polymerization: Does not polymerize

continued...

Material Safety Data Sheet (continued)

Stabilizer (ST)

SECTION 6: TOXICITY AND HEALTH HAZARD DATA

Carcinogenicity: NTP: N/A IARC Monographs: N/A OSHA Regulated: N/A
None of the chemicals used in this product are listed on NTP, IARC or OSHA listings of human carcinogens.

EXPOSURE EFFECTS

Eye Contact: May cause irritation.

Skin Contact: May cause irritation.

Ingestion: May cause nausea.

Inhalation: May cause nausea and irritation of the mucus membranes.

Medical Conditions Aggravated By Exposure: No medical conditions known to be aggravated by exposure to this product.

FIRST AID

Eye: Immediately flush eyes with plenty of water for at least 15 minutes. If problem persists, contact physician.

Skin: Wash the exposed area thoroughly with water. Contact physician, if necessary.

Ingestion: Wash mouth with water. Call physician immediately.

Inhalation: Take patient to fresh air.

SECTION 7: PRECAUTIONS FOR HANDLING AND USE

Steps to be Taken in case Material is Released or Spilled: Use appropriate protective equipment. Collect liquid into suitable container, clean up with water.

Waste Disposal Method: Discharge to sewer requires the approval of permitting authority and may require pretreatment. Treatment, storage, transportation and disposal must be in accordance with Federal, State and Local regulations. Burn in a chemical incinerator equipped with an afterburner and scrubber.

Precautions to be Taken in Handling and Storing: Store in cool, dry place. Close cap tightly. Keep out of reach of children.

SECTION 8: SPECIAL PROTECTION INFORMATION

Ventilation: Mechanical exhaust is recommended.

Protective Equipment: Protective goggles, gloves and mask are recommended.

SECTION 9: PREPARATION DATE OF MSDS

Prepared by (Group, Department, etc.):
Mitsubishi Imaging (MPM), Inc.

Phone Number:
(914) 925-3200

Date:
July 8, 1999

The information contained herein is furnished without warranty of any kind. Users should consider this data as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.



Mitsubishi Imaging (MPM), Inc.

SilverMaster Etch (SDP-OH)

Material Safety Data Sheet

Etch (OH)

SECTION 1: PRODUCT IDENTIFICATION AND USE

Product Name: Mitsubishi SLM-OH Etch

Product Identification Number (PIN): 60-18610-003

Formula: Aqueous Mixture

Manufacturer / Supplier: Mitsubishi Imaging (MPM), Inc. - 555 Theodore Fremd Avenue - Rye, NY 10580

Emergency Telephone Number: Chemtrec (800) 424-9300

SECTION 2: HAZARDOUS INGREDIENTS

Principal Component(s)	Cas Reg #	OSHA PEL (mg/m ³)	ACGIH TLV (mg/m ³)	% WT (w/w)
*Ethyl Alcohol	64-17-5	N/A	1880	5~20
Ethylen Glycol	107-21-1	N/A	C29 (Vaper)	5~20
*Isopropyl Alcohol	67-63-0	N/A	49	1~5
Water	7732-18-5	N/A	N/A	To make 100

*OSHA Hazardous Substance(s): 29 CFR 1910.1200

Dot Shipping Name: Ethanol Solution

Hazard Class: Class 8

ID# UN 1170

P.G.: III

SECTION 3: PHYSICAL DATA

pH: 5.2

Specific Gravity: 1.01

Solubility in Water: Good

Boiling Point: N/A

Evaporation Rate: N/A

Volatile Organic Content: .88 lbs. / Gallon

Vapor Pressure: N/A

Percent Volatility (as water): 60-100

Vapor Density: N/A

Appearance and Odor: Opaque colorless solution, alcohol odor.

SECTION 4: FIRE AND EXPLOSION DATA

Flammable Properties: Yes. Flashpoint; 34° C (Closed Cup Method)

Flammable Limit: None

LEL: N/A

UEL: N/A

Extinguishing Media: Carbon Dioxide, Dry Chemical, Water Spray

Special Fire Fighting Procedures: Evacuate personnel to a safe area. Firefighters should wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual Fire Hazards: Product susceptible to flash at elevated temperature

SECTION 5: REACTIVITY DATA

Stability: Stable

Conditions to Avoid: None

Incompatibility: Strong Oxidants

Hazardous Decomposition: Combustion will produce CO_x, SO_x and NO_x gases

Hazardous Polymerization: Does not polymerize

continued...

Material Safety Data Sheet (continued)

Etch (OH)

SECTION 6: TOXICITY AND HEALTH HAZARD DATA

Carcinogenicity: NTP: N/A IARC Monographs: N/A OSHA Regulated: N/A
None of the chemicals used in this product are listed on NTP, IARC or OSHA listings of human carcinogens.

EXPOSURE EFFECTS

Eye Contact: May cause burning

Skin Contact: Prolonged exposure may cause irritation

Ingestion: May cause nausea

Inhalation: May cause nausea and irritation of the mucus membranes.

Medical Conditions Aggravated By Exposure: No medical conditions known to be aggravated by exposure to this product.

FIRST AID

Eye: Immediately flush eyes with plenty of water for at least 15 minutes. If problem persists, contact physician.

Skin: Wash the exposed area thoroughly with water. Contact physician, if necessary.

Ingestion: Wash mouth with water. Call physician immediately.

Inhalation: Take patient to fresh air.

SECTION 7: PRECAUTIONS FOR HANDLING AND USE

Steps to be Taken in case Material is Released or Spilled: Use appropriate protective equipment. Collect liquid into suitable container, clean up with water.

Waste Disposal Method: Discharge to sewer requires the approval of permitting authority and may require pretreatment. Treatment, storage, transportation and disposal must be in accordance with Federal, State and Local regulations. Burn in a chemical incinerator equipped with an afterburner and scrubber.

Precautions to be Taken in Handling and Storing: Store in cool, dry place. Close cap tightly. Keep out of reach of children. Keep away from sources ignition. No smoking.

SECTION 8: SPECIAL PROTECTION INFORMATION

Ventilation: Mechanical exhaust is recommended

Protective Equipment: Protective goggles, gloves and mask are recommended.
A NIOSH cartridge respirator is recommended.

Other Precautions: Avoid breathing vapors. Avoid contact with eyes, skin and clothing. Wash after handling. Do not take internally. Keep out of reach of children.

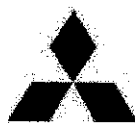
SECTION 9: PREPARATION DATE OF MSDS

Prepared by (Group, Department, etc.):
Mitsubishi Imaging (MPM), Inc.

Phone Number:
(914) 925-3200

Date:
August 9, 1999

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Mitsubishi Imaging (MPM), Inc.

SilverMaster Fountain Solution (SDP-OD)

Material Safety Data Sheet

Fountain Solution (OD)

SECTION 1: PRODUCT IDENTIFICATION AND USE

Product Name: Mitsubishi SLM-OD Fountain Solution

Product Identification Number (PIN): 60-18611-004

Formula: Fountain Solution

Manufacturer / Supplier: Mitsubishi Imaging (MPM), Inc. - 555 Theodore Fremd Avenue - Rye, NY 10580

Emergency Telephone Number: Chemtrec (800) 424-9300

SECTION 2: HAZARDOUS INGREDIENTS

Principal Components(s)	Cas Reg #	OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)	% WT (w/w)
Sodium Phosphate Monobasic	7558-80-7	N/A	N/A	0~1
Colloidal Silica	7631-86-9	N/A	(as powder dust)	0~1
Nitric Acid Sodium Salt	7631-99-4	N/A	N/A	0~1
Water	7732-18-5	N/A	N/A	To Make 100

Dot Shipping Name: Non-Hazardous Aqueous Mixture

Hazard Class: N/A

ID#: N/A

P.G.: N/A

SECTION 3: PHYSICAL DATA

pH: 5.9

Specific Gravity: 1.015

Solubility in Water: Good

Boiling Point: Over 100° C

Melting Point: Under 4° Celsius

Evaporation Rate: N/A

Volatile Organic Content: 0 lbs. / Gallon

Vapor Pressure: Similar to water

Percent Volatility (as water): N/A

Vapor Density: Similar to water

Appearance and Odor: Pinkish opaque, odorless solution

SECTION 4: FIRE AND EXPLOSION DATA

Flammable Properties: No. No flashpoint

Flammable Limit: None

LEL: N/A

UEL: N/A

Extinguishing Media: Carbon dioxide, Dry chemical, Dry sand

Special Fire Fighting Procedures: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual Fire Hazards: Combustion will produce NOx gas.

SECTION 5: REACTIVITY DATA

Stability: Stable

Conditions to Avoid: None

Incompatibility: None

Hazardous Decomposition: Combustion will produce NOx gases

Hazardous Polymerization: Does not polymerize

continued...

Material Safety Data Sheet (continued)

Fountain Solution (OD)

SECTION 6: TOXICITY AND HEALTH HAZARD DATA

Carcinogenicity: NTP: N/A IARC Monographs: N/A OSHA Regulated: N/A
None of the chemicals used in this product are listed on NTP, IARC or OSHA listings of human carcinogens.

EXPOSURE EFFECTS

Eye Contact: Irritant. May cause burning.

Skin Contact: Irritant. Prolonged exposure may cause irritation.

Ingestion: Acute toxicity data. LD50 Estimated by component over 5000mg/kg (rat-oral). May cause burning of mucous membranes.

Inhalation: May cause nausea.

Medical Conditions Aggravated By Exposure: No medical conditions known to be aggravated by exposure to this product.

FIRST AID

Eye: Immediately wash with running water for at least 15 minutes. Call a physician if necessary.

Skin: Immediately wash with soap and water. Call a physician if necessary.

Ingestion: Wash mouth with water and call physician immediately.

Inhalation: Take patient to fresh air.

SECTION 7: PRECAUTIONS FOR HANDLING AND USE

Steps to be Taken in case Material is Released or Spilled: Use appropriate protective equipment. Collect liquid into suitable container, clean up with water.

Waste Disposal Method: Before disposal consult appropriate Federal, State and Local regulatory agencies to ascertain proper procedures.

Burn in a chemical incinerator equipped with an afterburner and scrubber.

Precautions to be Taken in Handling and Storing: Do not use hook. Wear protective goggle, mask and gloves. Store in cool dry place, do not freeze. Close cap tightly. Keep out of reach of children.

SECTION 8: SPECIAL PROTECTION INFORMATION

Ventilation: Mechanical exhaust is recommended.

Protective Equipment: Protective mask, rubber gloves and goggles.

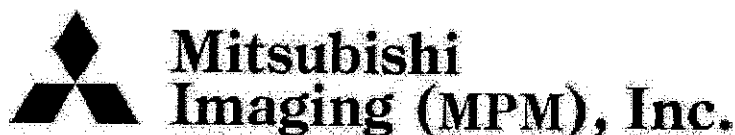
SECTION 9: PREPARATION DATE OF MSDS

Prepared by (Group, Department, etc.):
Mitsubishi Imaging (MPM), Inc.

Phone Number:
(914) 925-3200

Date:
August 6, 1999

The information contained herein is furnished without warranty of any kind. Users should consider this data as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.



SilverMaster Activator (SDP-AC)

Material Safety Data Sheet

Activator (AC)

SECTION 1: PRODUCT IDENTIFICATION AND USE

Product Name: Mitsubishi SLM-AC Activator

Product Identification Number (PIN): 60-18608-002

Formula: Aqueous Mixture

Manufacturer / Supplier: Mitsubishi Imaging (MPM), Inc. - 555 Theodore Fremd Avenue - Rye, NY 10580

Emergency Telephone Number: Chemtrec (800) 424-9300

SECTION 2: HAZARDOUS INGREDIENTS

Principal Component(s)	Cas Reg #	OSHA PEL (mg/m3)	ACGIH TLV (mg/m3)	% WT (w/w)
Potassium Hydroxide	1310-58-3	N/A	C2	1~5
Sodium Hydroxide	1310-73-2	N/A	C2	1~5
N- (2-Aminoethyl) ethanolamine	111-41-1	N/A	N/A	1~5
Sodium Sulfite	7757-83-7	N/A	N/A	1~5
Water	7732-18-5	N/A	N/A	To Make 100

*OSHA Hazardous Substance(s): 29 CFR 1910.1200

Potassium Hydroxide (<5%) Sodium Hydroxide (<5%)

*SARA Title III Hazardous Substance(s): Section 304

304 Potassium Hydroxide, Sodium Hydroxide

*WIMIS (Canada) Controlled Material(s)

Potassium Hydroxide, Sodium Hydroxide

EC Symbol: Xi

R- phrase: R36/37/38 Irritant for eyes, respiratory organs and skins

S- phrase: S36/37/38 Wear protective goggles, gloves and mask

Dot Shipping Name: Potassium Hydroxide Solution

Hazard Class: Class 8

ID# UN 1814

P.G.: II

NRPA Rating: Health - 2

Flammability - 0

Reactivity - 0

Dot Shipping Name: Sodium Hydroxide Solution

Hazard Class: Class 8

ID# UN 1824

P.G.: II

NRPA Rating: Health - 2

Flammability - 0

Reactivity - 0

SECTION 3: PHYSICAL DATA

pH: 13.7

Specific Gravity (H₂O = 1): 1.106

Solubility in Water: Good

Boiling Point: Over 100° C

Melting Point: Under 4° C

Evaporation Rate: N/A

Volatile Organic Content: 0 lbs. / Gallon

Vapor Pressure: Similar to water

Percent Volatility (as water): 60-100

Vapor Density: Similar to water

Appearance and Odor: Clear Colorless, Amine Odor Solution

SECTION 4: FIRE AND EXPLOSION DATA

Flammable Properties: No Flashpoint

Flammable Limit: None

LEL: N/A

UEL: N/A

Extinguishing Media: Carbon dioxide, Dry chemical, Dry Sand, Water Spray

Special Fire Fighting Procedures: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual Fire Hazards: Combustion will produce SO_x and NO_x gases.

continued...

Material Safety Data Sheet (continued)

Activator (AC)

SECTION 5: REACTIVITY DATA

Stability: Stable **Conditions to Avoid:** None
Incompatibility: Strong oxidants. Strong acid.
Hazardous Decomposition: Combustion will produce SO_x and NO_x gases.
Hazardous Polymerization: Does not polymerize

SECTION 6: TOXICITY AND HEALTH HAZARD DATA

Carcinogenicity: **NTP:** N/A **IARC Monographs:** N/A **OSHA Regulated:** N/A
None of the chemicals used in this product are listed on NTP, IARC or OSHA listings of human carcinogens.

EXPOSURE EFFECTS: R - phrase; R36/37/38 Irritant for eyes, respiratory organs and skin.

Eye Contact: May cause burning. Severe.

Skin Contact: Prolonged exposure may cause irritation.

Ingestion: May cause burning of mucous membranes. Acute toxicity data. LD50 Estimated by component over 2000mg/kg (rat-oral).

Inhalation: May cause nausea.

FIRST AID

Eye: Immediately wash with running water for at least 15 minutes, call a physician.

Skin: Immediately wash with soap and water. Call a physician if necessary.

Ingestion: Wash mouth with water and call a physician immediately.

Inhalation: Take patient to fresh air.

SECTION 7: PRECAUTIONS FOR HANDLING AND USE

Steps to be Taken in case Material is Released or Spilled: Use appropriate protective equipment. Collect this liquid into suitable container and clean up with water.

Waste Disposal Method: Before disposal, consult appropriate federal, state and local regulatory agencies to ascertain proper procedures.

Burn in a chemical incinerator equipped with an afterburner and scrubber.

Precautions to be Taken in Handling and Storing: Do not use hook. Wear protective goggles, mask and gloves. Store in cool dry place. Close cap tightly. Keep out of reach of children.

SECTION 8: SPECIAL PROTECTION INFORMATION

Ventilation: Mechanical exhaust is recommended.

Protective Equipment: Wear protective mask, rubber gloves and goggles

SECTION 9: PREPARATION DATE OF MSDS

Prepared by (Group, Department, etc.):
Mitsubishi Imaging (MPM), Inc.

Phone Number:
(914) 925-3200

Date:
August 10, 2001

The information contained herein is furnished without warranty of any kind. Users should consider this data as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure use and disposal of these materials and the safety and health of employees and customers and the protection of the environment.

(184933)

Metered Aerosol Products - All Fragrances

MATERIAL SAFETY DATA SHEET

Effective Date: 15 August 2000

SECTION I - PRODUCT IDENTIFICATION AND PREPARATION INFORMATION

Product Name: Metered Aerosol Products - All Fragrances

Product Usage: Air Freshener

WHMIS Class: Class B - Division 5; Flammable aerosol
Class D - Division 2B; Class A - Compressed gas

T.D.G. Classification: Consumer Commodity

HEALTH	1
FLAMMABILITY	3
REACTIVITY	1
PERSONAL PROTECTION	

Manufacturer Name and Address:

Technical Concepts
1301 Allanson Road
Mundelein, IL 60060
(847) 837-4100

MSDS Prepared by:

Dell Tech Laboratories Ltd.
UWO Research Park, 100 Collip Circle
London, Ontario N6G 4X8
(519) 858-5021

Emergency Telephone (Infotrack): 1-800-535-5053

SECTION II - HAZARDOUS INGREDIENTS

<u>Ingredients</u>	<u>CAS#</u>	<u>Wt%</u>	<u>ACGIH-TLV</u>	<u>LC₅₀</u>	<u>LD₅₀</u>
Dipropylene glycol	25265-71-8	7-13	Not available	Not available	14800 mg/kg oral, rat
Ethanol	64-17-5	7-13	1000 ppm TWA	31623 ppm 4 h, rat	7060 mg/kg oral, rat
Diethylene glycol ethyl ether	111-90-0	3-7	50 ppm C	Not available	5500 mg/kg oral, rat
Essential oils	Mixture	1-5	Not available	Not available	Not available
Hexylene glycol	107-41-5	7-13	25 ppm C	Not available	3700 mg/kg oral, rat
2-Propanol	67-63-0	7-13	400 ppm TWA	16971 ppm 4 h, rat	4710 mg/kg oral, rat
Propane	74-98-6	10-30	2500 ppm TWA	Not available	Not available
Butane	106-97-8	10-30	800 ppm TWA	658 mg/m ³ 4 h rat	Not available

SECTION III - PHYSICAL DATA

Boiling Point (°C): Not available

Pressure in Cylinder (kPa @ 21 °C): 537-551

Vapour Density (Air = 1): >1

Solubility in Water: Not available

Physical State: Aerosol

Appearance and Odour: Clear colourless; fragrant odour

Specific Gravity (H₂O = 1): 0.924

Percent Volatile (Wt %): Not available

Evaporation Rate (BuAc = 1): >1

pH (as supplied): Not applicable

Viscosity: Water thin

Odour Threshold: Not available

SECTION IV - FIRE AND EXPLOSION DATA

Flammability: Flammable aerosol

Flash Point (deg C, TCC): 21.0 **LEL:** 1.9 **UEL:** 9.5

Hazardous Combustion Products: May include and are not limited to oxides of carbon.

Means of Extinction: Water, dry chemical, carbon dioxide, foam.

Special Fire Hazards: Firefighters should wear self-contained breathing apparatus. Cool containers with water spray and remove source of ignition if safe. Contents under pressure. Container may explode with heat.

SECTION V - REACTIVITY DATA

Conditions for Chemical Instability: Stable.

Incompatible Materials: Oxidizers.

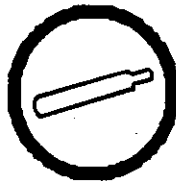
Conditions for Reactivity: Not available.

Hazardous Decomposition Products: May include and are not limited to oxides of carbon when heated to decomposition.

Metered Aerosol Products - All Fragrances



- Eye and skin irritant.



- Compressed gas.



- Flammable aerosol.

- Do not puncture or incinerate container.
- Avoid contact with eyes and skin.
- Do not store at temperatures above 49°C. Keep away from sources of ignition.
- Keep out of reach of children.

- If in contact with eyes, immediately flush with water for 15 minutes. Obtain medical attention if irritation persists.
- If in contact with skin, flush with water. Obtain medical attention if irritation persists.
- If ingested, do not induce vomiting. Obtain medical attention.

READ MATERIAL SAFETY DATA SHEET BEFORE USING PRODUCT

=====
- Irritant pour les yeux et la peau. - Gaz comprimés. - Aérosol inflammable.

- Ne pas percer le contenant ni le jeter au feu.
- Éviter le contact avec les yeux et la peau.
- Ne pas conserver à des températures dépassant 49°C. Conserver à l'écart de toutes sources d'ignition.
- Garder hors de la portée des enfants.

- En cas de contact avec les yeux, rincer immédiatement à grande eau pendant 15 minutes. Obtenir de l'attention médicale si l'irritation persiste.
- En cas de contact avec la peau, rincer à grande eau. Obtenir de l'attention médicale si l'irritation persiste.
- En cas d'ingestion, ne pas tenter de faire vomir. Obtenir de l'attention médicale.

LIRE LA FICHE SIGNALÉTIQUE AVANT D'UTILISER CE PRODUIT

=====
- Irritante para los ojos y la piel. - Gas comprimido. - Aerosol inflamable.

- No perforar el recipiente ni tirarlo al fuego.
- Evitar el contacto con los ojos y la piel.
- No almacenar a temperaturas por arriba de 49°C. Mantener alejado de fuentes de ignición.
- Mantener lejos del alcance de los niños.

- En caso de contacto con los ojos, enjuagar inmediatamente con mucha agua durante 15 minutos. Si la irritación persiste, obtener atención médica.
- En caso de contacto con la piel, enjuagar con mucha agua. Si la irritación persiste, obtener atención médica.
- En caso de ingestión, no provocar el vómito. Obtener atención médica.

LEER LA FICHA DESCRIPTIVA ANTES DE USAR EL PRODUCTO

Technical Concepts

Material Safety Data Sheet

Sec 1 Product Identification

PRODUCT NAME: Majestic Bleach

CHMAI20

MANUFACTURER: Champion Packaging 1840 Internationale Pkwy.
Woodridge, IL 60517 PH: (630)-972-0100
FAX: (630)-972-1020

EFFECTIVE DATE: July 25, 2001

EPA REGISTRATION: 55852-01

CAS NUMBER: 7681-52-9

CHEMICAL FORMULA: NaOCL (Solution)

HAZARDOUS INGREDIENTS: Sodium Hypochlorite 3.00%

EMERGENCY RESPONSE: INFOTRAC (800) 535-5053

Sec 2 Physical Data

APPEARANCE: Clear to Yellow Liquid

ODOR: Pungent, irritating, that of household bleach.

SOLUBILITY: Complete

BOILING POINT: Decomposes prior to boiling

SPECIFIC GRAVITY: 1.083 @ 3.00%

VAPOR PRESSURE: Approx. that of air

EVAPORATION RATE: Not Applicable

Sec 3 Fire and Explosion Information

FIRE: Not considered to be a fire hazard.

EXPLOSION: Not considered an explosion hazard.

FIRE EXTINGUISHING MEDIA: Use any means suitable for extinguishing surrounding fire.

SPECIAL INFORMATION: Wear fully encapsulated suits with self-contained breathing apparatus (Positive Pressure).

Sec 4 Reactivity Data

Stability: Stable under ordinary conditions of use and storage.
Unstable at elevated temperatures.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposes under various mechanisms. May generate chlorine or oxygen which can be toxic and explosive, respectively.

HAZARDOUS POLYMERIZATION: This substance does not polymerize.

INCOMPATIBILITIES (Material to Avoid): Reacts vigorously with Amine, Ammonium Acetate, Ammonium Oxalate, Acids and most organics.

Sec 5 Leak/Spill Disposal Information

RELEASES/SPILLS: Move unprotected personnel upwind out of danger.

REPORTABLE QUANTITY (RQ) (CWA/CERCLA): 100 lbs. 454 Kg

DISPOSAL: Dilute with water and flush to local sewer system, if permitted. Solid waste must be disposed of in a permitted waste management facility. Ensure compliance with local, state, and federal regulations.

Sec 6 Health Hazard Information

A. EXPOSURE/HEALTH EFFECTS

INHALATION: Respiratory tract irritant.

INGESTION: Can cause corrosion of the mucous membranes.

IF Swallowed: Drink large quantities of water. Do NOT induce vomiting. Get medical attention immediately. Call physician or poison control center immediately.

SKIN CONTACT: Contact with liquid can cause chemical burns. Immediately flush with water.

EYE CONTACT: Wash eyes for at least twenty minutes. If irritation continues after flushing, seek medical attention.

CHRONIC EXPOSURE: Not data found.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:
NTP -NO ; IARC -NO ; OSHA -NO ; ACGIH -NO

Sec 7 Occupational Control Measures

OSHA PERMISSIBLE EXPOSURE LIMIT: Not established

VENTILATION SYSTEM: Local exhaust

PERSONAL RESPIRATORS: (NIOSH Approved) Recommended for all personnel working in or about an area of potential exposure.

SKIN PROTECTION: Wear impervious protective clothing; including boots; gloves; lab coat; apron or coveralls to prevent skin contact.

EYE PROTECTION: Use chemical safety goggles impervious to product. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

Sec 8 Storage and Special Information

Store in cool, dry, ventilated area. Protect against physical damage. Keep separate from incompatibles.

Sec 9 Regulatory Information

Regulated under the Federal Insecticide Fungicide and Rotenticide Act (FIFRA) if any sanitation or disinfection claims are made on label.

NFPA/HMIS ratings: Health - 3 ; Flammability - 0 ; Reactivity - 0, higher alkalinity R - 1.

SARA TITLE III- SEC. 302, 304, 311, 312.

REPORTABLE QUANTITY (RQ) (CWA/CERCLA): 100 lbs.

INGREDIENTS:	Sodium Hypochlorite	3.00% Wt
	Inert Ingredients	97.00% Wt

THE INFORMATION CONTAINED HEREIN IS PROVIDED IN GOOD FAITH AND IS BELIEVED TO BE CORRECT AS OF THE DATE HEREOF. HOWEVER, CHAMPION PACKAGING, INC. MAKES NO REPRESENTATION AS TO THE COMPREHENSIVENESS OR ACCURACY OF THE INFORMATION. IT IS EXPECTED THAT INDIVIDUALS RECEIVING THE INFORMATION WILL EXERCISE THEIR INDEPENDENT JUDGMENT IN DETERMINING ITS APPROPRIATENESS FOR A PARTICULAR PURPOSE. ACCORDINGLY, CHAMPION PACKAGING, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES OF ANY KIND RESULTING FROM THE USE OF OR RELIANCE UPON SUCH INFORMATION. NO REPRESENTATIONS, OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR TO THE PRODUCT TO WHICH THE INFORMATION REFERS.

700080



MATERIAL SAFETY DATA SHEET

SECTION 1 - MANUFACTURER OR SUPPLIER DATA

MSDS NUMBER

100332

MANUFACTURER'S NAME & MAILING ADDRESS U S Chemical Corporation 316 Hart Street Watertown, Wisconsin 53094 USA	PREPARED BY D. E. Kenas	SIGNATURE <i>David E. Kenas</i>
EMERGENCY TELEPHONE NO. (24 HOUR SERVICE) Medical Emergency ONLY: 1-800-851-7145 Ext. 075	TITLE Quality Assurance Manager	DATE 1-4-02
PRODUCT INFORMATION TELEPHONE NO. (8 AM TO 5 PM CST, MON - FRI) Product Information: 1-800-558-9566		

SECTION 2 - IDENTITY OF MATERIAL

PRODUCT NAME LIQUID UTENSIL PRE-SOAK			
PRODUCT DESCRIPTION Alkaline Silverware Presoaking Detergent		FORMULA Proprietary Blend	CHEMICAL FAMILY N.A.
REGULATED IDENTIFICATION	DOT PROPER SHIPPING NAME Not Regulated by D.O.T.		
	SHIPPING ID NUMBER N.A.	PACKING GROUP N.A.	HAZARD CLASS N.A.

SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT N.A.	SPECIFIC GRAVITY (H ₂ O = 1) 1.110	PHYSICAL FORM Liquid	COLOR Blue
VAPOR PRESSURE (mm Hg) N.A.	MELTING POINT N.A.	SOLUBILITY IN WATER Complete	SCENT None Added
VAPOR DENSITY (AIR = 1) N.A.	EVAPORATION RATE (BUTYL ACETATE = 1) N.A.	pH 2500 ppm SOLUTION N.A.	pH CONCENTRATE 11.5
OTHER Non-Viscous, Clear Blue Solution.			

SECTION 4 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS (CHEMICAL NAME; COMMON NAME)	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	PERCENT WT/WT
Trisodium Phosphate CAS Registry Number 7601-54-9	Not Established	Not Established	Not Established	3.0-7.0
<p>This product contains no other ingredient considered hazardous according to the criteria of 29 CFR 1910.1200, OSHA. However, this product contains chemicals which may be subject to reporting requirements according to the criteria of SARA Title III, 40 CFR, Part 370, Section 311 and Section 312.</p>				
<p>STATE RIGHT TO KNOW INFORMATION</p> <p>THIS PRODUCT CONTAINS: WATER/7732-18-5, SODIUM TRIPOLYPHOSPHATE/7758-29-4, SODIUM XYLENESULFONATE/1300-72-7, TRISODIUM PHOSPHATE/7601-54-9, SODIUM DODECYLBENZENESULFONATE/25155-30-0</p>				
NFPA RATING: Health-2/Flammability-0/Reactivity-0 HMIS RATING: Health-2/Flammability-0/Reactivity-0	See Section 5 for Protective Equipment.			
<p>CARCINOGENICITY:</p> <p>This product does not contain any known carcinogens or anticipated carcinogens according to the criteria of the NTP Annual Report on Carcinogens, IARC Monographs, and OSHA 29 CFR 1910, Subpart Z.</p>				

(CONTINUED IN SECTIONS 5 TO 8)

SECTION 5 - SAFE USAGE DATA

PROTECTIVE EQUIPMENT TYPES	EYES Safety glasses with side shields and an eye-wash station.	
	RESPIRATORY None required with normal use.	GLOVES Rubber or Neoprene.
	OTHER If major exposure is possible to eye/skin, wear/use appropriate protective equipment.	
VENTILATION	GENERAL MECHANICAL Satisfactory. Maintain adequate ventilation. Keep levels below recommended TLV.	
	LOCAL EXHAUST Not ordinarily needed. Avoid inhalation of mists containing this product.	
PRECAUTIONS	HANDLING & STORAGE Follow all label directions. Instruct personnel about proper use, hazards, precautions, and first-aid measures. Avoid inhalation, ingestion and contact with skin and eyes.	
	Rotate stock regularly. Handle carefully to avoid damaging container. Keep container closed when not in use. Recommended storage temp below 100°F. Do not freeze. Keep out of children's reach.	

SECTION 6 - HEALTH HAZARD DATA

EFFECTS OF EXPOSURE	INHALATION Inhalation of mists may cause irritation to nose, throat, and mucous membranes, tissue damage, and pulmonary irritation. Severity depends upon degree of exposure.	
	INGESTION May cause nausea, vomiting, and tissue damage to mouth, esophagus, stomach, and to other tissues with which contact is made. Severity depends upon degree of exposure.	
	SKIN & EYES SKIN: Contact may cause mild to severe irritation, depending on degree of exposure. EYES: Contact may cause severe irritation, temporary or permanent vision loss, and blindness.	
	ACUTE & CHRONIC ACUTE: Irritation to skin and eyes. Permanent eye damage may result without immediate first aid treatment. CHRONIC: None Known.	
ROUTES OF ENTRY	INGESTION-X SKIN ABSORPTION- SKIN-X EYES-X INHALATION-	TARGET ORGANS Eyes, Skin.

SECTION 7 - PHYSICAL HAZARD DATA

FLAMMABILITY	LEL = N.A. UEL = N.A.		FLASH POINT = N.A.	METHOD USED = N.A.
STABILITY	STABLE	X	CONDITIONS TO AVOID Avoid mixing with any other cleaning product. Mix only with water. Do not store at high temperatures. Recommended storage temperature <100°F.	
	UNSTABLE		HAZARDOUS DECOMPOSITION PRODUCTS Mixing with incompatible materials may produce carbon dioxide, hydrogen, and other toxic and irritating fumes.	
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID	
	WILL NOT OCCUR	X	N.A.	
INCOMPATIBILITY	MATERIALS TO AVOID Acidic materials and oxidizing agents.			

SECTION 8 - EMERGENCY RESPONSE DATA

FIRE	EXTINGUISHING MEDIA For fires in area, use appropriate media. For example: Water spray, dry chemical, carbon dioxide, or alcohol foam.	
	SPECIAL PROCEDURES Evacuate area of unprotected and unnecessary personnel.	
	UNUSUAL HAZARDS Not Applicable.	
FIRST AID MEASURES	INGESTION: Do not induce vomiting. If patient is conscious and can swallow, administer milk or water. SKIN: Remove contaminated clothes, flood with water for 15 minutes. EYES: Flood with lukewarm (not hot) water poured from a large glass 2 or 3 inches from eyes. Remove contacts. Have patient blink as much as possible while flooding the eyes. Continue for 15 minutes. INHALATION: Move victim to fresh air. Give artificial respiration if patient is not breathing. ADMINISTER FIRST AID TREATMENT AS STATED ABOVE, THEN CALL 1-800-851-7145 Ext 075 OR CONTACT PHYSICIAN FOR FURTHER MEDICAL INSTRUCTIONS.	
	SPILLS	STEPS TO BE TAKEN Wear proper protective equipment including rubber boots. Stop leak if you can do so without risk. Dike or dam large spills. Ventilate area if needed. Soak up with sand or other non-combustible inert absorbent materials. Flush area with water and follow with normal clean-up procedures. Keep combustibles away! Be careful as spills are slippery.
HAZARDOUS REACTION	WASTE DISPOSAL METHOD Comply with all federal, state, and local regulations. Consult state and local authorities for restrictions on disposal of chemical waste. If approved, may be diluted and drained to a municipal sewer or waste treatment plant. Rinse empty container thoroughly with water before discarding. Please recycle empty container whenever possible.	

THE DATA IN THIS MATERIAL SAFETY DATA SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND DOES NOT RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR PROCESS. THE DATA CONTAINED IS BELIEVED TO BE ACCURATE, HOWEVER, SINCE USE CONDITIONS VARY AND ARE OUTSIDE OUR CONTROL, THE MANUFACTURER MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, AND ASSUMES NO LIABILITY FOR FAILURE TO FOLLOW PRODUCT USE DIRECTIONS AND SAFETY PRECAUTIONS.

CLX 243



The Clorox Company
7200 Johnson Drive
Pleasanton, California 94566
Tel. (415) 847-8100

Material Safety Data Sheet

CLOROX - HMIS	
HEALTH	3*
FLAMMABILITY	0
REACTIVITY	1
Personal Protection	B

I Chemical Identification											
NAME: LIQUID-PLUMR PROFESSIONAL STRENGTH		CAS no. N/A									
DESCRIPTION: A CLEAR ALKALINE LIQUID WITH A CHLORINE ODOR		RTECS no. N/A									
Other Designations	Manufacturer	Emergency Procedure									
Drain Cleaner	The Clorox Company 1221 Broadway Oakland, CA 94612	Notify your Supervisor Call your local poison control center or Rocky Mountain Poison Center (303) 573-1014									
II Health Hazard Data		III Hazardous Ingredients									
<p>*CORROSIVE to the eyes. Harmful if swallowed (nausea, vomiting, and burning sensation of the mouth and throat. The following medical conditions may be aggravated by exposure to high concentrations of vapor or mist: heart conditions or chronic respiratory problems such as asthma, chronic bronchitis or obstructive lung disease. Under normal consumer use conditions the likelihood of any adverse health effects are low. FIRST AID: EYE CONTACT: If wearing contact lenses, remove. Immediately flush eyes with water for 15 minutes. See a physician. INGESTION: Drink a glassful of water. DO NOT induce vomiting. Evaluation by a doctor is necessary. SKIN CONTACT: Remove contaminated clothing and wash exposed area with water. INHALATION: Remove from exposure.</p>		<table border="1"> <thead> <tr> <th>Ingredient</th> <th>Concentration</th> <th>Worker Exposure Limit</th> </tr> </thead> <tbody> <tr> <td>Sodium hydroxide CAS # 1310-73-2</td> <td>0.5-2%</td> <td>2 mg/m³ TLV-C</td> </tr> <tr> <td>Sodium hypochlorite CAS # 7681-52-9</td> <td>5-10%</td> <td>not established</td> </tr> </tbody> </table> <p>None of the ingredients in this product are on the IARC, OSHA or NTP carcinogen lists. TLV-C-Threshold Limit Value-Ceiling. The worker exposure limit should not be exceeded at any time. Source: ACGIH., 1985-86. Occasional clinical reports suggest a low potential for sensitization upon exaggerated exposure to sodium hypochlorite if skin damage (eg. irritation) occurs during exposure. Routine clinical tests conducted on intact skin with Liquid-Plumr found no sensitization in the test subjects.</p>	Ingredient	Concentration	Worker Exposure Limit	Sodium hydroxide CAS # 1310-73-2	0.5-2%	2 mg/m ³ TLV-C	Sodium hypochlorite CAS # 7681-52-9	5-10%	not established
Ingredient	Concentration	Worker Exposure Limit									
Sodium hydroxide CAS # 1310-73-2	0.5-2%	2 mg/m ³ TLV-C									
Sodium hypochlorite CAS # 7681-52-9	5-10%	not established									
IV Special Protection Information		V Special Precautions									
<p>Hygienic Practices: Wear safety glasses and gloves. The availability of an eye wash and shower is recommended in a manufacturing environment.</p> <p>Engineering Controls: Use general ventilation to minimize exposure to vapors.</p> <p>Work Practices: Avoid eye and skin contact and inhalation of vapor or mist.</p>		<p>KEEP OUT OF REACH OF CHILDREN. Avoid all splashing; particularly in eyes, on skin and clothing. Keep children away from basins containing Liquid-Plumr. Do not use plunger with Liquid-Plumr. Do not use Liquid-Plumr with ammonia, toilet bowl cleaners or other drain openers. Do not reuse empty container. Rinse container and replace cap before discarding.</p>									
VI Spill or Leak Procedures		VII Reactivity Data									
<p>Small quantities of less than 5 gallons may be flushed down drain. For larger quantities wipe up with an absorbent material or mop and dispose of in accordance with local, state and federal regulations.</p>		<p>Stable under normal use and storage conditions. Reacts with other household chemicals such as toilet bowl cleaners, ammonia or other drain openers to produce hazardous gases, such as chlorine and other chlorinated species.</p>									
VIII Fire and Explosion Data		IX Physical Data									
<p>Not flammable or explosive. Cool containers during fire to prevent rupture and release of sodium chlorate.</p>		<p>Boiling point-----approx. 212°F/100°C Specific Gravity (H₂O=1)-----1.08 - 1.11 Solubility in Water-----complete pH-----13.2</p>									

750190



MATERIAL SAFETY DATA SHEET

SECTION 1 - MANUFACTURER OR SUPPLIER DATA

MSDS NUMBER

100469

MANUFACTURER'S NAME & MAILING ADDRESS U S Chemical Corporation 316 Hart Street Watertown, Wisconsin 53094 USA	PREPARED BY D. E. Kenas	SIGNATURE <i>David E. Kenas v</i>
	TITLE Quality Assurance Manager	DATE 1-4-02
EMERGENCY TELEPHONE NO. (24 HOUR SERVICE) Medical Emergency ONLY: 1-800-851-7145 Ext. 075	PRODUCT INFORMATION TELEPHONE NO. (8 AM TO 5 PM CST, MON - FRI) Product Information: 1-800-558-9566	

SECTION 2 - IDENTITY OF MATERIAL

PRODUCT NAME LIQUID LAUNDRY SOFTENER/SANITIZER			
PRODUCT DESCRIPTION Fabric Softener/Sanitizer		FORMULA Proprietary Blend	CHEMICAL FAMILY N.A.
REGULATED IDENTIFICATION	DOT PROPER SHIPPING NAME Not Regulated by D.O.T.		
	SHIPPING ID NUMBER N.A.	PACKING GROUP N.A.	HAZARD CLASS N.A.

SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT N.A.	SPECIFIC GRAVITY (H ₂ O = 1) .990	PHYSICAL FORM Liquid	COLOR Yellow
VAPOR PRESSURE (mm Hg) N.A.	MELTING POINT N.A.	SOLUBILITY IN WATER Complete	SCENT None Added
VAPOR DENSITY (AIR = 1) N.A.	EVAPORATION RATE (BUTYL ACETATE = 1) N.A.	pH 2500 ppm SOLUTION N.A.	pH CONCENTRATE 4.5
OTHER Viscous, Clear to Slightly Hazy Solution with a Germicidal Odor.			

SECTION 4 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS (CHEMICAL NAME; COMMON NAME)	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	PERCENT WT/WT
Alkyl Dimethyl Benzyl Ammonium Chloride CAS Registry Number 68391-01-5	Not Established	Not Established	Not Established	3.25
Alkyl Dimethyl Ethylbenzyl Ammonium Chloride CAS Registry Number 68956-79-6	Not Established	Not Established	None	3.25
Isopropanol: Isopropyl Alcohol CAS Registry Number 67-63-0	400 ppm TWA	400 ppm TWA	500 ppm STEL (OSHA/ACGIH)	4.0

This product contains no other ingredient considered hazardous according to the criteria of 29 CFR 1910.1200, OSHA. However, this product contains chemicals which may be subject to reporting requirements according to the criteria of SARA Title III, 40 CFR, Part 370, Section 311 and Section 312.

NFPA RATING: Health-2/Flammability-0/Reactivity-0 See Section 5 for Protective Equipment.
HMIS RATING: Health-2/Flammability-0/Reactivity-0 See Section 5 for Protective Equipment.

CARCINOGENICITY:

This product does not contain any known carcinogens or anticipated carcinogens according to the criteria of the NTP Annual Report on Carcinogens, IARC Monographs, and OSHA 29 CFR 1910, Subpart Z.

(CONTINUED IN SECTIONS 5 TO 8)

SECTION 5 - SAFE USAGE DATA

PROTECTIVE EQUIPMENT TYPES	EYES Safety glasses with side shields and an eye-wash station.	
	RESPIRATORY None required with normal use.	GLOVES Rubber or Neoprene.
	OTHER If major exposure is possible to eye/skin, wear/use appropriate protective equipment.	
VENTILATION	GENERAL MECHANICAL Satisfactory. Maintain adequate ventilation. Keep levels below recommended TLV.	
	LOCAL EXHAUST Not ordinarily needed. Avoid inhalation of mists containing this product.	
PRECAUTIONS	HANDLING & STORAGE Follow all label directions. Instruct personnel about proper use, hazards, precautions, and first-aid measures. Avoid inhalation, ingestion and contact with skin and eyes. Rotate stock regularly. Handle carefully to avoid damaging container. Keep container closed when not in use. Recommended storage temp below 100°F. Do not freeze. Keep out of children's reach.	

SECTION 6 - HEALTH HAZARD DATA

EFFECTS OF EXPOSURE	INHALATION Inhalation of mists may cause irritation to nose, throat, and mucous membranes. Severity depends upon degree of exposure.
	INGESTION May cause nausea, vomiting, and gastrointestinal irritation, and swelling of the larynx and skeletal muscle paralysis affecting ability to breath, circulatory shock, and convulsions.
	SKIN & EYES SKIN: Contact may cause mild to severe irritation, depending upon the degree of exposure. EYES: Corrosive. Causes eye burns. May cause temporary or permanent vision loss and blindness.
	ACUTE & CHRONIC ACUTE: Irritation to skin and respiratory system. Causes eye burns. Permanent eye damage may result without immediate first aid treatment. CHRONIC: None Known.
ROUTES OF ENTRY	INGESTION-X SKIN ABSORPTION-X SKIN-X EYES-X INHALATION-X TARGET ORGANS Eyes, Circulatory System, Gastrointestinal System.

SECTION 7 - PHYSICAL HAZARD DATA

FLAMMABILITY	LEL = N.A. UEL = N.A.	FLASH POINT = N.A.	METHOD USED = N.A.
STABILITY	STABLE	X	CONDITIONS TO AVOID Avoid mixing with any other cleaning product. Mix only with water. Do not store at high temperatures. Recommended storage temperature below 100°F.
	UNSTABLE		HAZARDOUS DECOMPOSITION PRODUCTS Warning! Mixing with incompatible materials may produce sulfur dioxide, hydrogen sulfide, nitrous oxides, and ammonia vapors.
HAZARDOUS POLYMERIZATION	MAY OCCUR	X	CONDITIONS TO AVOID
	WILL NOT OCCUR		N.A.
INCOMPATIBILITY	MATERIALS TO AVOID Anionic surfactants, reducing agents, sodium hypochlorite, along with other strong oxidizing agents and strong alkali such as caustic soda or caustic potash.		

SECTION 8 - EMERGENCY RESPONSE DATA

FIRE	EXTINGUISHING MEDIA For fires in area, use appropriate media. For example: Water spray, dry chemical, carbon dioxide, or alcohol foam.
	SPECIAL PROCEDURES Evacuate area of unprotected and unnecessary personnel.
	UNUSUAL HAZARDS Not Applicable.
FIRST AID MEASURES	INGESTION: Do not induce vomiting. If patient is conscious and can swallow, administer milk or water. SKIN: Remove contaminated clothes, flood with water for 15 minutes. EYES: Flood with lukewarm (not hot) water poured from a large glass 2 or 3 inches from eyes. Remove contacts. Have patient blink as much as possible while flooding the eyes. Continue for 15 minutes. INHALATION: Move victim to fresh air. Give artificial respiration if patient is not breathing. ADMINISTER FIRST AID TREATMENT AS STATED ABOVE, THEN CALL 1-800-851-7145 Ext 075 OR CONTACT PHYSICIAN FOR FURTHER MEDICAL INSTRUCTIONS.
SPILLS	STEPS TO BE TAKEN Wear proper protective equipment including rubber boots. Stop leak if you can do so without risk. Dike or dam large spills. Ventilate area if needed. Soak up with sand or other non-combustible inert absorbent materials. Flush area with water and follow with normal clean-up procedures. Keep combustibles away! Be careful as spills are slippery.
WASTE DISPOSAL METHOD	Comply with all federal, state, and local regulations. Consult state and local authorities for restrictions on disposal of chemical waste. If approved, may be diluted and drained to a municipal sewer or waste treatment plant. Rinse empty container thoroughly with water before discarding. Please recycle empty container whenever possible.

THE DATA IN THIS MATERIAL SAFETY DATA SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND DOES NOT RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR PROCESS. THE DATA CONTAINED IS BELIEVED TO BE ACCURATE. HOWEVER, SINCE USE CONDITIONS VARY AND ARE OUTSIDE OUR CONTROL, THE MANUFACTURER MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, AND ASSUMES NO LIABILITY FOR FAILURE TO FOLLOW PRODUCT USE DIRECTIONS AND SAFETY PRECAUTIONS.

700240



MATERIAL SAFETY DATA SHEET

SECTION 1 - MANUFACTURER OR SUPPLIER DATA

MSDS NUMBER
100350

MANUFACTURER'S NAME & MAILING ADDRESS U S Chemical Corporation 316 Hart Street Watertown, Wisconsin 53094 USA		PREPARED BY D. E. Kenas	SIGNATURE David E. Kenas
EMERGENCY TELEPHONE NO. (24 HOUR SERVICE) Medical Emergency ONLY: 1-800-851-7145 Ext. 075		TITLE Quality Assurance Manager	DATE 1-4-02
		PRODUCT INFORMATION TELEPHONE NO. (8 AM TO 5 PM CST, MON - FRI) Product Information: 1-800-558-9566	

SECTION 2 - IDENTITY OF MATERIAL

PRODUCT NAME LIME SOLVENT			
PRODUCT DESCRIPTION Lime Solvent (Acid Detergent)		FORMULA Proprietary Blend	CHEMICAL FAMILY N.A.
REGULATED IDENTIFICATION	DOT PROPER SHIPPING NAME CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS HYDROCHLORIC ACID, PHOSPHORIC ACID)		
	SHIPPING ID NUMBER UN3264	PACKING GROUP II	HAZARD CLASS 8 (CORROSIVE MATERIAL)

SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT N.A.	SPECIFIC GRAVITY (H ₂ O = 1) 1.150	PHYSICAL FORM Liquid	COLOR Green
VAPOR PRESSURE (mm Hg) N.A.	MELTING POINT N.A.	SOLUBILITY IN WATER Complete	SCENT None Added
VAPOR DENSITY (AIR = 1) N.A.	EVAPORATION RATE (BUTYL ACETATE = 1) N.A.	pH 2500 ppm SOLUTION N.A.	pH CONCENTRATE Less Than 2.0
OTHER Non-Viscous, Clear Solution.			

SECTION 4 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS (CHEMICAL NAME: COMMON NAME)	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	PERCENT WT/WT
Orthophosphoric Acid: Phosphoric Acid CAS Registry Number 7664-38-2	1 mg/m ³ TWA	1 mg/m ³ TWA	3 mg/m ³ STEL (ACGIH/OSHA)	15.0-40.0
Hydrochloric Acid: Muriatic Acid CAS Registry Number 7647-01-0	5 ppm Ceiling Limit	5 ppm Ceiling Limit	None	1.0-5.0

This product contains no other ingredient considered hazardous according to the criteria of 29 CFR 1910.1200, OSHA. However, this product contains chemicals which may be subject to reporting requirements according to the criteria of SARA Title III, 40 CFR, Part 370, Section 311 and Section 312. This product also contains chemicals which may be subject to reporting requirements according to the criteria of SARA Title III, 40 CFR, Part 372, Section 313.

STATE RIGHT TO KNOW INFORMATION

THIS PRODUCT CONTAINS: WATER/7732-18-5, PHOSPHORIC ACID/7664-38-2, HYDROCHLORIC ACID/7647-01-0
POLOXAMER/9003-11-6

NFPA RATING: Health-3/Flammability-0/Reactivity-0 See Section 5 for Protective Equipment.
HMIS RATING: Health-3/Flammability-0/Reactivity-1 See Section 5 for Protective Equipment.

CARCINOGENICITY:

This product does not contain any known carcinogens or anticipated carcinogens according to the criteria of the NTP Annual Report on Carcinogens, IARC Monographs, and OSHA 29 CFR 1910, Subpart Z.

(CONTINUED IN SECTIONS 5 TO 8)

SECTION 5 - SAFE USAGE DATA

PROTECTIVE EQUIPMENT TYPES	EYES Splash-proof safety glasses, safety goggles, and an eye-wash station.	
	RESPIRATORY None required with normal use.	GLOVES Rubber or Neoprene.
	OTHER Wear full-cover protective clothing to prevent skin contact.	
VENTILATION	GENERAL MECHANICAL Satisfactory. Maintain adequate ventilation. Keep levels below recommended TLV.	
	LOCAL EXHAUST Not ordinarily needed. Avoid inhalation of mists containing this product.	
PRECAUTIONS	HANDLING & STORAGE Follow all label directions. Instruct personnel about proper use, hazards, precautions, and first-aid measures. Avoid inhalation, ingestion and contact with skin and eyes.	
	Rotate stock regularly. Handle carefully to avoid damaging container. Keep container closed when not in use. Recommended storage temp below 100°F. Do not freeze. Keep out of children's reach.	

SECTION 6 - HEALTH HAZARD DATA

EFFECTS OF EXPOSURE	INHALATION Corrosive. Inhalation of mist may cause irritation to nose, throat and mucous membranes, pulmonary irritation, pulmonary edema, tissue damage and chemical burns.
	INGESTION Corrosive. Harmful or fatal if swallowed. May cause nausea, vomiting, and severe tissue damage to digestive tract. Corrosive to mouth, throat, stomach and to other tissues.
	SKIN & EYES SKIN: Corrosive. Contact may cause severe irritation, dermatitis, and chemical burns. EYES: Corrosive. Causes eye burns. May cause temporary or permanent vision loss and blindness.
	ACUTE & CHRONIC ACUTE: Corrosive to all body tissues. Harmful skin contact may not cause immediate pain. Permanent eye damage may result without immediate first aid treatment. CHRONIC: None Known.
ROUTES OF ENTRY	INGESTION-X SKIN ABSORPTION-X TARGET ORGANS SKIN-X EYES-X INHALATION-X Eyes, Skin, Respiratory System.

SECTION 7 - PHYSICAL HAZARD DATA

FLAMMABILITY	LEL = N.A. UEL = N.A.	FLASH POINT = N.A.	METHOD USED = N.A.
STABILITY	STABLE	X	CONDITIONS TO AVOID Avoid mixing with any other cleaning product. Mix only with water. Do not store at high temperatures. Recommended storage temperature below 100°F.
	UNSTABLE		HAZARDOUS DECOMPOSITION PRODUCTS May react with certain metals to produce flammable hydrogen gas. Mixing with strong alkali can generate steam.
HAZARDOUS POLYMERIZATION	MAY OCCUR	X	CONDITIONS TO AVOID
	WILL NOT OCCUR		N.A.
INCOMPATIBILITY	MATERIALS TO AVOID Alkaline materials, chlorinated compounds, and metals such as aluminum, zinc, tin, etc., and cyanides, sulfides, and sulfites. Avoid sodium hypochlorite or bleach.		

SECTION 8 - EMERGENCY RESPONSE DATA

FIRE	EXTINGUISHING MEDIA For fires in area, use appropriate media. For example: Water spray, dry chemical, carbon dioxide, or alcohol foam.
	SPECIAL PROCEDURES Evacuate area of unprotected personnel. Wear protective clothing, goggles, and face shield. Cool fire-exposed containers with water spray.
	UNUSUAL HAZARDS Product may react with some metals such as aluminum, zinc, tin, etc., to release flammable hydrogen gas.
FIRST AID MEASURES	INGESTION: Do not induce vomiting. If patient is conscious and can swallow, administer milk or water. SKIN: Remove contaminated clothes, flood with water for 15 minutes. EYES: Flood with lukewarm (not hot) water poured from a large glass 2 or 3 inches from eyes. Remove contacts. Have patient blink as much as possible while flooding the eyes. Continue for 15 minutes. INHALATION: Move victim to fresh air. Give artificial respiration if patient is not breathing. ADMINISTER FIRST AID TREATMENT AS STATED ABOVE, THEN CALL 1-800-851-7145 Ext 075 OR CONTACT PHYSICIAN FOR FURTHER MEDICAL INSTRUCTIONS.
SPILLS RQ - N.A.	STEPS TO BE TAKEN Wear proper protective equipment including rubber boots. Stop leak if you can do so without risk. Dike or dam large spills. Ventilate area if needed. Soak up with sand or other non-combustible inert absorbent materials. Flush area with water and follow with normal clean-up procedures. Keep combustibles away! Be careful as spills are slippery.
	WASTE DISPOSAL METHOD Comply with all federal, state, and local regulations. Consult state and local authorities for restrictions on disposal of chemical waste. If approved, may be diluted and drained to a municipal sewer or waste treatment plant. Rinse empty container thoroughly with water before discarding. Please recycle empty container whenever possible.

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(MSDS)

(108100)

ITEM NUMBER: 006 - Lice Killer

IDENTITY (As Used On Label and List):

EMERGENCY MEDICAL Telephone# 1-800-228-5635 X 009 (24 Hrs) Outside of the U.S.A. Call 651-632-9275

PRODUCT HAZARD RATINGS (NFPA): Health = 2, Fire = 4, Reactivity = 0, Protective Equipment = *A
(Rating Legend: 4 = Extreme, 3 = Serious, 2 = Moderate, 1 = Slight, 0 = Minimal)

SECTION I

Claire Mfg
500 Vista
Addison

TELEPHONE NUMBER FOR INFORMATION :

DATE PRINTED : 11/01/01 NAME OF PREPARER : Ron Cepa

IL 60101

SECTION II - HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Chemical Names	Exposure Limits (LD50-Oral Rat)	SARA Title III SEC 313	ACGIH TLV/TWA	OSHA PEL	% By Wt.
Pyrethrins (CAS# 8003-34-7)	200 mg/kg	-	5 mg/cm3	5mg/cm3	0.4
Piperonyl Butoxide (CAS# 51-03-6)	5.0g/kg	YES	ND	ND	2.0
Isoparaffinic Petroleum Solvent (CAS# 64742-47-8)	-	-	ND	ND	1.6
Mineral Spirits (CAS# 64742-88-7)	-	-	100ppm	100ppm	5.8
Sodium Benzoate (CAS# 532-32-1)	4100mg/kg	-	NA	NA	0.1
Liquefied Petroleum Gas (CAS# 68476-85-7)	NA	-	1000	1000	25.0

Unidentified ingredients are not considered hazardous under the Federal Hazard Communication Standard.
Components Listed As A Suspected Carcinogen: None

SECTION III - PHYSICAL CHARACTERISTICS

Boiling Point: NO Vapor Pressure (psig): 100 @130F Specific Gravity (H2O=1): <1.0
Solubility/Water: >10% Vapor Density (AIR=1): >1 Evaporation Rate (Ether=1): <1
Appearance and Odor: Misty spray, petroleum distillate odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Aerosol Flammability: This product has been tested in accordance with the method described in 40 CFR 156.10 and found to be not flammable. (Under certain conditions this product may burn.)

Flammable Limits % Volume In Air (Propellant): LEL: 1.8 UEL: 9.2

Extinguishing Media: Carbon dioxide, foam and/or dry chemical may be used.

Special Fire Fighting Procedures: Containers should be cooled with water to prevent vapor pressure build up.

Use equipment or shielding, as required, to protect personnel from bursting, rupturing or venting containers.

Unusual Fire and Explosion Hazards: At elevated temperatures (over 54C-130F) containers may vent or burst.

SECTION V - REACTIVITY DATA

Stability: Stable Hazardous Polymerization: NA
Incompatibility (Materials to Avoid): High heat sources, open flames and oxidizing agents.
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide and additional toxic chemicals may be formed in small amounts.
Conditions to Avoid: Do not store above 54C-130F. Keep away from heat, direct sunlight, open flames or sparks. Dropping of containers may cause bursting.

--*-*-* SECTION VI - HEALTH HAZARD DATA

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Route(s) of Entry - Inhalation: X Eyes: X Skin: X Ingestion: X
Signs and Symptoms of Exposure: Respiratory irritation. High concentrations may produce headache, dizziness and nausea. Prolonged or repeated skin contact may lead to drying, irritation and dermatitis. Possible skin absorption. Eye contact may cause burning and irritation.

Medical Conditions Generally Aggravated by Exposure: Pre-existing skin or eye disorders may be aggravated by exposure to this product.

Emergency and First Aid Procedures: Eye Contact: Flush eyes with plenty of water for 15 minutes while holding eyelids open. Get medical attention if irritation persists. Skin Contact: Remove contaminated clothing. Flush skin with water, follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. Inhalation: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention. Ingestion: Get medical attention.

--*-*-* SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

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Releases or Spilled: Remove all sources of ignition and ventilate area. Soak up spill with an inert absorbent and place into a designated disposal container. Consult local regulatory agency for proper disposition of material.

Waste Disposal Method: Do not puncture or incinerate containers. When contents are depleted continue to depress button until all gas is expelled. Dispose of container in accordance with local, state, and federal regulations.

Handling And Storing: Avoid breathing vapor. Keep away from heat and flame. Use with adequate ventilation. Do not puncture or incinerate containers. Do not expose to direct sunlight or store at temperatures above 130F (54C). Store as Level 1 Aerosol (NFPA 308).

Other Precautions: Product is toxic to fish. Do not apply directly to lakes, streams, ponds, tidal marshes or estuaries. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water by cleaning of equipment or disposal of waste. Please read and follow directions on the product label; they are your best guide to using this product in the most effective way, and give the necessary safety precautions to protect your health.

--*-*-* SECTION VIII - EMPLOYEE PROTECTION

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Respiratory Protection (Type): None required if good ventilation is maintained. If exposure exceeds occupational exposure limits (Sec. II), use a NIOSH approved respirator to prevent overexposure.

Ventilation: Local exhaust is adequate under normal conditions, mechanical ventilation is optional.

Protective Gloves: Optional; Chemical resistant gloves*.

Eye Protection: Chemical safety glasses are recommended*.

Other Protective Clothing or Equipment: Wear impervious clothing to prevent skin contact.

Work/Hygienic Practices: Ensure strict sanitary conditions are conformed to when working around chemicals.

Protective clothing and equipment should be in accordance with 29 CFR 1910.132 and CFR 1910.133.

--*-*-* SECTION IX - OTHER REGULATORY CONTROLS

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Governmental Listings: Ingredients of this product are listed on the EPA/TSCA Inventory of Chemical Substances.

***** SECTION X TRANSPORTATION REQUIREMENTS (D.O.T. CLASSIFICATION) *****

Shipping Name: Consumer Commodity Hazard Class: ORM-D

NG -- Negligible NA-- Not Applicable NE-- Not Established UN-- Unavailable ND-- Not Determined

While the information set forth herein is believed to be accurate as of the date hereof, the Company makes no warranty or guarantee, express or implied, and disclaims all liability arising out of the use of this information.
As of: April 22, 1998

Manufacturer: Xerox Corporation
Rochester, N.Y. 14644

Health Emergency Tel. No.: (716) 422-2177
Transportation Emergency: (716) 422-1230
Safety Information Tel. No.: (800) 828-6571

Section I - Product Identification

Trade Names/Synonyms: Lens and Mirror Cleaner, Platen Glass Cleaner **Part No.:** 43P81,8R3669

Chemical Name: None

Ingredients

	<u>CAS No.</u>
Ethyl alcohol (75-85%)	64-17-5
Isopropyl alcohol (5-15%) ¹	67-63-0
Water (5-10%)	7732-18-5
Ammonium hydroxide (<1%)	1336-21-6
3, 5-Dimethyl-1-hexyn-3-ol (<0.1%)	107-54-0

Section II - Emergency and First Aid

Eyes: Flush thoroughly with water.
Skin: Wash thoroughly with soap and water.
Inhalation: Remove from exposure.
Ingestion: Dilute stomach contents with several glasses of water.
Primary Route of Entry: Inhalation
Symptoms of Overexposure: Central nervous system depression, respiratory distress, and gastrointestinal irritation.
Medical Conditions Generally Aggravated by Exposure: None when used as described by product literature.
Additional Information: Call physician.

Section III - Toxicology and Health Information

This material has been evaluated by Xerox Corporation.

Oral LD₅₀:	>21 g/kg (rats) practically non-toxic. ²	TLV:	1000 ppm (ethyl alcohol)
Dermal LD₅₀:	> 20 g/kg (rabbits) practically non-toxic. ²		400 ppm (isopropyl alcohol)
Inhalation LC₅₀:	Not determined	PEL:	1000 ppm (ethyl alcohol)
Eye Irritation:	Irritant		400 ppm (isopropyl alcohol)
Skin Sensitization:	Not a sensitizer.	STEL:	500 ppm (isopropyl alcohol)
Skin Irritation:	Not an irritant. ²	Ceiling:	None established
Human Patch:	Non-irritating, non-sensitizing.	XEL³:	None established
Mutagenicity:	Not determined		
Carcinogens:	None present		
Aquatic LC₅₀:	Not determined		
Additional Information:	None		

¹This product contains a toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40CFR Part 372. ²Prolonged or repeated skin contact may cause defatting of skin. ³XEL - Xerox Exposure Limit

Section IV - Physical Data

Appearance/Odor:	Clear liquid/alcoholic odor	Softening Range:	N.A.
Boiling Point:	76-82°C	Melting Point:	N.A.
Solubility in Water:	Completely	Specific Gravity (H₂O = 1):	0.82
Evaporation Rate:	3.1 (n-butylacetate = 1)	Vapor Pressure (mm Hg):	15 @ 20°C
Vapor Density (Air = 1):	0.85	pH =	10.6
Volatile	100%(Wgt.)	N.A. % (Vol.)	

Section V - Fire and Explosion Data

Flash Point (Method Used):	27°C (80°F) ASTM Open Cup	Flammable Limits	LEL:	N.A.
Extinguishing Media:	Alcohol foam, carbon dioxide, dry chemical.		UEL:	N.A.
Special Fire Fighting Procedures:	None			
Fire and Explosion Hazards:	None			

Section VI - Reactivity Data

Stability:	<table border="1"><tr><td>Unstable</td><td></td></tr><tr><td>Stable</td><td>X</td></tr></table>	Unstable		Stable	X	Hazardous Polymerization:	<table border="1"><tr><td>May Occur</td><td></td></tr><tr><td>Will Not Occur</td><td>X</td></tr></table>	May Occur		Will Not Occur	X
Unstable											
Stable	X										
May Occur											
Will Not Occur	X										

Hazardous Decomposition Products: None

Incompatibility (Materials to Avoid): Acetyl chloride, oxidizers.

Section VII - Special Protection Information

Respiratory Protection: None required when used as intended in Xerox products.
Eye Protection: Safety glasses with side shields recommended.
Protective Gloves: PVC plastic gloves recommended.
Other: None required when used as intended on Xerox products.

Section VIII - Special Precautions

Handling and Storage: Do not handle or store near heat, sparks, flames, or oxidizing agents. Store in a cool place.
Conditions to Avoid: Avoid prolonged or repeated skin contact.

Section IX - Spill, Leak, and Disposal Procedures

For Spills or Leakage: Eliminate sources of ignition. Small spills should be flushed with large quantities of water. Large spills should be absorbed on vermiculate or similar absorbant material collected for disposal.
Waste Disposal Method: Absorb liquid on vermiculate or other absorbant material or atomize into an incinerator where permitted. Dispose of in accordance with federal, state, and local regulations.

Section X - Transportation Information

	Proper Shipping name	Hazard Class	Packing Group	UN ID #	small quantity exception may apply
D.O.T.	Flammable Liquid, n.o.s. (ethyl alcohol, methyl alcohol)	3	III	UN 1993	yes
I.A.T.A.	Flammable Liquid, n.o.s. (ethyl alcohol, methyl alcohol)	3	III	UN 1993	yes
I.M.O.	Flammable Liquid, n.o.s. (ethyl alcohol, methyl alcohol)	3.3	III	UN 1993	yes

MATERIAL SAFETY DATA SHEET

SECTION I - IDENTITY AND RESPONSIBLE PARTY INFORMATION

302090165

Responsible Party: KSS ENTERPRISES	Product Name: KSS MILD BOWL CLEANER
Address: KALAMAZOO, MI 49001	Date Prepared: 5-1-03
Emergency Telephone No. 269-349-6637 And Other Information	Prepared By Regulatory Affairs Department

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS #'s	OSHA PEL	ACGIH TLV	Other Limits Recommended	% Optional
Specific Chemical Identity: Common Name(s)					
*Hydrochloric Acid	7647-01-0	5 ppm(c)	5 ppm(c)	N/A	9.5
Nonoxynol	9016-45-9	N/A	N/A	N/A	1.0
Amine Ethoxylate	61791-24-0	N/A	N/A	N/A	1.0

***THIS CHEMICAL IS SUBJECT TO THE REPORTING REQUIREMENTS FOR SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 AND 40 CFR PART 372.**

HMIS RATING - HEALTH: 2 FLAMMABILITY: 0 REACTIVITY: 0 PERSONAL PROTECTION EQPT: B

SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: Approx. 212°F	Specific Gravity (H ₂ O = 1): 1.050
Vapor Pressure (mm Hg): N/E	Percent Volatile By Weight (%): >95%
PH (conc.): <1	Evaporation Rate (H ₂ O=1): >1
Solubility in Water: Complete	Appearance and Fragrance: Green Liquid / Floral Fragrance

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used) - None	Flammable Limits - LEL - N/A	UEL - N/A
Extinguishing Media - Water, CO₂, Foam or media suitable for surrounding fire.		
Special Fire Fighting Procedures - Standard fire fighting procedures may be followed, including full protective gear, NIOSH approved self-contained breathing apparatus. Unusual Fire and Explosion Hazards - None Known		

SECTION V - PHYSICAL HAZARDS

Stability: Unstable Stable X	Conditions to Avoid - None Known
Incompatibility (Materials to Avoid) - Do not mix with chlorine bleach or other chemicals.	
Hazardous Decomposition Products or By-products - Thermal decomposition on burning may produce toxic vapors or gases.	
Hazardous: May Occur	Conditions to Avoid - None Known
Polymerization: Will not Occur X	

SECTION VI - HEALTH HAZARDS

Route(s) of Entry:	Inhalation? X	Skin? X	Ingestion? X
Health Hazards (1. Acute and 2. Chronic) - 1. ACUTE: Harmful or fatal if swallowed. Eye and skin irritant. May cause permanent damage if not treated promptly.			
2. CHRONIC: None Known			
Chemical Listed as Carcinogen or Potential Carcinogen	National Toxicology Program	No X	I.A.R.C. Monographs No X
			OSHA No X

Signs and Symptoms of Exposure - **Irritation or burning sensation.**

Medical Conditions Generally Aggravated by Exposure - **May aggravate skin disorders or respiratory ailments.**

Emergency and First Aid Procedures - **EYE CONTACT: Flush immediately with water for 15 minutes. Get medical attention. SKIN CONTACT: Flush with water for 15 minutes. Remove and wash contaminated clothing. INHALATION: Move to fresh air. Get medical attention. INGESTION: Rinse mouth with water. Then drink 1-2 glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical attention.**

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be Taken in Case Material is Released or Spilled - **Wear appropriate protective equipment. If possible, contain spill and collect in approved container. Rinse affected area thoroughly with water. Keep product out of storm sewers or waterways. Hold for disposal.**

Waste Disposal Method - **Dispose of in accordance with local, state and Federal regulations. If possible, triple rinse container, and recycle.**

Precautions to be Taken in Handling and Storing - **Avoid contact with skin or eyes. Avoid breathing vapor, spray or mist. Store in original container, in cool dry place with adequate ventilation. Keep out of reach of children. Keep container tightly closed when not in use.**

Other Precautions - **Use only according to label directions. If unsure about safe use, contact your supervisor immediately.**

SECTION VIII - CONTROL MEASURES

Respiratory Protection (Specify Type) - **Not expected to be necessary under normal conditions of use. Where exposure cannot be adequately controlled by general or local ventilation, use appropriate respiratory protection to prevent over exposure. An approved dust/mist respirator would be recommended.**

Ventilation - **X Local Exhaust - As Necessary Mechanical (General) - Adequate Special - N/A Other - N/A**

Protective Gloves - **Water Impervious (Latex, Neoprene) Eye Protection - Chemical Resistant Goggles or Face Shield Other Protective Clothing or Equipment - Eye wash recommended**

Work/Hygiene Practices - **Follow OSHA mandated procedures. Never eat or smoke while working with chemicals. Good housekeeping practices apply. Wash thoroughly after handling.**

NOTICE: NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE, ARE MADE WITH RESPECT TO INFORMATION CONCERNING THE PRODUCT REFERRED TO IN THIS MATERIAL SAFETY DATA SHEET.

N/A (Not Applicable/Not Available) N/E (Not Established)

(127500)



Material Safety Data Sheet

WHMIS (Pictograms)	WHMIS (Classification)	HCS
	E	HCS CLASS: Toxic. HCS CLASS: Corrosive liquid.
Section 1. Chemical Product and Company Identification		
Product Name/ Trade name	KSS Heavy Duty Cleaner	Code 103
Synonym	Heavy Duty Cleaner/Degreaser	CAS # Not applicable.
Chemical Family	Not available.	Validation Date 1/25/2001
Chemical Formula	Not applicable.	Print Date 2/12/2001
Manufacturer	Betco Corporation 1001 Brown Avenue Toledo, Ohio 43607 (419) 241-2156	In Case of Emergency Chemtrec (800) 424-9300
TSCA	TSCA Inventory: All components listed or are exempt from listing.	
DSL	DSL : All components listed unless noted elsewhere on this MSDS	
		Protective Clothing

Section 2. Composition and Information on Ingredients				
Name	CAS #	% by Weight	Exposure Limits	LC ₅₀ /LD ₅₀
1) Sodium Metasilicate	6834-92-0	<15	Not available.	Not available.
2) 2-Butoxyethanol	111-76-2	<5	TWA: 20 (ppm) from ACGIH (TLV) [United States] TWA: 50 (ppm) from OSHA (PEL) [United States]	ORAL (LD50): Acute: 1746 mg/kg [Rat].
3) Sodium Tallate	61790-45-2	<2	Not available.	Not available.
4) Sodium Xylene Sulfonate	1300-72-7	<1	Not available.	Not available.

Section 3. Hazards Identification	
Potential Acute Health Effects	Corrosive to skin and eyes on contact. Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Severe over-exposure can result in death.
Potential Chronic Health Effects	Prolonged exposure may result in skin burns and ulcerations. Severe over-exposure can produce lung damage, choking, unconsciousness or death. The amount of tissue damage depends on length of contact.
Carcinogenic Effects	Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Liquid.	Odor	Pleasant.
Molecular Weight	Not applicable.	Taste	Not available.
pH	12.5 to 13.5 [Basic.]	Color	Violet.
Boiling/Condensation Point	215°F initial		
Melting/Freezing Point	Not available.		
Critical Temperature	Not available.		
Instability Temperature	Not available.		
Specific Gravity	1.06 (Water = 1)		
Vapor Pressure	20mm Hg @ 68°F		
Vapor Density	>1 (Air = 1)		
Volatility	80		
VOC	Not available.		
Evaporation Rate	<1 compared to Water		
Odor Threshold	Not available.		
LogK_{ow}	Not available.		
Ionicity (in Water)	Not available.		
Dispersion Properties	See solubility in water.		
Solubility	Easily soluble in cold water.		
The Product is:	Non-flammable.		
Auto-ignition Temperature	Not available.		
Flash Points	Not available.		
Flammable Limits	Not available.		
Fire Hazards in Presence of Various Substances	No specific information is available in our database regarding the flammability of this product in presence of various materials.		
Explosion Hazards in Presence of Various Substances	Not applicable		

Section 10. Stability and Reactivity Data

Stability	The product is stable.
Incompatibility with Various Substances	Strong acids.
Hazardous Decomposition Products	not available

Maritime Transportation Not available.

Special Provisions for Transport Not available.

Section 15. Other Regulatory Information and Pictograms

WHMIS (Classification) E



Regulatory Lists No products were found.

Other Regulations OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications HCS (U.S.A.) HCS CLASS: Toxic.
HCS CLASS: Corrosive liquid.

USA Regulatory Lists

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
2-Butoxyethanol: immediate health hazard, delayed health hazard
SARA 313 toxic chemical notification and release reporting: 2-Butoxyethanol

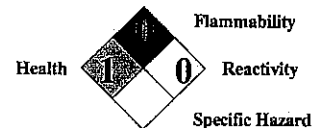
DSD (EEC) This product is not classified according to the EU regulations.

International Regulations Lists No products were found.

Hazardous Material Information System (U.S.A.)

Health	2
Flammability	0
Reactivity	0
Personal Protection	B

National Fire Protection Association (U.S.A.)



Section 16. Other Information

Validated by CRushton on 1/25/2001.

Verified by CRushton.

Printed 2/12/2001.

Information Contact Betco Corporation
1001 Brown Avenue
Toledo, Ohio 43607

Notice to Reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

MATERIAL SAFETY DATA SHEET (MSDS)

MSDS030 030 031

ITEM NUMBER: 031 - ALL PURPOSE CLEANER 19 OZ.

IDENTITY (As Used On Label and List): Krud Kutter All Purpose Cleaner

EMERGENCY MEDICAL Telephone# 1-800-228-5635 X 009 (24 Hrs) Outside of the U.S.A. Call 651-632-9275

PRODUCT HAZARD RATINGS (NFPA): - Health = 1, Fire = 1, Reactivity = 0, Protective Equipment = *B (Rating Legend: - 4 = Extreme, 3 = Serious, 2 = Moderate, 1 = Slight, 0 = Minimal)

SECTION I

ONE WAY PRODUCTS, INC
433 EAST RANSOM STREET
KALAMAZOO MI 49007

TELEPHONE NUMBER FOR INFORMATION : 616-343-3772

DATE PREPARED : 11/09/99

NAME OF PREPARER : Jodi Gallagher

SECTION II - HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Table with 6 columns: Chemical Names, Exposure Limits (LD50-Oral Rat), SARA Title III SEC 313, ACGIH TLV/TWA, OSHA PEL, % By Wt. Rows include 2 Butoxy Ethanol, Alkyl Dimethyl Amine Oxide, Quarternary Ammonium Chloride, Sodium Ethylene Diamine Tetraacetate, and Liquified Petroleum Gas.

SECTION III - PHYSICAL CHARACTERISTICS

Boiling Point: NA Vapor Pressure (psig): 115 @130F Specific Gravity (H2O=1): <1.0
Solubility/Water: >10% Vapor Density (AIR=1): >1 Evaporation Rate (Ether=1): <1
Appearance and Odor: Foaming spray / floral-ammonia odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Aerosol Flammability: This product is considered to be non flammable as described in 16CFR 1500.45.
Flammable Limits - % Volume In Air (Propellant): LEL: 1.8 UEL: 9.2
Extinguishing Media: Carbon dioxide, foam and/or dry chemical may be used.
Special Fire Fighting Procedures: Containers should be cooled with water to prevent vapor pressure build up. Use equipment or shielding, as required, to protect personnel from bursting, rupturing or venting containers.
Unusual Fire and Explosion Hazards: At elevated temperatures (over 54C-130F) containers exposed to direct flame or heat contact should be cooled with water to prevent weakening of container structure.

SECTION V - REACTIVITY DATA

Stability: Stable Hazardous Polymerization: NA
Incompatibility (Materials to Avoid): Strong oxidizers, heat and open flame.
Hazardous Decomposition Products: Carbon monoxide, carbon dioxide and additional toxic chemicals may be formed in small amounts.
Conditions to Avoid: Do not store above 54C-130F. Keep away from heat, direct sunlight, open flames or sparks. Dropping of containers may cause bursting.

***** SECTION VI - HEALTH HAZARD DATA *****

Route(s) of Entry - Inhalation: X Eyes: X Skin: X Ingestion: X
Signs and Symptoms of Exposure: Inhalation is the primary route of exposure and may cause dizziness, drowsiness and throat irritation. Prolonged or repeated skin contact can cause irritation and defatting of skin.
Medical Conditions Generally Aggravated by Exposure: Pre-existing skin or eye disorders may be aggravated by exposure to this product.
Emergency and First Aid Procedures: Eye Contact: Flush eyes with plenty of water for 15 minutes while holding eyelids open. Get medical attention if irritation persists. Skin Contact: Remove contaminated clothing. Flush skin with water, follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. Inhalation: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention. Ingestion: Get medical attention. This product contains 2-Butoxyethanol, which if ingested in significant quantities may result in red blood cell hemolysis.

***** SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE *****

Releases or Spilled: Remove all sources of ignition and ventilate area. Soak up spill with an inert absorbent and place into a designated disposal container. Consult local regulatory agency for proper disposition of material.
Waste Disposal Method: Do not puncture or incinerate containers. When contents are depleted continue to depress button until all gas is expelled. Dispose of container in accordance with local, state, and federal regulations.
Handling And Storing: Avoid breathing vapor. Keep away from heat and flame. Use with adequate ventilation. Do not puncture or incinerate containers. Do not expose to direct sunlight or store at temperatures above 130F (54C). Store as Level 1 Aerosol (NFPA 30B).
Other Precautions: Please read and follow the directions on the product label; they are your best guide to using this product in the most effective way, and give the necessary safety precautions to protect your health.

***** SECTION VIII - EMPLOYEE PROTECTION *****

Respiratory Protection (Type): None required if good ventilation is maintained. If exposure exceeds occupational exposure limits (Sec. II), use a NIOSH approved respirator to prevent overexposure.
Ventilation: Local exhaust is adequate under normal conditions, mechanical ventilation is optional.
Protective Gloves: Chemical resistant gloves*.
Eye Protection: Chemical safety glasses are recommended*.
Other Protective Clothing or Equipment: Wear impervious clothing to prevent skin contact.
Work/Hygienic Practices: Ensure strict sanitary conditions are conformed to when working around chemicals. Protective clothing and equipment should be in accordance with 29 CFR 1910.132 and CFR 1910.133.

***** Section IX-Other Regulatory Controls *****

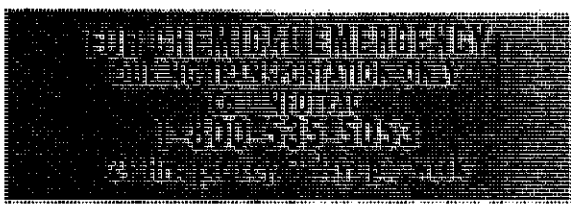
Governmental Listings: Ingredients of this product are listed on the EPA/TSCA Inventory of Chemical Substances.

***** Section X-Transportation/Storage Classifications (D.O.T./NFP *****

Shipping Name: Consumer Commodity Hazard Class: ORM-D

NG-- Negligible NA-- Not Applicable NE-- Not Established UN-- Unavailable ND-- Not Determined

While the information set forth herein is believed to be accurate as of the date hereof, the Company makes no warranty or guarantee, express or implied, and disclaims all liability arising out of the use of this information.
As of: April 22, 1998



XJ03

Data Sheet For: X-JT JOINT SEALER CAULK
Manufactured By: REVERE
Report Printed: 05/21/1993 09:49:24

Product's ID #: XJ03

Printed: 05/21/1993 09:49:24

MATERIAL SAFETY DATA SHEET

Identity (As used on label and list) | Note: Blank fields are
X-JT JOINT SEALER CAULK | not permitted

Section I

Manufacturer's Name | Emergency Phone #
REVERE | 1-800-535-5053
Address | Information Phone #
4529 INDUSTRIAL PARKWAY | 1-800-321-1976
City, State, Zip Code | Date Prepared
CLEVELAND, OH 44135 | JAN. 15, 1992

Section II - Hazardous Ingredients

Ingredient | Percent | CAS Number
POLYURETHANE POLYMER | 30.00 |
Common Names and Synonyms
POLYURETHANE POLYMERN
PEL: N/A | TLV: N/A
Other Limits Recommended: NONE
Ingredient | Percent | CAS Number
TALC DUST | 30.00 | 14807-95-5
Common Names and Synonyms
TALC DUST
PEL: 2 MG/M3 (RESP.DUST) | TLV: 2 MG/M3 (RESP. DUST)
Other Limits Recommended: NONE

Section II continued on next page

Section II - Hazardous Ingredients (continued)

Ingredient | Percent | CAS Number
CALCIUM CARBONATE | 20.00 | 1317-65-3
Common Names and Synonyms
CALCIUM CARBONATE (LIMESTONE)
PEL: 10 MG/M3 (TOTAL DUST) | TLV: 15 MG/M3 (TOTAL DUST)
Other Limits Recommended: NO ASBESTOS <1% S102
Ingredient | Percent | CAS Number
DI(2-ETHYLHEXYL) ADIPATE | 9.00 | 103-23-1
Common Names and Synonyms
DI(2-ETHYLHEXYL) ADIPATE
PEL: N/A | TLV: N/A
Other Limits Recommended: NONE
Ingredient | Percent | CAS Number
BUTYL BENZYL PHTHALATE | 9.00 | 85-68-7
Common Names and Synonyms
BUTYL BENZYL PHTHALATE
PEL: 5 MG/M3 | TLV: 5 MG/M3
Other Limits Recommended: 10 MG/M3 STEL
Ingredient | Percent | CAS Number
TOLUENE | 4.00 | 108-88-3
Common Names and Synonyms
TOLUENE (METHYLBENZENE)
PEL: 50 PPM | TLV: 100 PPM
Other Limits Recommended: 150 PPM (SKIN)

Section II continued on next page

Section II - Hazardous Ingredients (continued)		
Ingredient	Percent	CAS Number
MAGNESIUM(II) CARBONATE (1:1)	2.00	546-93-0
Common Names and Synonyms MAGNESIUM CARBONATE		
PEL: 10 MG/M3	TLV: 15 MG/M3	
Other Limits Recommended: 5 MG/M3 RESPIRABLE DUST		
Ingredient	Percent	CAS Number
TITANIUM OXIDE	2.00	13463-67-7
Common Names and Synonyms TITANIUM DIOXIDE		
PEL: 10 MG/M3	TLV: 10 MG/M3	
Other Limits Recommended: NO ASBESTOS < 1% SiO2		
Ingredient	Percent	CAS Number
ATTAPULGITE CLAY	2.00	8031-18-3
Common Names and Synonyms MAGNESIUM ALUMINUM SILICATE (CLAY)		
PEL: 10 MG/M3 NUISANCE DUST	TLV: 15 MG/M3 NUISANCE DUST	
Other Limits Recommended: NONE		
Ingredient	Percent	CAS Number
DIISODECYL PHTHALATE	1.00	26761-40-0
Common Names and Synonyms DIISODECYL PHTHALATE		
PEL: N/A	TLV: N/A	
Other Limits Recommended: NONE		

Section II continued on next page.

Section II - Hazardous Ingredients (continued)		
Ingredient	Percent	CAS Number
ISOCYANIC ACID, METHYLENEDI-P-	.45	101-68-8
Common Names and Synonyms 4,4'-METHYLENE BIS(PHENYL ISOCYANATE)		
PEL: 0.005 PPM	TLV: N/A	
Other Limits Recommended: NONE		
Ingredient	Percent	CAS Number
SILICA, CRYSTALLINE QUARTZ	0.30	14808-60-7
Common Names and Synonyms CRYSTALLINE SILICA (QUARTZ)		
PEL: 0.1 MG/M3 RESP. DUST	TLV: 0.1 MG/M3 RESP. DUST	
Other Limits Recommended: NONE		
Ingredient	Percent	CAS Number
CARBON BLACK	1.00	1333-86-4
Common Names and Synonyms CARBON BLACK		
PEL: 3.5 MG/M3	TLV: 3.5 MG/M3	
Other Limits Recommended: NONE		
Ingredient	Percent	CAS Number
XYLENE	4.00	1330-20-7
Common Names and Synonyms XYLENES (DIMETHYLBENZENES)		
PEL: 100 PPM	TLV: 100 PPM	
Other Limits Recommended: 150 PPM STEL		

Section III - Physical/Chemical Characteristics

Boiling Point: NOT ESTABL. | Specific Gravity: 1.41
Vapor Pressure: NEGLIGIBLE | Melting Point: NOT ESTABL.
Vapor Density: NOT ESTABL. | Evaporation Rate: NOT ESTABL.

SOLUBILITY IN WATER
NEGLIGIBLE

APPEARANCE AND ODOR
GREY PASTE, MILD ODOR

Section IV - Fire And Explosion Hazard Data

Flash Point: 104 F | Limits: Lel: N/E | Uel: N/E

EXTINGUISHING MEDIA
CARBON DIOXIDE, DRY CHEMICAL, FOAM, WATER FOG.

SPECIAL FIREFIGHTING PROCEDURES
PREVENT EXPOSURE TO FUMES USING ACCEPTED FIRE FIGHTING TECH.

UNUSUAL FIRE AND EXPLOSION HAZARDS
PRODUCT, RESIDUE OR VAPER MAY IGNITE.

Section V - Reactivity Data

STABILITY: Stable

CONDITIONS TO AVOID
NONE KNOWN

INCOMPATIBILITY (MATERIALS TO AVOID)
CONTACT WITH WATER, AMINES, BASES, OXIDIZERS, ALCOHOLS.

HAZARDOUS DECOMPOSITION PRODUCTS
HYDROCYANIC ACID, OXIDES OF NITROGEN CAN FORM.

HAZARDOUS POLYMERIZATION: Will Not Occur

Section V - Reactivity Data (continued)

CONDITIONS TO AVOID
NONE KNOWN

Section VI - Health Hazard Data

CARCINOGENICITY	NTP?	IARC?	OSHA REGULATED
YES	YES	YES	YES

Effects and Hazards of Overexposure (Acute and Chronic)

EFFECTS AND HAZARDS OF EYE CONTACT
CAN CAUSE IRRITATION

EFFECTS AND HAZARDS OF SKIN CONTACT
CAN CAUSE IRRITATION, SENSITIZATION, DERMATITIS.

EFFECTS AND HAZARDS OF INHALATION (BREATHING)
CAN CAUSE HEADACHE, IRRITATION, NAUSEA, DROWSINESS, STUPOR,
COUGHING SPELL AND ALLERGIC RESPIRATION SENSITIZATION.

EFFECTS AND HAZARDS OF INGESTION (SWALLOWING)
CAN CAUSE GASTROINTESTINAL IRRITATION.

Emergency And First Aid Procedures

TREATMENT FOR EYE CONTACT
FLUSH IMMEDIATELY WITH RUNNING WATER FOR 15 MINUTES, LIFTING
UPPER AND LOWER LIDS. GET IMMEDIATE MEDICAL ATTENTION.

TREATMENT FOR SKIN CONTACT
WASH AREA OF CONTACT THOROUGHLY WITH HAND CLEANER FOLLOWED
BY SOAP AND WATER. IF IRRITATION, RASH OR OTHER DISORDERS
DEVELOP, GET MEDICAL ATTENTION IMMEDIATELY

TREATMENT FOR INHALATION (BREATHING)
REMOVE TO FRESH AIR. MEDICAL ATTENTION IF OVEREXPOSURE SEVERE

TREATMENT FOR INGESTION (SWALLOWING)
GET MEDICAL ATTENTION IMMEDIATELY.

Section V continued on next page

Section VII - Precautions for Safe Handling and Use

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
REMOVE SOURCE OF IGNITION. VENTILATE TO REDUCE AIRBORNE CONTAMINATE. ABSORB SPILL IN SAND, EARTH, OTHER SUITABLE MATERIAL.

WASTE DISPOSAL METHOD

SUBJECT TO REQUIREMENTS UNDER RCRA. INCINERATE AT EPA APPROVED FACILITY OR DISPOSE OF IN COMPLIANCE WITH REGULATIONS.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

STORE IN CLOSED CONTAINER BELOW 80 F. KEEP LIQUID AND VAPOR AWAY FROM HEAT, SPARKS, FLAME. DO NOT STORE IN DIRECT SUNLIGHT PREVENT INHALATION OF VAPOR, INGESTION AND CONTACT WITH SKIN AND EYES. KEEP CONTAINER CLOSED WHEN NOT IN USE. VAPOR MAY MIGRATE TO SOURCES OF IGNITION. DO NOT SMOKE, WELD, GENERATE SPARKS OR USE FLAME NEAR CONTAINER.

OTHER PRECAUTIONS

KEEP OUT OF THE REACH OF CHILDREN.

Section VIII - Control Measures

RESPIRATORY PROTECTION

NIOSH/MSHA APPROVED RESPIRATOR WHEN AIRBORNE CONTAMINATE LEVELS EXCEED EXPOSURE LIMITS. SELECT POSITIVE PRESSURE SUPPLIED AIR RESPIRATOR (TC19C OR EQUIVALENT) FOR ISOCYANATES.

Ventilation

LOCAL EXHAUST VENTILATION

TO KEEP CONCENTRATION BELOW EXPOSURE LIMIT

SPECIAL VENTILATION

NONE

MECHANICAL (GENERAL) VENTILATION

YES

OTHER VENTILATION

NONE

Section VIII continued on next page

Section VIII - Control Measures (continued)

PROTECTIVE GLOVES

IMPERVIOUS RUBBER GLOVES

EYE PROTECTION

CHEMICAL SPLASH GOGGLES, FACE SHIELD IS RECOMMENDED.

OTHER PROTECTIVE EQUIPMENT

RUBBER APRON AND OVERSHOES/

WORK AND HYGIENIC PRACTICES

CHANGE SOILED WORK CLOTHES FREQUENTLY. CLEAN HANDS THOROUGHLY AFTER HANDLING. DO NOT SMOKE, WELD, GENERATE SPARKS OR USE FLAME NEAR CONTAINER



SF01

MATERIAL SAFETY DATA SHEET

Data Sheet For: STA-FIL
Manufactured By: REVERE
Report Printed: 05/20/1993 14:52:40

Identity (As used on label and list) STA-FIL
Note: Blank fields are not permitted

Section I
Manufacturer's Name: REVERE
Address: 4529 INDUSTRIAL PARKWAY
City, State, Zip Code: CLEVELAND, OH 44135
Emergency Phone #: 1-800-535-5053
Information Phone #: 1-800-321-1976
Date Prepared: FEB. 28, 1989

Section II - Hazardous Ingredients
Ingredient: ASPHALT, Percent: > 6.00, CAS Number: 8052-42-4
Common Names and Synonyms: EMULSIFIED ASPHALT
Other Limits Recommended: NONE

Ingredient: LIMESTONE, Percent: > 94.00, CAS Number: 1317-65-3
Common Names and Synonyms: LIMESTONE
Other Limits Recommended: NONE

Section II continued on next page

Section II - Hazardous Ingredients (continued)
Ingredient: FUEL OIL, Percent: 1.00, CAS Number: 68476-34-6
Common Names and Synonyms: FUEL OIL #2
Other Limits Recommended: NONE

Section III - Physical/Chemical Characteristics
Boiling Point: NOT APPLIC.
Vapor Pressure: > 1 MM HG
Vapor Density: > 1
Specific Gravity: 1.6
Melting Point: N/A
Evaporation Rate: SLOWER
SOLUBILITY IN WATER: INSOLUBLE
APPEARANCE AND ODOR: BLACK COATED STONE WITH PETROLEUM ODOR.

Section IV - Fire And Explosion Hazard Data
Flash Point: N/A
Limits: Lel: 0.7% Uel: N/A
EXTINGUISHING MEDIA: EXTINGUISH WITH DRY CHEMICAL, CO2 OR UNIVERSAL TYPE FOAM - WATER FOG IS EFFECTIVE BUT MAY CAUSE FROTHING. DO NOT USE WATER. FIGHT AS A FUEL OIL FIRE.
SPECIAL FIREFIGHTING PROCEDURES: NOT APPLICABLE

UNUSUAL FIRE AND EXPLOSION HAZARDS
UNDER FIRE CONDITIONS, MAY FORM TOXIC MATERIALS: CARBON DIOXIDE AND CARBON MONOXIDE AND OTHER VARIOUS HYDROCARBONS.

Section V - Reactivity Data

STABILITY: Stable

CONDITIONS TO AVOID
NONE KNOWN

INCOMPATIBILITY (MATERIALS TO AVOID)
AVOID CONTACT WITH STRONG OXIDIZING AGENTS AND ACIDS TO PRESERVE QUALITY.

HAZARDOUS DECOMPOSITION PRODUCTS
CARBON DIOXIDE, CARBON MONOXIDE AND HYDROGEN SULFIDE.

HAZARDOUS POLYMERIZATION: Will Not Occur

CONDITIONS TO AVOID
NONE

Section VI - Health Hazard Data

CARCINOGENICITY	NTP?	IARC?	OSHA REGULATED
NO	NO	NO	NO

Effects and Hazards of Overexposure (Acute and Chronic)

EFFECTS AND HAZARDS OF EYE CONTACT
ASPHALT COMPONENTS CAN CAUSE SEVERE IRRITATION, REDNESS, TEARING AND BLURRED VISION.

EFFECTS AND HAZARDS OF SKIN CONTACT
PROLONGED OR REPEATED CONTACT CAN CAUSE MODERATE IRRITATION, DEFATTING AND DERMATITIS. REPEATED SKIN CONTACT HAS BEEN SHOWN TO PRODUCE SKIN TUMORS ON LABORATORY ANIMALS. PROLONGED OR REPEATED SKIN CONTACT WITH THIS PRODUCT TENDS TO REMOVE SKIN OILS POSSIBLY LEADING TO IRRITATION AND DERMATITIS. HOWEVER, BASED ON HUMAN EXPERIENCE AND AVAILABLE TOXICOLOGICAL DATA, THIS PRODUCT IS JUDGED TO BE NEITHER A CORROSIVE NOR AN 'IRRITANT' BY OSHA CRITERIA.

EFFECTS AND HAZARDS OF INHALATION (BREATHING)
EXCESSIVE INHALATION OF HEATED MATERIAL IN AN ENCLOSED AREA MAY CAUSE DIZZINESS, WEAKNESS, HEADACHE, POSSIBLE UNCONSCIOUS-
(Continued on next page)

Section VI continued on next page

Section VI - Health Hazard Data (continued)

EFFECTS AND HAZARDS OF INHALATION (BREATHING) (Cont.)
NESS AND EVEN ASPHYXIATION. AS A PRECAUTION, EXPOSURE TO VAPORS, LIQUIDS, MISTS OR FUMES SHOULD BE MINIMIZED. PRODUCT HAS LOW ORDER OF ACUTE ORAL AND DERMAL TOXICITY, BUT MINUTE AMOUNTS ASPIRATED INTO THE LUNGS DURING INGESTION MAY CAUSE MILD TO SEVERE PULMONARY INJURY AND POSSIBLY DEATH. PERSONS WITH PRE-EXISTING CENTRAL NERVOUS SYSTEM DISEASE, SKIN DISORDERS OR CHRONIC RESPIRATORY DISEASE SHOULD AVOID EXPOSURE TO THIS PRODUCT.

EFFECTS AND HAZARDS OF INGESTION (SWALLOWING)
CAN CAUSE GASTROINTESTINAL IRRITATION, NAUSEA, VOMITING OR DIARRHEA.

Emergency And First Aid Procedures

TREATMENT FOR EYE CONTACT
FLUSH EYES WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. GET MEDICAL ATTENTION.

TREATMENT FOR SKIN CONTACT
REMOVE CONTAMINATED CLOTHING. THOROUGHLY WASH EXPOSED AREA WITH SOAP AND WATER. IF IRRITATION OR REDNESS DEVELOPS AND PERSISTS, GET MEDICAL ATTENTION.

TREATMENT FOR INHALATION (BREATHING)
IF AFFECTED, REMOVE INDIVIDUAL TO FRESH AIR. IF BREATHING IS DIFFICULT, ADMINISTER OXYGEN. IF BREATHING STOPS, USE ARTIFICIAL RESPIRATION AND SEEK PROMPT MEDICAL ATTENTION.

TREATMENT FOR INGESTION (SWALLOWING)
DO NOT INDUCE VOMITING. KEEP PERSON WARM AND QUIET AND CONTACT A PHYSICIAN. ASPIRATION INTO THE LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS, WHICH CAN BE FATAL.

Section VII - Precautions for Safe Handling and Use

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
SHUT OFF AND ELIMINATE ALL IGNITION SOURCES. KEEP PEOPLE AWAY
RECOVER FREE PRODUCT. ADD SAND, EARTH OR OTHER SUITABLE ABSORBENTS TO SPILL AREA. KEEP PRODUCT OUT OF SEWERS AND WATER COURSES BY DIKING OR IMPOUNDING. ADVISE AUTHORITIES IF PRO-
(Continued on next page)

Section VII continued on next page

=====
| Section VII - Precautions for Safe Handling and Use (continued) |
=====
| STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED(Cont.) |
| UCT HAS ENTERED OR MAY ENTER SEWERS, WATER COURSES OR EXTEN- |
| SIVE LAND AREAS. ASSURE CONFORMITY WITH APPLICABLE LOCAL |
GOVERNMENTAL REGULATIONS.
WASTE DISPOSAL METHOD
ANY APPROVED LANDFILL ACCORDING TO FEDERAL, STATE AND LOCAL
REGULATIONS.

| PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING |
| KEEP CONTAINERS TIGHTLY CLOSED, COOL, DRY AND AWAY FROM SOURCE |
| OF IGNITION. USE THIS PRODUCT WITH ADEQUATE VENTILATION. |
| EMPTY CONTAINERS RETAIN RESIDUE AND CAN BE DANGEROUS. DO NOT |
| PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE |
| SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF |
| IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. DO NOT |
ATTEMPT TO CLEAN SINCE RESIDUE IS DIFFICULT TO REMOVE.
OTHER PRECAUTIONS
MINIMIZE BREATHING VAPOR OR MIST. AVOID PROLONGED OR REPEAT-
ED SKIN CONTACT. KEEP OUT OF REACH OF CHILDREN.
=====

=====
| Section VIII - Control Measures |
=====
| RESPIRATORY PROTECTION: |
| USE SUPPLIED AIR RESPIRATORY PROTECTION IN CONFINED OR |
ENCLOSED SPACES IF NEEDED.
Ventilation
~~~~~
LOCAL EXHAUST VENTILATION
USE ONLY WITH VENTILATION SUFFICIENT TO PREVENT EXCEEDING
RECOMMENDED EXPOSURE LIMIT OR BUILDUP OF EXPLOSIVE CONCEN-
TRATIONS OF VAPOR IN AIR.
-----  
| SPECIAL VENTILATION |  
EXPLOSION-PROOF EQUIPMENT.
MECHANICAL (GENERAL) VENTILATION
BELOW TLV
-----

Section VIII continued on next page

=====  
| Section VIII - Control Measures (continued) |  
=====  
| OTHER VENTILATION |  
NONE
PROTECTIVE GLOVES
USE CHEMICAL RESISTANT GLOVES IF NEEDED TO AVOID PROLONGED
OR REPEATED SKIN CONTACT.
-----  
| EYE PROTECTION |  
SPLASH GOGGLES OR FACE SHIELD WHEN EYE CONTACT MAY OCCUR.
OTHER PROTECTIVE EQUIPMENT
USE CHEMICAL RESISTANT APRON OR OTHER IMPERVIOUS CLOTHING IF
NEEDED TO AVOID CONTAMINATING REGULAR CLOTHING WHICH COULD
RESULT IN PROLONGED OR REPEATED SKIN CONTACT.
-----  
| WORK AND HYGIENIC PRACTICES |  
| REMOVE CONTAMINATED CLOTHING; LAUNDRY OR DRYCLEAN BEFORE |  
| REUSE. REMOVE CONTAMINATED SHOES AND THOROUGHLY CLEAN AND |  
| DRY BEFORE REUSE. CLEANSE SKIN THOROUGHLY AFTER CONTACT |  
| BEFORE BREAKS AND MEALS, AND AT END OF WORK PERIOD. PRODUCT |  
| IS READILY REMOVED FROM SKIN BY WATERLESS HAND CLEANERS |  
| FOLLOWED BY WASHING THOROUGHLY WITH SOAP AND WATER. |  
=====

141800

MATERIAL SAFETY DATA SHEETS (MSDS)

PRINTED 02/12/2004

ITEM # 78852 KALSANCO FLO FREE EFFECTIVE 04/23/2001  
KSS ENTERPRISE (SEE SECTION 10 FOR ADDRESS/PHONE #)

***** SECTION 1 - MATERIAL IDENTIFICATION *****

- 1. CHEMICAL NAME AND SYNONYMS ..... ELIMINATOR
- 2. TRADE NAME AND SYNONYMS ..... KALSANCO FLO FREE
- 3. CHEMICAL FAMILY ..... A AQUEOUS BLEND OF SURFACTANT, AND VIABLE BACTERIAL CULTURES.
- 4. FORMULA ..... 60-21-3
- 5. HAZARDOUS RATING SYSTEM VIA HMIS  
HEALTH = 1 FLAMMABILITY = 0 REACTIVITY = 0 PERSONAL PROTECTION = B

***** SECTION 2 - HAZARDOUS INGREDIENTS *****

- 1. INGREDIENT ..... TLV % (UNITS)  
SPORZYME 1B CAS# PROPRIETARY <30% N/E
- CARCINOGENS:  
NTP: NO IARC: NO OSHA: NO  
TSCA: ALL COMPONENTS LISTED.

***** SECTION 3 - PHYSICAL DATA *****

- 1. BOILING POINT ( F ) ...199 DEG. F.
- 2. VAPOR PRESSURE (MM HG)N/A
- 3. VAPOR DENSITY (AIR = 1) ..N/A
- 4. SOLUBILITY IN WATER ..COMPLETE
- 5. APPEARANCE AND ODOR ..OFF-WHITE OPAQUE PERFORMED LIQUID
- 6. SPEC. GRAVITY (WATER=1)1.00
- 7. % VOLATILE BY VOLUME .N/A
- 8. EVAP. RATE (N-BUTYLACETATE = 1) .. N/A
- 9. FREEZING/MELTING POINT (DEG/F) .. N/E
- 10. PH OF SOLUTION .....7.5-8.5
- 11. HEAT OF SOLUTION ....N/E

***** SECTION 4 - FIRE AND EXPLOSION HAZARD *****

- 1. FLASH POINT (METHOD USED)..... NON FLAMMABLE
- 2. FLAMMABLE LIMITS ..... LEL N/A UEL N/A
- 3. EXTINGUISHING MEDIA ..... USE APPROPRIATE EXTINGUISHING MEDIA FOR THE SURROUNDING FIRE.
- 4. SPECIAL FIRE FIGHTING PROCEDURES ..... SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING SHOULD BE WORN WHEN FIGHTING FIRES INVOLVING CHEMICALS.
- 5. UNUSUAL FIRE AND EXPLOSION HAZARDS.... NONE

***** SECTION 5 - SPECIAL PRECAUTIONS *****

- 1. PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE ..USE COMMON SENSE AND SOUND INDUSTRIAL HYGIENE.
- 2. OTHER PRECAUTIONS ..... N/E

***** SECTION 6 - HEALTH HAZARD DATA *****

- 1. THRESHOLD LIMIT VALUE ..... N/E
- 2. OVEREXPOSURE EFFECTS/COMMENTS .....
- 2B. EXPOSURE LIMITS/DATA .....  
OSHA: N/E ACGIH: N/E  
PEL/TWA: TLV/TWA:  
PEL/CEILING: TLV/STEL:  
OTHER EFFECTS/DATA:  
EYES: MAY CAUSE IRRITATION.  
SKIN: MAY CAUSE INFECTION IN OPEN WOUNDS/SORES.  
INGESTION: NAUSEA, VOMITING, DIARRHEA.  
INHALATION: N/E
- 3. EMERGENCY & FIRST AID PROCEDURES .....
- 3B. ADDITIONAL DATA ..... EYES: Immediately flush with of water for at least 15 minutes while keeping eyelids opened. Get medical attention if irritation persists. SKIN: Wash with plenty of soap and water. Wash

contaminated clothing before re-use. Get medical attention if irritation persists.  
INGESTION: Give milk or water to dilute. Induce vomiting. Get immediate medical attention. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON!!! INHALATION: Remove victim to fresh air. If person is having difficulty in breathing, perform artificial respiration and get immediate medical attention.

***** SECTION 7 - REACTIVITY DATA *****

1. UNSTABLE .. 2. STABLE .. X
3. INCOMPATIBILITY (MATERIALS TO AVOID) . STRONG ACIDS OR ALKALI COMPOUNDS  
MAY INACTIVATE BIOLOGICAL CULTURES
4. HAZARDOUS DECOMPOSITION PRODUCTS ..... NONE
5. HAZARDOUS POLYMERIZATION ..... NO
6. CONDITIONS TO AVOID ..... EXCESSIVE HEAT OR FREEZING  
TEMPERATURES.

***** SECTION 8 - SPILL OR LEAK PROCEDURES *****

WEAR NECESSARY PERSONAL PROTECTIVE EQUIPMENT. DIKE AREA TO PREVENT SPREADING OF SPILLED MATERIAL. COVER WITH AN INERT ABSORBENT, SHOVEL INTO APPROPRIATE CONTAINERS AND DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS. 50056-1 50056-2

***** SECTION 9 - SPECIAL PROTECTION INFORMATION *****

1. RESPIRATORY PROTECTION (SPECIFY TYPE). NONE REQUIRED FOR RECOMMENDED USE
2. VENTILATION ..... LOCAL EXHAUST
3. SPECIAL ..... TO PREVENT SKIN CONTACT.
4. PROTECTIVE GLOVES ..... RUBBER
5. EYE PROTECTION ..... SAFETY GLASSES
6. OTHER PROTECTIVE EQUIPMENT ..... SAFETY SHOWER AND EYE WASH STATION  
SHOULD BE IN THE WORK AREA.

***** SECTION 10 - INFORMATION SOURCES *****

THIS INFORMATION PROVIDED BY: WARSAW CHEMICAL CO., INC.  
INFORMATION ON THIS FORM IS FURNISHED SOLELY FOR THE PURPOSE OF COMPLIANCE WITH OSHA'S 'HCA' AND SHALL NOT BE USED FOR ANY OTHER PURPOSE.  
269-349-6637 574-267-3251  
KSS ENTERPRISE  
616 EAST VINE STREET  
KALAMAZOO, MI 49001

***** SECTION 11 - EMPTY CONTAINER INFORMATION *****

ANY DISPOSAL PRACTICES MUST BE IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL LAWS. ANY QUESTIONS REGARDING DISPOSAL SHOULD BE DIRECTED TO THE PROPER GOVERNMENT AGENCY.

***** SECTION 12 - TRANSPORTATION REQUIREMENTS *****

- DOT CLASSIFICATION ..... NOT REGULATED  
PROPER SHIPPING NAME ..... NOT REGULATED  
UN# -OR- NA# ..... N/A

N/A = NOT APPLICABLE

N/E = NONE ESTABLISHED

***** SECTION 1 - MATERIAL IDENTIFICATION *****

1. CHEMICAL NAME AND SYNONYMS ..... N/E
2. TRADE NAME AND SYNONYMS ..... KALSANCO GLASS CLEANER
3. CHEMICAL FAMILY ..... AN AQUEOUS SOLUTION OF SOLVENTS AND SURFACTANT.
4. FORMULA ..... 31-77-13
5. HAZARDOUS RATING SYSTEM VIA HMIS  
HEALTH = 1    FLAMMABILITY = 0    REACTIVITY = 0    PERSONAL PROTECTION = B

***** SECTION 2 - HAZARDOUS INGREDIENTS *****

1. INGREDIENT	TLV
	% (UNITS)
ETHYLENE GLYCOL MONOBUTYL ETHER 111-76-2	<5% 50 PPM
ISOPROPYL ALCOHOL 67-63-0	<5% 400 PPM
ACETONE 67-64-1	<2% 1000 PPM
*AQUA AMMONIA 1336-21-6	<2% 50 PPM

CARCINOGENS: NONE SUSPECTED.  
TSCA: ALL COMPONENTS LISTED.

* NOTIFICATION OF THESE CHEMICALS IS REQUIRED BY SARA TITLE III SECTION 313. YOU MAY BE REQUIRED TO REPORT THESE CHEMICALS ACCORDINGLY.

***** SECTION 3 - PHYSICAL DATA *****

- |                                                           |                                           |
|-----------------------------------------------------------|-------------------------------------------|
| BOILING POINT ( F) ... 196 DEG F                          | 6. SPEC. GRAVITY (WATER=1) 0.995          |
| VAPOR PRESSURE (MM HG) N/E                                | 7. % VOLATILE BY VOLUME <10%              |
| VAPOR DENSITY (AIR = 1) ... N/E                           | 8. EVAP. RATE (N-BUTYLACETATE = 1) .. N/E |
| SOLUBILITY IN WATER .. COMPLETE                           | 9. FREEZING/MELTING POINT (DEG/F) .. 28   |
| APPEARANCE AND ODOR .. BLUE WATERLIKE LIQUID AMMONIA ODOR | 10. PH OF SOLUTION ..... 10.7             |
|                                                           | 11. HEAT OF SOLUTION ..... N/E            |

***** SECTION 4 - FIRE AND EXPLOSION HAZARD *****

1. FLASH POINT (METHOD USED) ..... NONFLAMMABLE
2. FLAMMABLE LIMITS ..... LEL N/A    UEL N/A
3. EXTINGUISHING MEDIA ..... USE APPROPRIATE EXTINGUISHING MEDIA FOR THE SURROUNDING FIRE.
4. SPECIAL FIRE FIGHTING PROCEDURES ..... SELF-CONTAINED BREATHING APPARATUS AND FULL PROTECTIVE CLOTHING SHOULD BE WORN WHEN FIGHTING FIRES INVOLVING CHEMICALS.
5. UNUSUAL FIRE AND EXPLOSION HAZARDS .... NONE

***** SECTION 5 - SPECIAL PRECAUTIONS *****

1. PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE .. USE COMMON SENSE AND SOUND INDUSTRIAL HYGIENE PRACTICES WHEN HANDLING THIS MATERIAL AS WELL AS ANY OTHER MATERIALS. KEEP CONTAINERS CLOSED WHEN NOT IN USE. WASH HANDS AFTER HANDLING.
2. OTHER PRECAUTIONS ..... N/E

***** SECTION 6 - HEALTH HAZARD DATA *****

1. THRESHOLD LIMIT VALUE ..... N/E
2. OVEREXPOSURE EFFECTS/COMMENTS .....  
MAY IRRITATE EYES, SKIN, MUCOUS MEMBRANES AND RESPIRATORY TRACT. PROLONGED EXPOSURE MAY CAUSE DE FATTING OF THE SKIN. HARMFUL IF SWALLOWED.
3. EMERGENCY & FIRST AID PROCEDURES .....  
ADDITIONAL DATA ..... EYES: Immediately flush eyes with large amounts of water for at least 15 minutes while holding eyelids apart. Washing eyes within one minute is essential. Seek immediate medical attention. SKIN: Wash with plenty of water for 15 minutes. Remove contaminated clothing. Seek medical attention if irritation persists. INGESTION: Give large quantities of water. DO NOT induce vomiting. If vomiting occurs spontaneously, keep head lower than lungs to prevent aspiration of chemical into lungs. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

ITEM # 69705  
KSS ENTERPRISE

KALSANCO GLASS CLEANER

EFFECTIVE 11/23/98  
(SEE SECTION 10 FOR ADDRESS/PHONE #)

INHALATION: Remove victim to fresh air.

***** SECTION 7 - REACTIVITY DATA *****

- 1. UNSTABLE .. 2. STABLE .. X
- 3. INCOMPATIBILITY (MATERIALS TO AVOID) . NONE KNOWN
- 4. HAZARDOUS DECOMPOSITION PRODUCTS ..... NONE KNOWN
- 5. HAZARDOUS POLYMERIZATION ..... NO
- 6. CONDITIONS TO AVOID ..... AVOID EXTENDED EXPOSURE TO FUMES

***** SECTION 8 - SPILL OR LEAK PROCEDURES *****

WEAR NECESSARY PERSONAL PROTECTIVE EQUIPMENT. DIKE AREA TO PREVENT SPREADING OF SPILLED MATERIAL. COVER WITH AN INERT ABSORBENT, SHOVEL INTO APPROPRIATE CONTAINERS AND DISPOSE OF IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL REGULATIONS.

***** SECTION 9 - SPECIAL PROTECTION INFORMATION *****

- 1. RESPIRATORY PROTECTION (SPECIFY TYPE). NONE NORMALLY NEEDED.
- 2. VENTILATION ..... LOCAL
- 3. SPECIAL ..... TO PREVENT SKIN CONTACT
- 4. PROTECTIVE GLOVES ..... IMPERVIOUS
- 5. EYE PROTECTION ..... SAFETY GLASSES
- 6. OTHER PROTECTIVE EQUIPMENT ..... EYEWASH AND SHOWER FOR EMERGENCY  
USE SHOULD BE LOCATED IN THE WORKING AREA.

***** SECTION 10 - INFORMATION SOURCES *****

THIS INFORMATION PROVIDED BY: WARSAW CHEMICAL CO., INC.  
 INFORMATION ON THIS FORM IS FURNISHED SOLELY FOR THE PURPOSE OF COMPLIANCE WITH OSHA'S 'HCA' AND SHALL NOT BE USED FOR ANY OTHER PURPOSE.  
 616-349-6637 219-267-3251  
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 KALAMAZOO, MI 49007

***** SECTION 11 - EMPTY CONTAINER INFORMATION *****

ANY DISPOSAL PRACTICES MUST BE IN COMPLIANCE WITH FEDERAL, STATE AND LOCAL LAWS. ANY QUESTIONS REGARDING DISPOSAL SHOULD BE DIRECTED TO THE PROPER GOVERNMENT AGENCY.

***** SECTION 12 - TRANSPORTATION REQUIREMENTS *****

DOT CLASSIFICATION ..... NOT REGULATED  
 PROPER SHIPPING NAME ..... NOT REGULATED  
 UN# -OR- NA# ..... N/A

N/A = NOT APPLICABLE

N/E = NONE ESTABLISHED



**PROCTER & GAMBLE**

Foodservice & Lodging Products Division  
Winton Hill Technical Center  
6071 Center Hill Road  
Cincinnati, Ohio 45224

PROCTER 24

# MATERIAL SAFETY DATA SHEET

Issue Date: 11/1/86

## SECTION I

Emergency Telephone Number: 1-800-543-4252

Identity: Institutional Pack Comet Cleanser with Chlorinol (Brand Codes: 08195, 08181)

Ingredients/Chemical Name: Sodium dichloro-s-triazinetriene dihydrate, tetrasodium pyrophosphate, sodium carbonate, sodium alkyl benzene sulfonates, colorant and perfume.

Other: This product is an EPA registered pesticide. (EPA Reg. No. 3573-51)

## SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Ingredients as defined by OSHA, 29 CFR 1910.1200.

Chemical Name	Common Name	Cas No.	ACGIH TLV	OSHA PEL	Other Limits Recommended
tetrasodium pyrophosphate	complex sodium phosphate	7722-88-5	5mg/m ³	N.A.	N.K.

This mixture, when tested as a whole, is considered an eye irritant within the meaning of the OSHA Hazard Communication Standard.

## SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point (°F):	N.A.	Specific Gravity (H ₂ O=1):	1 (Bulk density)
Vapor Pressure (mm Hg):	N.A.	Percent Volatile by Volume (%):	1
Vapor Density (Air=1):	N.A.	Evaporation Rate (nBuOAc=1):	N.A.
Solubility in Water:	Moderate	Appearance and Odor:	Green Powder, Cedar pine odor

## SECTION IV - FLAMMABILITY AND REACTIVITY

Flash Point (Method Used):	N.A.	Explosive Limits:	LEL: N.A. UEL: N.A.
Extinguishing Media:	Use CO ₂ water or dry chemical		
Special Fire Fighting Procedures:	None		
Unusual Fire Hazards:	None Known		
Stability	Unstable: _____ Stable: X	Conditions to Avoid: None Known	
Incompatibility (Materials to avoid):	Ammonia or acid products.		
Hazardous Decomposition/By Products:	Chlorine gas, Chloramines in small amounts.		
Hazardous Polymerization	May Occur: _____ Will Not Occur: X	Conditions to Avoid: None Known	

0951z-9

**SECTION V - HEALTH AND SAFETY DATA**

Route(s) of Entry: Ingestion, eye contact, skin contact, inhalation.

Health Hazards (Acute and Chronic): Mild skin, eye and mucous membrane irritant.

Signs and Symptoms of Exposure: Prolonged skin contact or instillation into the eye may result in superficial transient effects similar to those produced by other household detergents. Ingestion may result in mild gastrointestinal irritation with nausea, vomiting and diarrhea.

Medical Conditions Generally Aggravated by Exposure: Use on irritated or extremely dry skin may aggravate the existing condition.

Emergency and First Aid Procedures: Ingestion: dilute with water or milk and treat symptomatically. Inhalation: Leave dusty area. Eye Contact: Flush thoroughly with water for 15 minutes. Skin Irritation: Discontinue use, wash with soap and water.

Other: Product Label States: Keep out of reach of children. May cause eye irritation. In case of contact, flush thoroughly with water. If irritation persists, see a physician. In case of ingestion, drink a glass of water.

**SECTION VI - PRECAUTIONS FOR SAFE HANDLING AND USE**

Precautions to be Taken in Handling and Storing: Avoid moisture to prevent loss of bleaching/germicidal action and to prevent caking.

Other Precautions: None required.

Steps to be Taken in Case Material is Released or Spilled: Sweep up and dispose.

Waste Disposal Method: Product contains biodegradable surfactants. If permitted, flush down sewer drain with large excess of water or dispose of at landfill.

Disposal is to be performed in compliance with all regulations.

**SECTION VII - SPECIAL PROTECTION INFORMATION**

Respiratory Protection (Specify Type): None required for normal use.

Ventilation	Local Exhaust: None required for normal use	Special: None
	Mechanical (General): Acceptable	Other: None

Eye Protection: None required with normal usage. Protective Gloves: None required with normal use.

Other Protective Equipment: None required with normal usage.

*N.A. - Not Applicable

*N.K. - Not Known

The submission of this MSDS may be required by law, but this is not an assertion that the substance is hazardous when used in accordance with proper safety practices and normal handling procedures. Data supplied is for use only in connection with occupational safety and health.



# Material Safety Data Sheet

HYDROCHLORIC ACID 22°, 20°, 18°B  
QUICK IDENTIFIER  
Common Name: (used on label and list)

May be used to comply with OSHA's Hazard Communication Standard, 29CFR 1910. 1200. Standard must be consulted for specific requirements.

## SECTION 1 -

Manufacturer's Name	Haviland Products Company	Emergency Telephone No.	CHEMTREC (800) 424-9300
Address	421 Ann Street N.W.	Other Information Calls	(616) 361-6691
City, State, and ZIP	Grand Rapids, MI 49504	Date Prepared	7/1/86
Signature of Person Responsible for Preparation (Optional)			

## SECTION 2 - HAZARDOUS INGREDIENTS/IDENTITY

Hazardous Component(s) (chemical & common name(s))	OSHA PEL	ACGIH TLV	Other Exposure Limits	% (optional)	CAS NO.
Hydrochloric Acid(muriatic acid)	5 ppm ceiling	5 ppm ceiling			7647-01

## SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS

Boiling Point	131°-194°F (55°-90°C)	Specific Gravity (H ₂ O=1)	1.14-1.16	Vapor Pressure (mm Hg)	84-20 A 20°C
	Vapor Density (Air = 1)	1.27			
Solubility in Water	completely	Reactivity in Water	exothermic reaction with evolution of hydrogen chloride fumes		
Appearance and Odor	clear, colorless to slightly yellow liquid; pungent odor	Melting Point	-49°F to -122.8°F (-45°C to -86°C)		

## SECTION 4 - FIRE & EXPLOSION DATA

Flash Point	F. C.	Method Used	not flammable	Flammable Limits in Air % by Volume	LEL Lower	NA*	UEL Upper	NA
Auto-Ignition Temperature	will not burn	Extinguisher Media	as for surrounding fires					
Special Fire Fighting Procedures	Wear self contained breathing apparatus and full personal protective equipment when material is involved in fire.							
Unusual Fire and Explosion Hazards	Reacts with most metals to produce flammable and explosive hydrogen gas.							

NA = Not applicable

**SECTION 5 - PHYSICAL HAZARDS (REACTIVITY DATA)**

Stability Unstable  Conditions Stable  to Avoid NA

Incompatibility (Materials to Avoid) most metals, strong oxidizers, alkalies, amines, esters, carbonates, cyanides, sulfides.

Hazardous Decomposition Products hydrogen gas, chlorine gas, hydrogen chloride gas

Hazardous Polymerization May Occur  Conditions Will Not Occur  to Avoid NA

**SECTION 6 - HEALTH HAZARDS**

1. Acute Corrosive to all exposed body tissues 2. Chronic conjunctivitis, burns

Signs and Symptoms of Exposure redness of exposed tissues, coughing, burns, possible choking, headaches, dizziness, nausea, vomiting

Medical Conditions Generally Aggravated by Exposure none currently known

Chemical Listed as Carcinogen or Potential Carcinogen National Toxicology Program Yes  No  I.A.R.C. Monographs Yes  No  OSHA Yes  No

Emergency and First Aid Procedures * Designates primary routes of entry

**ROUTES OF ENTRY**

- *1. Inhalation Move person to fresh air. If not breathing, give artificial respiration. Keep victim calm & warm. Contact physician.
- *2. Eyes Immediately flush with water for at least 15-20 minutes, holding eyelids apart. Contact physician IMMEDIATELY!!!
- *3. Skin Wash with plenty of water. Remove contaminated clothing and wash before reuse. If irritation persists, contact physician.
- 4. Ingestion DO NOT INDUCE VOMITING!!! Give large quantities of water to conscious victim. CONTACT PHYSICIAN IMMEDIATELY!!!

**SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES**

Precautions to be Taken in Handling and Storage Store in cool, dry, well ventilated area. Avoid contact with skin and eyes.

Keep containers tightly closed when not in use.

Other Precautions Emptied containers retain product residue

Steps to be Taken in Case Material is Released or Spilled Contain and carefully dilute spill with water. Neutralize with lime, limestone or soda ash. Flush to sewer. Spill may be contained by diking area with soil or clay.

Waste Disposal Methods (Consult federal, state, and local regulations) Neutralize with lime, limestone or soda ash. Dispose of in a licensed landfill or treatment facility. Comply with federal, state and local regulations.

**SECTION 8 - SPECIAL PROTECTION INFORMATION/CONTROL MEASURES**

Respiratory Protection (Specify Type) NIOSH approved respirator for hydrogen chloride gas and/or mist.

Ventilation to maintain vapors below TLV's Local Exhaust recommended Mechanical (General) acceptable Special NA Other NA

Protective Gloves rubber or other impervious material Eye Protection splash proof chemical goggles

Other Protective Clothing or Equipment For operations where spills or splashing may occur, use an impervious body covering & boots. A safety shower & eye bath should be available

Work/Hygienic Practices Wash thoroughly after handling.

**IMPORTANT**

Do not leave any blank spaces. If required information is unavailable, unknown, or does not apply, so indicate.

103601

**MATERIAL SAFETY DATA SHEET**

This MSDS complies with OSHA's Hazard Communication Standard 29 CFR 1910.1200 and OSHA Form 174

IDENTITY AND DISTRIBUTOR'S INFORMATION						
NFPA Rating: Health-2; Flammability-2; Reactivity-0; Special-0			HMIS Rating: Health-2; Flammability-2; Reactivity-0; Personal Protection- B			
Manufactured For: Hillyard Industries, Inc. Address: 302 N. 4 th Street Address: St. Joseph, MO 64501			DOT Hazard Classification: ORM-D Identity (trade name as used on label): <b>HIL-TREAT DUST MOP TREATMENT/ Part # HIL0104854</b>			
Phone: (816)-233-1321 ext. 8285 or http://www.hillyard.com			MSDS Number: A00 810 Revision- 10			
Emergency Response Number: Chemtrec 1-800-424-9300			Date Prepared: 05/27/03 Prepared By: CH/IB			
NOTICE: JUDGEMENT BASED ON INDIRECT TEST DATA						
SECTION 1 - MATERIAL IDENTIFICATION AND INFORMATION						
COMPONENTS-CHEMICAL NAMES AND COMMON NAMES (Hazardous Components 1% or greater; Carcinogens 0.1% or greater)		CAS Number	SARA III LIST	OSHA PEL (ppm)	ACGIH TLV (ppm)	Carcinogen Ref. Source **
PETROLEUM DISTILLATE		8052-41-3	No	500	100	d
PETROLEUM DISTILLATE		64742-54-7	No	5mg/M3	5mg/M3	d
ISOBUTANE / PROPANE BLEND		75-28-5	No	800	800	d
		74-98-6	No	1000	1000	d
SECTION 2 - PHYSICAL/CHEMICAL CHARACTERISTICS						
Boiling Point: N/A			Specific Gravity (H2O=1): Concentrate Only = 0.93			
Vapor Pressure: PSIG @ 70°F (Aerosols): Max. 50			Vapor Pressure (Non-Aerosols)(mm Hg and Temperature): N/A			
Vapor Density (Air = 1): N/E			Evaporation Rate ( = 1): N/E			
Solubility in Water: Emulsifiable			Water Reactive: No			
Appearance and Odor: White, creamy spray with pine fragrance.						
SECTION 3 - FIRE AND EXPLOSION HAZARD DATA						
FLAMMABILITY as per USA FLAME PROJECTION TEST (aerosols): less than 18" projection: <b>NOT CATEGORIZED AS FLAMMABLE</b>		Auto Ignition Temperature N/E		Flammability Limits in Air by % in Volume: % LEL: N/E % UEL: N/E		
FLASH POINT AND METHOD USED (non-aerosols): N/A			EXTINGUISHER MEDIA: Foam, dry chemical, carbon dioxide, water.			
SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus.						
Unusual Fire & Explosion Hazards: Do not expose aerosols to temperatures above 130°F or the container may rupture.						
SECTION 4 - REACTIVITY HAZARD DATA						
STABILITY <input checked="" type="checkbox"/> STABLE <input type="checkbox"/> UNSTABLE			HAZARDOUS POLYMERIZATION <input type="checkbox"/> WILL <input checked="" type="checkbox"/> WILL NOT OCCUR			
Incompatibility (Mat. to avoid): Strong oxidizers.			Conditions to Avoid: Open flame, welding arcs, heat, sparks.			
Hazardous Decomposition Products: CO, CO2.						
SECTION 5 - HEALTH HAZARD DATA						
PRIMARY ROUTES OF ENTRY: <input checked="" type="checkbox"/> INHALATION <input type="checkbox"/> INGESTION <input checked="" type="checkbox"/> SKIN ABSORPTION <input type="checkbox"/> EYE <input type="checkbox"/> NOT HAZARDOUS						
ACUTE EFFECTS:						
Inhalation: Excessive inhalation of vapors can be harmful and may cause headache, dizziness, asphyxia, anesthetic effects and possible unconsciousness.						
Eye Contact: Irritation			Skin Contact: Irritation			
Ingestion: Possible chemical pneumonitis if aspirated into lungs. Nausea.						
CHRONIC EFFECTS: (Effects due to excessive exposure to the raw materials of this mixture) Dermatitis.						
Medical Conditions Generally Aggravated by Exposure: May aggravate existing eye, skin, or upper respiratory conditions.						
EMERGENCY FIRST AID PROCEDURES						
Eye Contact: Flush with water for 15 minutes. If irritated, seek medical attention.						
Skin Contact: Wash with soap and water. If irritated, seek medical attention.						
Inhalation: Remove to fresh air. Resuscitate if necessary. Get medical attention.						
Ingestion: DO NOT INDUCE VOMITING. Drink two large glasses of water. Get immediate medical attention.						
SECTION 6 - CONTROL AND PROTECTIVE MEASURES						
Respiratory Protection (specify type): If vapor concentration exceeds TLV, use respirator approved by NIOSH for organic vapor.						
Protective Gloves: Disposable Latex or Nitrile.			Eye Protection: Safety glasses.			
Ventilation Requirements: Adequate ventilation to keep vapor concentration below TLV.						
Other Protective Clothing & Equipment: Eyewash station recommended.						
Hygienic Work Practices: Wash with soap and water before handling food. Remove contaminated clothing.						
SECTION 7 - PRECAUTIONS FOR SAFE HANDLING AND USE						
Steps To Be Taken If Material Is Spilled Or Released: Absorb with suitable medium. Incinerate or landfill according to local, state or Federal regulations. DO NOT FLUSH TO SEWER.						
Waste Disposal Methods: Aerosol cans when vented to atmospheric pressure through normal use, pose no disposal hazard.						
Precautions To Be Taken in Handling & Storage: Do not puncture or incinerate containers. Do not store at temperatures above 130°F.						
Other Precautions &/or Special Hazards: KEEP OUT OF REACH OF CHILDREN. Avoid food contamination. Remove ignition sources. Avoid prolonged breathing of spray mist.						

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind.

** Chemical Listed as Carcinogen or Potential Carcinogen, [N] NTP [B] IARC Monograph [C] OSHA [d] Not Listed [e] Animal Data Only

**MATERIAL SAFETY DATA SHEET**

**NFPA RATING:** Health = 0 Flammability = 0 Reactivity = 0

**HMIS RATING:** Health = 0 Flammability = 0 Reactivity = 0

**SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (429N-55A)**

**Manufacturer's Name:** HILLYARD INDUSTRIES

**Product Name:** HIL TEX+

**Address:** 302 North Fourth Street  
St. Joseph, MO 64502

**Date Prepared:** March 22, 1994

**Prepared by:** Regulatory Affairs Department

**Emergency Telephone No.:** (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

**Other information calls:** (816) 233-1321 (Ext. 303)

**SECTION II -- INGREDIENTS/IDENTITY INFORMATION****Components**

(Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	none	none	N.A.	---
Acrylate Copolymer	Unknown to Hillyard	not established	not established	N.A.	---
Propylene Glycol (1)	57-55-6	not established	not established	N.A.	---

(1) Regulated by PA and RI

**SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS**

**Boiling Point:** 209°F

**Specific Gravity (H₂O = 1):** 25°C = 1.02 & 39°C = 1.02

**Vapor Pressure (mm Hg.):** 17.5

**Percent Volatile by Volume (%):** 83.7%

**Vapor Density (AIR = 1):** 0.7

**Evaporation Rate (ethyl ether = 1):** Slower than 1

**Solubility in Water:** Complete

**Appearance and Odor:** Translucent, white liquid;

**pH (concentrate):** 7.7

non-objectionable polymeric odor.

**SECTION IV -- FIRE AND EXPLOSION HAZARD DATA**

**Flash point:** None (T.C.C.)

**Flammable Limits:** LEL = N.A., UEL = N.A.

**Extinguishing Media:** Not applicable.

**Special Fire Fighting Procedures:** Wear self-contained breathing apparatus (pressure-demand MSHA/NIOSH approved or equivalent) and full protective gear in a fire.

**Unusual Fire and Explosion Hazards:** Material may spatter if temperatures exceed 100°C/212°F.

Polymer film can burn. Polymer may decompose at temperatures above 177°C/ 350°F and produce acrylic monomers.

**SECTION V -- PHYSICAL HAZARDS**

**Stability:** Stable **Conditions to Avoid:** N/A

**Incompatibility (Materials to Avoid):** None known to Hillyard

**Hazardous Decomposition Products or Byproducts:** None known to Hillyard.

**Hazardous Polymerization:** Will not Occur **Conditions to Avoid:** N/A

**SECTION VI -- HEALTH HAZARD DATA**

**Routes of entry:** Inhalation? N/A Skin? N/A Ingestion? N/A

**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. Mild eye irritation.

2. None known to Hillyard Industries

**Chemical listed as Carcinogen or Potential Carcinogen:**

**National Toxicology Program =** No

**I.A.R.C. Monographs =** No

**OSHA =** No

This product has no carcinogens listed by IARC, NTP, NIOSH, OR ACGIH as of this date, greater than or equal to 0.1%.

**Signs and Symptoms of Exposure:** None known to Hillyard.

**Medical Conditions Generally Aggravated by Exposure:** None known to Hillyard

**Emergency and First Aid Procedures:** If splashed into eyes flush with water for 15 minutes; if irritation persists get medical attention. Flush skin with water. Ingestion: Drink large quantity of water; consult a physician. Never give anything by mouth to an unconscious person.

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Pick up with mop or wet vac and wash away with water.

**Waste Disposal Method:** Observe all applicable Federal, State, and Local regulations regarding disposal. Waste from normal product use may be sewer to a public-owned treatment works (POTW) in compliance with applicable Federal, State, and Local pretreatment requirements. Pick up with mop or wet vac and wash down POTW. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.

**Precautions To Be Taken In Handling And Storing:** Freezing of product may rupture container. Product shelf life is best retained by storage at 45-100°F temperature.

**Other Precautions:** Inhalation exposure to spray mist should be maintained at less than 10 mg/m³ per eight hours exposure (TWA limit established for nuisance dust). This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right To Know Act of 1986 and 40 CFR Part 372.

**SECTION VIII -- CONTROL MEASURES:**

**Respiratory Protection (Specify Type):** None required if good ventilation is maintained.

**Ventilation:**

**Local Exhaust** = not required **Mechanical (General)** = suggested **Special** = N.A. **Other** = N.A.

**Protective Gloves:** none required **Eye Protection:** none required

**Other Protective Clothing or Equipment:** none required

**Work / Hygienic Practices:** Do not take internally; wash contaminated clothing and equipment before reuse.

**SECTION IX - TRANSPORTATION INFORMATION:**

**Applicable regulations:** no 49 CFR; no IMCO; no IATA.

**Proper shipping name:** Liquid Floor Wax & Polish

**UN No.:** not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable

**Labels required:** not required **DOT Exception:** not applicable

**EPA Hazardous waste number / code:** not listed

**Hazardous waste characteristics:**

**Ignitability** = not applicable; **Corrosivity** = not applicable; **Reactivity** = not applicable.

**DISCLAIMER OF WARRANTIES**

**NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.**

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

**THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.**

SPARTAN CHEMICAL COMPANY, INC. - MATERIAL SAFETY DATA SHEET

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label)  
HEPACIDE QUAT

Manufacturer's Name - Spartan Chemical Company, Inc.  
Emergency Telephone No. - 800/537-8990  
Address - 110 N. Westwood Ave., Toledo, OH 43607

NFPA RATINGS: Health-1 Fire-0 React-0  
HMIS RATINGS: Health-1 Fire-0 React-0 Pers. Prot.-A

SECTION II: HAZARDOUS INGREDIENTS

No Hazardous Ingredients at 1% or Greater Concentration

SECTION III: PHYSICAL DATA

Boiling Point - 210 F  
Specific Gravity (H₂O = 1) - 0.997  
Percent Solid by Weight - 0-2  
Vapor Pressure - 18 mm Hg @ 75 F  
Evaporation Rate (But. Ace. = 1) - <1  
Vapor Density (Air = 1) - Unknown  
Solubility in Water - Complete  
Appearance and Odor - Clear liquid, slight amine odor  
Material Is - Liquid  
pH - 10.5-11.5

SECTION IV: FIRE & EXPLOSION HAZARD DATA

Flash Point - None  
Method Used - ASTM - D56  
Flammable Limits - N/A  
Extinguishing Media - N/A  
Special Fire Fighting Procedures - None  
Unusual Fire and Explosion Hazards - None

SECTION V: HEALTH HAZARD DATA

Effects of Overexposure - Conditions to Avoid: Nontoxic; LD₅₀ >5 g/kg - orally rats, dermal LD₅₀ >(or =) 2 g/kg - rabbits.  
May cause skin and eye irritation. Avoid contamination of food.  
Do not get in eyes; avoid contact with skin and clothing.  
Threshold Limit Value - Not Established  
Conditions Aggravated by Use - Unknown  
Primary Routes of Entry: Skin Contact  
☐Emergency and First Aid Procedures -  
Eyes: Remove contact lenses. In case of contact, immediately flush eyes  
with water for at least 15 minutes. If irritation persists,  
seek  
medical attention.  
Skin: Immediately flush skin with plenty of water for at least 15 minutes. If irritation persists, seek medical attention.  
Ingestion: If swallowed, promptly drink large quantities of water.

SECTION VI: REACTIVITY DATA

Stability: Stable X  
Incompatibility (Materials to Avoid) - Strong oxidizers  
Hazardous Decomposition Products - None  
Hazardous Polymerization: Will Not Occur X

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled - Flush with water  
Waste Disposal Method - Sanitary sewer

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type) - None  
Ventilation - Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.  
Protective Gloves (Specify Type) - Not necessary  
Eye Protection (Specify Type) - Not necessary  
Other Protective Equipment - None

SECTION IX: SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storing - Nothing special  
Other Precautions - None

Spartan Chemical Company, Inc. - HEPACIDE QUAT  
Ref: 29 CFR 1910:1200 (OSHA)

NAME: Thomas J. Mitchell  
TITLE: Director of Research  
DATE : July 18, 1996  
SUPERCEDES: June 17, 1996

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# MATERIAL SAFETY DATA SHEET

## SECTION 1 - MANUFACTURER OR SUPPLIER DATA

MSDS NUMBER

101865

MANUFACTURER'S NAME & MAILING ADDRESS U S Chemical Corporation 316 Hart Street Watertown, Wisconsin 53094 USA		PREPARED BY D. E. Kenas	SIGNATURE <i>David E. Kenas</i> LL
EMERGENCY TELEPHONE NO. (24 HOUR SERVICE) Medical Emergency ONLY: 1-800-851-7145 Ext. 075		TITLE Quality Assurance Manager	DATE 1-4-02
		PRODUCT INFORMATION TELEPHONE NO. (8 AM TO 5 PM CST, MON - FRI) Product Information: 1-800-558-9566	

## SECTION 2 - IDENTITY OF MATERIAL

PRODUCT NAME HD-200			
PRODUCT DESCRIPTION Heavy Duty Alkaline Chlorinated Mechanical Dishwash		FORMULA Proprietary Blend	CHEMICAL FAMILY N.A.
REGULATED IDENTIFICATION	DOT PROPER SHIPPING NAME CORROSIVE SOLID, BASIC, INORGANIC, N.O.S. (CONTAINS SODIUM HYDROXIDE)		
	SHIPPING ID NUMBER UN3262	PACKING GROUP II	HAZARD CLASS 8 (CORROSIVE MATERIAL)

## SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT N.A.	SPECIFIC GRAVITY (H ₂ O = 1) N.A.	PHYSICAL FORM Granular Powder	COLOR White
VAPOR PRESSURE (mm Hg) N.A.	MELTING POINT N.A.	SOLUBILITY IN WATER Moderate	SCENT None Added
VAPOR DENSITY (AIR = 1) N.A.	EVAPORATION RATE (BUTYL ACETATE = 1) N.A.	pH 2500 ppm SOLUTION 12.3	pH CONCENTRATE N.A.
OTHER Non-Scented, however, a slight chlorine odor is present.			

## SECTION 4 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS (CHEMICAL NAME: COMMON NAME)	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	PERCENT WT/WT
Sodium Hydroxide: Caustic Soda CAS Registry Number 1310-73-2	2 mg/m3 Ceiling Limit	2 mg/m3 Ceiling Limit	None	33.0
Sodium Dichloro-S-Triazinetrione CAS Registry Number 2893-78-9	.5 ppm TWA As Chlorine	.5 ppm TWA As Chlorine	1 ppm STEL As Chlorine (ACGIH/OSHA)	1.0-5.0
Sodium Carbonate: Soda Ash CAS Registry Number 497-19-8	Not Established	Not Established	Not Established	15.0-40.0

This product contains no other ingredient considered hazardous according to the criteria of 29 CFR 1910.1200, OSHA. However, this product contains chemicals which may be subject to reporting requirements according to the criteria of SARA Title III, 40 CFR, Part 370, Section 311 and Section 312.

### STATE RIGHT TO KNOW INFORMATION

THIS PRODUCT CONTAINS: SODIUM HYDROXIDE/1310-73-2, SODIUM CARBONATE/497-19-8,  
SODIUM TRIPOLYPHOSPHATE/7758-29-4, SODIUM POLYACRYLATE/9003-04-7,  
SODIUM DICHLORO-S-TRIAZINETRIONE/2893-78-9

NFPA RATING: Health-3/Flammability-0/Reactivity-1 See Section 5 for Protective Equipment.  
HMIS RATING: Health-3/Flammability-0/Reactivity-1 See Section 5 for Protective Equipment.

### CARCINOGENICITY:

This product does not contain any known carcinogens or anticipated carcinogens according to the criteria of the NTP Annual Report on Carcinogens, IARC Monographs, and OSHA 29 CFR 1910, Subpart Z.

(CONTINUED IN SECTIONS 5 TO 8)



## SECTION 5 - SAFE USAGE DATA

PROTECTIVE EQUIPMENT TYPES	EYES Safety glasses, safety goggles, and an eye-wash station.	
	RESPIRATORY Dust mask if handling creates air-borne dust.	GLOVES Rubber or Neoprene.
	OTHER Wear full-cover protective clothing to prevent repeated or prolonged contact.	
VENTILATION	GENERAL MECHANICAL Satisfactory. Maintain adequate ventilation. Keep levels below recommended TLV.	
	LOCAL EXHAUST Not ordinarily needed. Avoid inhalation of dust containing this product.	
PRECAUTIONS	HANDLING & STORAGE Follow all label directions. Instruct personnel about proper use, hazards, precautions, and first-aid measures. Avoid inhalation, ingestion and contact with skin and eyes.	
	Rotate stock regularly. Handle carefully to avoid damaging container. Keep container closed when not in use. Recommended storage temperature below 100°F. Keep out of children's reach.	

## SECTION 6 - HEALTH HAZARD DATA

EFFECTS OF EXPOSURE	INHALATION Corrosive. Inhalation of dust or mist may cause irritation to nose, throat and mucous membranes, pulmonary irritation, pulmonary edema, tissue damage and chemical burns.	
	INGESTION Corrosive. Harmful or fatal if swallowed. May cause nausea, vomiting, and severe tissue damage to digestive tract. Corrosive to mouth, throat, stomach and to other tissues.	
	SKIN & EYES SKIN: Corrosive. Contact may cause severe irritation, dermatitis, and chemical burns. EYES: Corrosive. Causes eye burns. May cause temporary or permanent vision loss and blindness.	
	ACUTE & CHRONIC ACUTE: Corrosive to all body tissues. Harmful skin contact may not cause immediate pain. Permanent eye damage may result without immediate first aid treatment. CHRONIC: None Known.	
ROUTES OF ENTRY	INGESTION-X SKIN ABSORPTION-X SKIN-X EYES-X INHALATION-X	TARGET ORGANS Eyes, Skin, Respiratory System.

## SECTION 7 - PHYSICAL HAZARD DATA

FLAMMABILITY	LEL = N.A. UEL = N.A.	FLASH POINT = N.A.	METHOD USED = N.A.
STABILITY	STABLE	X	CONDITIONS TO AVOID Mixing with any other cleaning product. Mix only with below 150°F water. Avoid temperature above 100°F and high humidity to prevent caking.
	UNSTABLE		HAZARDOUS DECOMPOSITION PRODUCTS Warning! Mixing with incompatible materials may produce hydrazine, chlorine, hydrogen and other toxic and irritating fumes.
HAZARDOUS POLYMERIZATION	MAY OCCUR	X	CONDITIONS TO AVOID
	WILL NOT OCCUR		N.A.
INCOMPATIBILITY	MATERIALS TO AVOID Phosphoric acid, muriatic acid and other acidic materials, reducing agents, hydrocarbons, alcohols, ether, ammonia, ammoniated compounds and aluminum.		

## SECTION 8 - EMERGENCY RESPONSE DATA

FIRE	EXTINGUISHING MEDIA Fight fire with water spray. This product does not support combustion.
	SPECIAL PROCEDURES Use NIOSH certified gas mask with canister for chlorine. If possible, remove container to open air and flood with water.
	UNUSUAL HAZARDS Product may react with some metals such as aluminum, zinc, tin, etc., to release flammable hydrogen gas. This product can react violently with water.
FIRST AID MEASURES	INGESTION: Do not induce vomiting. If patient is conscious and can swallow, administer milk or water. SKIN: Remove contaminated clothes, flood with water for 15 minutes. EYES: Flood with lukewarm (not hot) water poured from a large glass 2 or 3 inches from eyes. Remove contacts. Have patient blink as much as possible while flooding the eyes. Continue for 15 minutes. INHALATION: Move victim to fresh air. Give artificial respiration if patient is not breathing. ADMINISTER FIRST AID TREATMENT AS STATED ABOVE, THEN CALL 1-800-851-7145 Ext 075 OR CONTACT PHYSICIAN FOR FURTHER MEDICAL INSTRUCTIONS.
SPILLS RO - N.A.	STEPS TO BE TAKEN Use proper protective equipment. Carefully sweep up and shovel into dry containers without raising dust. Cover containers and move containers out of spill area. Flush area with water and follow with normal clean-up procedures.
	WASTE DISPOSAL METHOD Comply with all federal, state, and local regulations. Consult state and local authorities for restrictions on disposal of chemical waste. Please recycle empty container whenever possible.

THE DATA IN THIS MATERIAL SAFETY DATA SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND DOES NOT RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR PROCESS. THE DATA CONTAINED IS BELIEVED TO BE ACCURATE. HOWEVER, SINCE USE CONDITIONS VARY AND ARE OUTSIDE OUR CONTROL, THE MANUFACTURER MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, AND ASSUMES NO LIABILITY FOR FAILURE TO FOLLOW PRODUCT USE DIRECTIONS AND SAFETY PRECAUTIONS.

SPARTAN CHEMICAL COMPANY, INC. - MATERIAL SAFETY DATA SHEET

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label)  
HDQ NEUTRAL

Manufacturer's Name - Spartan Chemical Company, Inc.  
Emergency Telephone No. - 800/537-8990  
Address - 110 N. Westwood Ave., Toledo, OH 43607

NFPA RATINGS: Health-3 Fire-0 React-0  
HMIS RATINGS: Health-3 Fire-0 React-0 Pers. Prot.-B

SECTION II: HAZARDOUS INGREDIENTS

Chemical Name(s) - Didecyl dimethyl ammonium chloride  
CAS Registry No. - 7173-51-5 Weight 4.61%  
TWA (mg/m3) - N/A STEL (mg/m3) - N/A Ceiling (mg/m3) - N/A  
Carcinogen - No

Chemical Name(s) - N-alkyl (C14 50%, C12 40%, C16 10%)  
dimethyl benzyl ammonium chloride  
CAS Registry No. - 68424-85-1 Weight 3.07%  
TWA (mg/m3) - N/A STEL (mg/m3) - N/A Ceiling (mg/m3) - N/A  
Carcinogen - No

SECTION III: PHYSICAL DATA

Boiling Point - 212 F  
Specific Gravity (H2O = 1) - 0.997  
Percent Solid by Weight - 10-15  
Vapor Pressure - 17.5 mm Hg @ 75 F  
Evaporation Rate (But. Ace. = 1) - <1  
Vapor Density (Air = 1) - Unknown  
Solubility in Water - Complete  
Appearance and Odor - Non-viscous red liquid, mild citrus fragrance  
Material Is - Liquid  
pH - 7.2-8.2

SECTION IV: FIRE & EXPLOSION HAZARD DATA

Flash Point - None  
Method Used - ASTM - D56  
Flammable Limits - N/A  
Extinguishing Media - None  
Special Fire Fighting Procedures - None  
Unusual Fire and Explosion Hazards - None

SECTION V: HEALTH HAZARD DATA

Effects of Overexposure - Conditions to Avoid:  
Eyes: Causes eye damage. Corrosive. Skin: Causes skin damage.  
Corrosive. Ingestion: Harmful or fatal if swallowed. Avoid  
contamination of food. Do not get in eyes, on skin or clothing.  
Threshold Limit Value - Not Established  
Conditions Aggravated by Use - Unknown  
Primary Routes of Entry: Skin Contact  
 Emergency and First Aid Procedures -  
Eyes: Remove contact lenses. In case of contact, immediately flush

eyes with water for at least 15 minutes. Call a physician.  
Skin: In case of skin contact, immediately flush with water for at least 15 minutes. Remove and wash contaminated clothing before reuse.

Ingestion: If swallowed, promptly drink a large quantity of milk, egg whites, gelatin solution; or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.

Note to Physician:

Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

SECTION VI: REACTIVITY DATA

Stability: Stable X  
Incompatibility (Materials to Avoid) - Strong oxidizers  
Hazardous Decomposition Products - CO, CO2  
Hazardous Polymerization: Will Not Occur X

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled - Small quantities may be flushed into sanitary sewer. Larger quantities should be picked up with absorbent material and disposed of in accordance with state and local regulations.  
Waste Disposal Method - Same as above.  
Container Disposal: Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.  
If burned, stay out of smoke.

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type) - None  
Ventilation - Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.  
Protective Gloves (Specify Type) - Rubber or other water-proof gloves  
Eye Protection (Specify Type) - Goggles or face shield  
Other Protective Equipment - None

SECTION IX: SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storing - Keep from freezing.  
Other Precautions - None

Spartan Chemical Company, Inc. - HDQ NEUTRAL  
Ref: 29 CFR 1910:1200 (OSHA)

NAME: Thomas J. Mitchell  
TITLE: Director of Research  
DATE: July 18, 1996

(153400)

#538

### MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 0 Flammability = 0 Reactivity = 0

HMIS RATING: Health = 0 Flammability = 0 Reactivity = 0

#### SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (429N-45A)

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: H.R. 2000

Address: 302 North Fourth Street  
St. Joseph, MO 64501

Date Prepared: February 3, 1994

Prepared by: Regulatory Affairs Department.

Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816)233-1321(Ext. 303)

#### SECTION II -- INGREDIENTS/IDENTITY INFORMATION

##### Components

(Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	none	none	N/A	---
Acrylic polymer emulsion	unknown	not est.	not est.	N/A	---
High density polyethylene emulsion	unknown	not est.	not est.	N/A	---
Alkenes, polymd	68527-08-2	not est.	not est.	N/A	---

V.O.C. = 10g/l less water; V.O.S. = 0.15 lbs/gallon with water.

#### SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: corr. 208°F

Specific Gravity (H20 = 1): 25°C = 1.01 & 39°C = 1.01

Vapor Pressure (mm Hg.): 17.5

Percent Volatile by Volume (%): 92.4

Vapor Density (AIR = 1): 0.7

Evaporation Rate (ethyl ether = 1): slower than 1

Solubility in Water: complete

Appearance and Odor: white, translucent liquid; lemon odor

#### SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: none (T.C.C.)

Flammable Limits: LEL = N/A UEL = N/A

Extinguishing Media: N/A

Special Fire Fighting Procedures: none

Unusual Fire and Explosion Hazards: Material may spatter if temperatures exceed boiling point. Polymer film can burn.

#### SECTION V -- PHYSICAL HAZARDS

Stability: Stable

Conditions to Avoid: N/A

Incompatibility (Materials to Avoid): None known

Hazardous Decomposition Products or Byproducts: None known

Hazardous Polymerization: Will not occur

Conditions to Avoid: N/A

#### SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? N/A

Skin? N/A

Ingestion? N/A

##### HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Mild eye irritation

2. None known

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No

I.A.R.C. Monographs = No

OSHA = No

**SECTION VI -- HEALTH HAZARD DATA cont.**

**Signs and Symptoms of Exposure:** None known

**Medical Conditions Generally Aggravated by Exposure:** None known

**Emergency and First Aid Procedures:** In case of contact, immediately flush eyes or skin with plenty of water.

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Pick up with mop or wet vac and wash away with water.

Keep spills and cleaning runoffs out of municipal sewers and open bodies of water.

**Waste Disposal Method:** Spills should be picked up with wet vac or absorbent material. Dispose of liquid per local, state and federal regulations. Waste from normal product use may be sewerred to a public-owned treatment works (POTW) in compliance with applicable federal, state and local requirements.

**Precautions To Be Taken In Handling And Storing:** Freezing of product may rupture container. Product shelf life is best retained by storage at 45-100 °F temperatures. Inhalation exposure to spray mist should be maintained at less than 10 mg/M³ per 8 hour exposure (TWA limit est. for nuisance dust). This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and 40 CFR Part 372.

**SECTION VIII -- CONTROL MEASURES:**

**Respiratory Protection (Specify Type):** None required

**Ventilation:**

**Local Exhaust =** not required      **Mechanical (General) =** suggested      **Special =** N/A      **Other =** N/A

**Protective Gloves:** none required

**Eye Protection:** chemical goggles (concentrate may cause pain, though it is unlikely to cause injury)

**Other Protective Clothing or Equipment:** Use good personal hygiene procedures

**Work / Hygienic Practices:** Do not take internally; wash contaminated clothing before reuse

**SECTION IX - TRANSPORTATION INFORMATION:**

**Applicable regulations:** 49 CFR = no; IMCO = no; IATA = no

Proper shipping name: Liquid Floor Wax & Polish

**UN No.:** not applicable      **Limited Qty.:** not applicable      **Hazard Class:** not applicable

**Labels required:** not required      **DOT Exception:** not applicable

**EPA Hazardous waste number/code:** not listed

**Hazardous waste characteristics:**

**Ignitability =** not applicable;      **Corrosivity =** not applicable;      **Reactivity =** not applicable.

**DISCLAIMER OF WARRANTIES**

**NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.**

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

**THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.**

**XEROX**

**Material Safety Data Sheet**

**MSDS No:** D-0401  
**Date:** 3/8/83  
**Revision:** 8/2/01

**Supplier:** Xerox Corporation  
Rochester, NY 14644

Xerox Canada Ltd.  
5650 Yonge Street  
North York, Ontario M2M 4G7

**Telephone #(s):**

*Safety Information: (800) 828-6571*  
*Health Emergency: (716)422-2177*  
*Transportation Emergency(Chemtrec):(800)424-9300*

**Section I - Product Identification**

**Trade Names/Synonyms:** Formula A Cleaner, Liquid Cleaning Kit,  
Exterior Cleaner, Formula B Cleaner

**Part No.:** 43P48, 43P49, 43P50, 43P51*

Included in Kits: 8R1169*, 8R582*,  
8R3674, 8R3800*

**Chemical Name:** None

XCI: 544P20361 Contained in: 8R3709

**WHMIS Status:** Class B/Div. 3, Combustible and Class D/Div. 2B, Toxic

*Cancelled

**Ingredients (% by wt.)**

**CAS No.**

Water (75-80%)	7732-18-5
Isopropanol (5-10%) ^{1,2}	67-63-0
1-Butoxy - 2-propanol (5-10%) ^{1,2}	5131-66-8
Linear alcohol surfactant; C ₁₁ - C ₁₅ (<5%)	68131-40-8
Sodium xylenesulfonate (<5%)	1300-72-7

**Section II - Emergency and First Aid**

**Primary Route of Entry:**

Inhalation

**Eyes:**

Flush thoroughly with water.

**Skin:**

Wash thoroughly with soap and water.

**Inhalation:**

Remove from exposure.

**Ingestion:**

Dilute stomach contents with several glasses of water.

**Symptoms of Overexposure:**

Central nervous system depression, cardiovascular and respiratory depression and gastrointestinal irritation.

**Medical Conditions Generally Aggravated by Exposure:**

None when used as described by product literature.

**Additional Information:**

None.

**Section III - Toxicology and Health Information**

*This material has been evaluated by Xerox Corporation.*

**Oral LD₅₀:** >5 g/kg (rats) practically non-toxic.  
**Dermal LD₅₀:** >10.2 g/kg (rabbits) practically non-toxic.  
**Inhalation LC₅₀:** >200 mg/l practically non-toxic.  
**Eye Irritation:** Irritant  
**Skin Sensitization:** Not a sensitizer.  
**Skin Irritation:** Not an irritant.  
**Human Patch:** N.D.  
**Mutagenicity:** N.D.  
**Carcinogens:** None present  
**Aquatic LC₅₀:** N.D.

**TLV:** 400 ppm (isopropanol)  
**PEL:** 400 ppm (isopropanol)  
**STEL:** 500 ppm (isopropanol)  
**Ceiling:** N.E.  
**XEL³:** 25 ppm (1-butoxy-2-propanol)

**Additional Information:** None

¹This product contains a toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40CFR Part 372. ²Hazardous ingredient(s) as defined by WHMIS. ³XEL-Xerox Exposure Limit.

**XEROX**

**Trade Name:** Formula A Cleaner, Liquid Cleaning Kit, Exterior Cleaner,  
Formula B Cleaner

**MSDS No.:** D-0401

**Section IV - Physical Data**

<b>Appearance/Odor:</b>	Clear liquid / slight odor	<b>Softening Range:</b>	N.A.
<b>Boiling Point:</b>	89-99°C	<b>Melting Point:</b>	N.A.
<b>Solubility in Water:</b>	Completely	<b>Specific Gravity (H₂O=1):</b>	~1
<b>Evaporation Rate:</b>	2,9 (N-butylacetate=1)	<b>Vapor Pressure @ 20°C (mm Hg):</b>	15
<b>Vapor Density (Air=1):</b>	2.07	<b>pH:</b>	9.6
<b>Volatile:</b>	96.4% (Wt.) N.A. % (Vol.)	<b>VOC:</b>	200 g/l

**Section V - Fire and Explosion Data**

**Flash Point (Method Used):** 106 °F (41.1°C) (P.M.C.C.)

**Flammable Limits:** LEL: 2%*, UEL: 12% *Value for isopropanol at 760mm and 82°C.

**NFPA 704:** Health - 0, Fire - 2, Reactivity - 0

**Extinguishing Media:** Water, foam, dry chemical, CO₂.

**Special Fire Fighting Procedures:** Use water spray to cool containers.

**Fire and Explosion Hazards:** A moderate explosion hazard occurs when this material is exposed to heat or flames.

**Section VI - Reactivity Data**

**Stability:** Stable

**Hazardous Polymerization:** Will Not Occur

**Hazardous Decomposition Products:** None

**Incompatibility (Materials to Avoid):** None

**Section VII - Special Protection Information**

**Respiratory Protection:** None required when used as intended in Xerox products.

**Eye Protection:** Safety glasses with side shields or goggles required.

**Protective Gloves:** Rubber or vinyl coated gloves recommended.

**Other:** None required when used as intended in Xerox products.

**Section VIII - Special Precautions**

**Handling and Storage:** Do not store near heat, flames, or sparks. This material is similar to soap and may be irritating to eyes.

**Conditions to Avoid:** None

**Section IX - Spill, Leak, and Disposal Procedures**

**For Spills or Leakage:** No special procedures. (Similar to washroom soaps.)

**Waste Disposal Method:** Flush down drain with water.

**Section X - Transportation Information**

	<u>Proper Shipping name</u>	<u>Hazard Class</u>	<u>ID#</u>	<u>Packing Group</u>	<u>Exceptions may apply</u>
D.O.T.	Combustible Liquid, n.o.s. (isopropyl alcohol)	Combustible Liquid	NA1993	III	Combustible liquids: 49 CFR, 173.150 (f) Limited Quantity: 49 CFR, 173.150 (b) Consumer Commodity (ORM-D): 49 CFR, 173.150 (c)
I.A.T.A.	Flammable Liquid, n.o.s. (isopropyl alcohol)	3	UN1993	III	yes
I.M.O.	Flammable Liquid, n.o.s. (isopropyl alcohol)	3	UN1993	III	yes
T.D.G.	Not Regulated	N.A.	N.A.	N.A.	Section 2.23.2(i)

MATERIAL SAFETY DATA SHEET (MSDS)

This MSDS should be attached or kept with the respective product with which it is associated.

MATERIAL SAFETY DATA SHEET - 78263

Associated Grainger Items

5E220

MATERIAL SAFETY DATA SHEET

78263

5E220

PERMATEX INDUSTRIAL CORPORATION 01/09/95

ROCKY HILL, CONNECTICUT 06067

TELEPHONE: (203) 571-5100

Form-A-Gasket(R) Silicone Blue RTV Gasket Maker

80627 - 5E220

I. PRODUCT IDENTIFICATION

Product Name: Form-A-Gasket(R) Silicone Blue RTV Gasket Maker  
 Item No.: 80627 - 5E220  
 Part No.: 6B  
 Product Type: Silicone  
 Formula No.: Does not apply

II. COMPOSITION

Ingredients	CAS No.	%
Poly(dimethylsiloxane), hydroxy terminated	70131-67-8	40-90
Poly(dimethylsiloxane), dimethyl	63148-62-9	10-30
Proprietary	Proprietary	10-30
Methyltriacetoxysilane	4253-34-3	1-5
ACETIC ACID	64-19-7	***

*** Up to 5% acetic acid may be released upon exposure to moisture.

III. CHEMICAL AND PHYSICAL PROPERTIES

Vapor Pressure: Less than 5 mm at 80°F  
 Vapor Density: Not available  
 Solubility in Water: Polymerized  
 Specific Gravity: 1.04 at 70°F  
 Boiling Point: Not Applicable, Polymeric material  
 Volatile Organic Compound (EPA Method 24) 4.6%, 47.8 grams per liter  
 Evaporation Rate (Ether = 1) More than 1  
 pH: Does not apply  
 Appearance: Blue paste  
 Odor: Acetic acid

IV. FLAMMABILITY AND EXPLOSIVE PROPERTIES

Flash Point: More than 200°F Method: Tag Closed Cup

Estimated NFPA Code:

UN or ID Number: Nona

VIII. REACTIVITY DATA

Stability: Stable

Health Hazard: 2  
 Fire Hazard: 1  
 Reactivity Hazard: 0  
 Specific Hazard: Does not apply  
 Estimated HMIS Code:

Health Hazard: 2  
 Flammability Hazard: 0  
 Reactivity Hazard: 1  
 Personal Protection: See Section X.  
 Explosive Limits:  
 (% by volume in air) Lower Not available  
 (% by volume in air) Upper Not available

Recommended

Extinguishing Agents: Carbon dioxide, foam, dry chemical, water fog

Hazardous Products Formed

by Fire or Thermal Decomp Acetic acid, formaldehyde, silica fume, oxides of carbon.

Unusual Fire or

Explosion Hazards: None  
 Compressed Gases: None  
 Pressure at Room Temp.: Does not apply

V. SPILL OR LEAK AND DISPOSAL PROCEDURES

Steps to be taken in case

of spill or leak: Wear proper protection equipment as specified in Section X. Wipe, scrape, or soak up spilled material with an inert absorbent. Maintain good ventilation for large spills. Place scrap material in a well ventilated place and allow to cure to rubber. Wash walking surface with detergent and water to reduce slipping hazard.

Recommended methods

of disposal: Cured rubber scrap can be incinerated. Follow EPA and local regulations.

VI. STORAGE AND HANDLING PROCEDURES

Safe Storage: Store in a dry area below 90°F.  
 Keep container closed when not in use.  
 Handling: Avoid breathing vapor. Avoid eye or skin contact.

VII. SHIPPING REGULATIONS

DOT (49 CFR 172)  
 Domestic Ground Transport  
 Proper Shipping Name: Unrestricted  
 Hazard Class or  
 Division: Unrestricted  
 Identification Number: None  
 Marine Pollutant: None

IATA

Proper Shipping Name: Unrestricted  
 Class or Division: Unrestricted  
 eyes, nose, and throat.

Existing Conditions

Aggravated by Exposure: Methyltriacetoxysilane: Eye, skin, and pulmonary disorders.



Hazardous Polymerization: Will not occur.

Hazardous Decomposition

Products (non-thermal): Acetic acid

Incompatibility: Oxidizing material.

Polymerized by contact with moisture.

#### IX. EMERGENCY TREATMENT PROCEDURES

Ingestion: Rinse mouth with water several times.

Do not induce vomiting. Keep individual calm.

Obtain medical attention.

Inhalation: Remove to fresh air. Treat symptomatically.

Skin Contact: Wipe off paste with paper towel or cloth.

Wash exposed area with detergent and water.

Obtain medical attention if irritation persists.

Eye Contact: Immediately flush at least 15 minutes with plenty of water. Obtain medical attention.

#### X. PERSONAL PROTECTION

Eyes: Safety glasses or goggles.

Skin: Cloth gloves under rubber or plastic gloves.

Ventilation: Provide mechanical ventilation sufficient to maintain vapor concentration below TLV.

#### XI. HEALTH HAZARD DATA

Toxicity: Eye and skin irritant. May also irritate lips, gums, tongue, mouth, nose, and throat. May be harmful if swallowed.

Hydroxy terminated silicone:

Oral LD50 more than 40,000 mg/kg (rat)

Inhalation LC50 more than 535 mg/liter (rat)

Methyltriacetoxysilane: Oral LD50 = 2060 mg/kg.

Proprietary component:

Estimated oral LD50 more than 40,000 mg/kg (rat)

Estimated inhalation LC50 more than 535 mg/liter (rat)

Primary Routes of Entry: Skin, eyes, inhalation.

Signs and Symptoms

of Exposure: Acetic acid produced during cure irritates

Exposure Limits (TWA)	ACGIH	OSHA	OTHER
Ingredients	(TLV)	(PEL)	
Proprietary	None	15 mg/m3	None
ACETIC ACID	10 ppm TWA	10 ppm TWA	None
25 mg/m3	25 mg/m3		

Exposure Limits (STEL)	ACGIH	OSHA
Ingredients	(TLV)	(PEL)
ACETIC ACID	15 ppm	None
37 mg/m3		

Ingredients for which no Exposure Limits have been established are not listed above.

Literature Referenced	Carcinogen			
Ingredients	Target Organ and Other Health Effects	NTP	IARC	OSHA
Poly(dimethylsiloxane), hydroxy terminated	No Data	NO	NO	NO
Poly(dimethylsiloxane), dimethyl	IRR	NO	NO	NO
Proprietary	No Data	NO	NO	NO
Methyltriacetoxysilane	No Data	NO	NO	NO
ACETIC ACID	BLO GIT IRR MUT NER RES	NO	NO	NO

#### Abbreviations

BLO Blood	GIT Gastrointestinal tract
IRR Irritant	MUT Mutagen
NER Nervous System	RES Respiratory

#### XII. PREPARATION INFORMATION

Prepared By: Stephen Repetto  
Title: Research Chemist, Environmental Health & Safety  
Company: Loctite Corp, 1001 Tr Br Cr, Rocky Hill CT 06067  
(24hr.) Phone: (203) 571-5100

MATERIAL SAFETY DATA SHEET (MSDS)

This MSDS should be attached or kept with the respective product with which it is associated.

MATERIAL SAFETY DATA SHEET - A1987

Associated Grainger Items

2A266, 2A267

LOCTITE CORPORATION

1001 TROUT BROOK CROSSING

ROCKY HILL, CT 06067-3910

EMERGENCY PHONE: (860) 571-5100

FAX: (860) 571-5465

ISSUED: 5/21/02

14:40:44

MATERIAL SAFETY DATA SHEET

-----1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION -----

PRODUCT NAME: SUPERFLEX™ BLUE RTV SILICONE ADHESIVE SEALANT

ITEM NO.: 30560

PRODUCT TYPE: SILICONE

-----2. COMPOSITION, INFORMATION ON INGREDIENTS -----

INGREDIENTS	CAS NO.	%
POLY(DIMETHYLSILOXANE), HYDROXY TERMINATED	70131-67-8	60-80
POLY(DIMETHYLSILOXANE), DIMETHYL	63148-62-9	3-30
SILICA, AMORPHOUS	7631-86-9	0-30
SILOXANE TREATED FUMED SILICA	68583-49-3	0-30
METHYLTRIACTOXSILANE	4253-34-3	1-5
ETHYLTRIACTOXSILANE	17689-77-9	0-5
BLUE PIGMENT	1345-16-0	0.1-1
ACETIC ACID	64-19-7	***
DIMETHYL		
SILICA, AMORPHOUS	NIU	NO N/A NO

*** UP TO 5% ACETIC ACID MAY BE RELEASED UPON EXPOSURE TO MOISTURE.

INGREDIENTS WHICH HAVE EXPOSURE LIMITS:

EXPOSURE LIMITS (TWA):

INGREDIENTS	ACGIH (TLV)	OSHA (PEL)	OTHER
SILICA, AMORPHOUS	10 MG/M3 TWA	6 MG/M3 TWA	NONE
ACETIC ACID	10 PPM TWA 25 MG/M3	10 PPM TWA 25 MG/M3	NONE

EXPOSURE LIMITS (STEL):

INGREDIENTS	ACGIH (TLV)	OSHA (PEL)
ACETIC ACID	15 PPM 37 MG/M3	NONE

-----3. HAZARDS IDENTIFICATION -----

TOXICITY:

EYE AND SKIN IRRITANT. MAY ALSO IRRITATE LIPS, GUMS, TONGUE, MOUTH, NOSE, AND THROAT. MAY BE HARMFUL IF SWALLOWED.

WHEN HEATED TO TEMPERATURES ABOVE 300 DEG. F (150 DEG. C) IN THE PRESENCE OF AIR, THIS PRODUCT CAN FORM FORMALDEHYDE VAPORS. FORMALDEHYDE IS A POTENTIAL CANCER HAZARD AND A KNOWN SKIN AND RESPIRATORY SENSITIZER. VAPORS IRRITATE EYES, NOSE AND THROAT. SAFE HANDLING CONDITIONS MAY BE MAINTAINED BY KEEPING VAPOR CONCENTRATIONS BELOW THE OSHA PERMISSIBLE LIMIT FOR FORMALDEHYDE.

PRIMARY ROUTES OF ENTRY: SKIN, EYES, INHALATION.

SIGNS AND SYMPTOMS OF EXPOSURE:

ACETIC ACID PRODUCED DURING CURE IRRITATES EYES, NOSE, AND THROAT. REPEATED SKIN CONTACT MAY CAUSE ALLERGIC SKIN REACTIONS.

EXISTING CONDITIONS AGGRAVATED BY EXPOSURE:

METHYLTRIACTOXSILANE; EYE, SKIN AND PULMONARY DISORDERS.

INGREDIENTS	LITERATURE REFERENCED	CARCINOGEN
	TARGET ORGAN AND OTHER	NTP IARC OSHA
	HEALTH EFFECTS	

POLY(DIMETHYLSILOXANE) NTO NO NO NO

HYDROXY TERMINATED

POLY(DIMETHYLSILOXANE) IRR NO NO NO

USE WATER SPRAY TO KEEP FIRE EXPOSED CONTAINERS COOL.

HAZARDOUS PRODUCTS FORMED BY FIRE OR THERMAL DECOMP:

ACETIC ACID, FORMALDEHYDE SILICA FUME, OXIDES OF CARBON AND NITROGEN, METAL

SILOXANE TREATED FUMED SILICA NO DATA NO NO NO  
METHYLTRIACTOXSILANE NTO NO NO NO  
ETHYLTRIACTOXSILANE NO DATA NO NO NO  
BLUE PIGMENT NTO NO NO NO  
ACETIC ACID ALG COR EYE GAS IMM NO NO NO  
IRR KID

ABBREVIATIONS:

N/A: NOT APPLICABLE  
ALG: ALLERGEN  
COR: CORROSIVE  
EYE: EYES  
GAS: GASTROINTESTINAL  
IMM: IMMUNE SYSTEM  
IRR: IRRITANT  
KID: KIDNEY  
NTO: NO TARGET ORGANS  
NUI: NOISANCE DUST

-----4. FIRST AID MEASURES -----

INGESTION:

RINSE MOUTH WITH WATER SEVERAL TIMES. DO NOT INDUCE VOMITING. KEEP INDIVIDUAL CALM. OBTAIN MEDICAL ATTENTION.

INHALATION: REMOVE TO FRESH AIR. TREAT SYMPTOMATICALLY.

SKIN CONTACT:

WIPE OFF PASTE WITH PAPER TOWEL OR CLOTH. WASH EXPOSED AREA WITH DETERGENT AND WATER. OBTAIN MEDICAL ATTENTION IF IRRITATION OR OTHER ILL EFFECTS DEVELOP OR PERSIST.

EYE CONTACT:

IMMEDIATELY FLUSH AT LEAST 15 MINUTES WITH PLENTY OF WATER. OBTAIN MEDICAL ATTENTION.

-----5. FIRE FIGHTING MEASURES -----

FLASH POINT: MORE THAN 200 DEG. F

METHOD: TAG CLOSED CUP

RECOMMENDED EXTINGUISHING AGENTS:

LARGE FIRES: DRY CHEMICAL, FOAM, WATER SPRAY.

SMALL FIRES: CARBON DIOXIDE, DRY CHEMICAL, WATER SPRAY.

SPECIAL FIREFIGHTING PROCEDURES:

-----9. PHYSICAL AND CHEMICAL PROPERTIES -----

APPEARANCE: BLUE PASTE

ODOR: ACETIC ACID

BOILING POINT: NOT APPLICABLE, POLYMERIC MATERIAL

OXIDES, INCOMPLETELY BURNED CARBON COMPOUNDS.

UNUSUAL FIRE OR EXPLOSION HAZARDS: NONE

EXPLOSIVE LIMITS:

(% BY VOLUME IN AIR) LOWER: NOT AVAILABLE

(% BY VOLUME IN AIR) UPPER: NOT AVAILABLE

-----6. ACCIDENTAL RELEASE MEASURES -----

STEPS TO BE TAKEN IN CASE OF SPILL OR LEAK:

WEAR PROPER PROTECTION EQUIPMENT AS SPECIFIED IN SECTION X. WIPE, SCRAPE, OR SOAK UP SPILLED MATERIAL WITH AN INERT ABSORBENT. MAINTAIN GOOD VENTILATION FOR LARGE SPILLS. PLACE SCRAP MATERIAL IN A WELL VENTILATED PLACE AND ALLOW TO CURE TO RUBBER. WASH WALKING SURFACE WITH DETERGENT AND WATER TO REDUCE SLIPPING HAZARD.

-----7. HANDLING AND STORAGE -----

SAFE STORAGE:

STORE IN A DRY AREA BELOW 90 DEG. F.  
KEEP CONTAINER CLOSED WHEN NOT IN USE.

(CONTACT LOCTITE CUSTOMER SERVICE 1-800-243-4874 FOR SHELF LIFE INFORMATION)

HANDLING:

AVOID BREATHING VAPOR. AVOID EYE OR SKIN CONTACT. WASH AT MEAL TIMES AND AT END OF SHIFT.

-----8. EXPOSURE CONTROLS, PERSONAL PROTECTION -----

EYES: SAFETY GLASSES OR GOGGLES.

SKIN:

CLOTH GLOVES UNDER RUBBER OR PLASTIC GLOVES.

CONTAMINATED CLOTHES AND SHOES SHOULD BE REMOVED AS SOON AS PRACTICAL AND THOROUGHLY CLEANED BEFORE REUSE.

VENTILATION:

PROVIDE MECHANICAL VENTILATION SUFFICIENT TO MAINTAIN VAPOR CONCENTRATION BELOW TLV.

RESPIRATORY:

USE APPROVED NIOSE RESPIRATORY PROTECTION IF TLV IS EXCEEDED OR OVEREXPOSURE IS LIKELY.

SEE SECTION 2 FOR EXPOSURE LIMITS.

NO DATA AVAILABLE

-----13. DISPOSAL CONSIDERATIONS -----

RECOMMENDED METHODS OF DISPOSAL:

CURED RUBBER SCRAP CAN BE INCINERATED. FOLLOW EPA AND LOCAL REGULATIONS.

Date:  
Supercedes:5 November 2007  
27 February 2006**MATERIAL SAFETY DATA SHEET****1. PRODUCT IDENTIFICATION AND COMPANY IDENTIFICATION:**

Product Name: **FOAMING PINK LOTION SKIN CLEANSER #RH220 – RH250**  
 Company Name & Address: Pro-Link, Inc.  
 510 Chapman St.  
 Canton, MA 02021  
 Emergency Phone: **866-303-6948**  
 Non-Emergency Phone: 781-828-9550  
 MSDS Request Phone: 781-828-9550

**2. INFORMATION ON INGREDIENTS:**

HAZARDOUS INGREDIENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	% RANGE
None				

Other ingredient(s) with notification requirements:	CAS NUMBER	List
Propylene Glycol	57-55-6	PA 1; CN 1

**3. HAZARDS IDENTIFICATION:****EMERGENCY OVERVIEW**

When used according to instructions, the product applicable to this MSDS is safe and presents no immediate or long-term health hazard. However, abnormal entry routes, such as gross ingestion, may require immediate medical attention.

**Potential Health Effects:**

HMIS: Health 1 Flammability 0 Reactivity 0 Personal Protection None

Eye Contact: May cause eye irritation.  
 Skin Contact: No irritation or reaction expected.  
 Inhalation: Not applicable.  
 Ingestion: May cause upset stomach, nausea (Abnormal entry route).  
 Carcinogenicity: Not listed as a carcinogen by NTP, IARC, OSHA or ACGIH.

**4. FIRST AID MEASURES:**

Eye Contact: Do not rub eyes. Flush eyes thoroughly with water for 15 minutes. If condition worsens or irritation persists, contact physician.  
 Skin Contact: Not applicable.  
 Inhalation: Not applicable.  
 Ingestion: Do not induce vomiting. Contact a physician or Poison Control Center.

**5. FIRE FIGHTING MEASURES:**

NFPA: Health 0 Fire 0 Reactivity 0

Flashpoint °F/°C (PMCC method): Not applicable

Unusual Fire and Explosion Hazards: None known.

Special Fire Fighting Procedures: None known.

Extinguishing Media: X Water Fog X Alcohol Foam X CO₂ X Dry Chemical      Other

**6. ACCIDENTAL RELEASE MEASURES:**

No special requirements. Water clean up and rinse. CAUTION – WILL CAUSE SLIPPERY SURFACES.

**7. HANDLING AND STORAGE:**

Store at normal room temperature away from reach of small children. Keep containers sealed. Use older containers first. Avoid freezing conditions.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION:**

Eye Protection: None required under normal conditions.

Skin Protection: None required under normal conditions.

Respiratory Protection: None required under normal conditions.

Ventilation: None required under normal conditions.

Protective Equipment or Clothing: None required under normal conditions.

**9. PHYSICAL AND CHEMICAL PROPERTIES:**

Appearance and Odor Clear pink liquid with cranberry fragrance

pH (undiluted): 5.0 – 7.5

VOC, %: 1%

**10. STABILITY AND REACTIVITY:**

Stable/Non reactive product.

**11. TOXICOLOGICAL INFORMATION:**

No acute or chronic toxic effects expected when used according to directions.

**12. ECOLOGICAL CONSIDERATIONS:**

No ecological or special considerations when used according to directions. Not considered environmentally harmful from normal dilution, expected usage and typical drainage to sewers, septic systems and treatment plants.

**13. DISPOSAL CONSIDERATIONS:**

No special considerations when disposed according to local, state and Federal regulations.

**14. TRANSPORT INFORMATION:**

Not classified as a hazardous material.

**15. REGULATORY AND OTHER INFORMATION:**

Complies with current FDA regulations for cosmetic and/or over-the-counter drug products.

TSCA: All ingredients are listed.

Notice: The information herein is based on data considered to be accurate as of the date of preparation of this material safety data sheet. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the foregoing data and safety information. The user assumes all liability for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.

**XEROX**

**Material Safety Data Sheet**

**MSDS No:** D-0550  
**Date:** 5/3/93  
**Revision:** 05/10/00

**Supplier:** Xerox Corporation Xerox Canada Ltd. Telephone #(s):  
Rochester, NY 14644 5650 Yonge Street Safety Information: (800) 828-6571  
North York, Ontario M2M 4G7 Health Emergency: (716)422-2177  
Transportation Emergency(Chemtrec):(800)424-9300

**Section I - Product Identification**

**Trade Names/Synonyms:** Film Remover, Thermal Head Cleaner, 1/4 inch Part No.: 8R26, 8R27, 43P45, 8R160, 8R161,  
Tape Drive Cleaning Solution, Head Cleaning Kit, 8R3520*, 8R3801*, 8R3811, 8R3812,  
Drive Head Cleaning Kit, Disk Drive Head Cleaning Kit, 8R3813, 9R88789,9R84156.  
Alcohol Cleaning Swab **XCI:** 544P23337  
Contained in: 9R88432, 8R3709,  
600K26520

**Chemical Name:** Isopropanol *Cancelled

**WHMIS Status:** Class B/Div. 2, Flammable liquid and Class D/ Div. 2B, Toxic

<u>Ingredients (% by wt.)</u>	<u>CAS No.</u>
Isopropanol (100%) ¹	67-63-0

**Section II - Emergency and First Aid**

**Primary Route of Entry:**

Inhalation

**Eyes:**

Flush thoroughly with water.

**Skin:**

Wash thoroughly with soap and water.

**Inhalation:**

Remove from exposure.

**Ingestion:**

Dilute stomach contents with several glasses of water.

**Symptoms of Overexposure:**

Central nervous system depression, cardiovascular and respiratory depression and gastrointestinal irritation.

**Medical Conditions Generally Aggravated by Exposure:**

None when used as described by product literature.

**Additional Information:**

Consult with physician

**Section III - Toxicology and Health Information**

*This material has been evaluated by Xerox Corporation.*

**Oral LD₅₀:** 5.84 g/kg (rats) slightly toxic., 8.6 g/kg (human) practically non-toxic.  
**Dermal LD₅₀:** >13 g/kg (rabbits) practically non-toxic.  
**Inhalation LC₅₀:** N.D.  
**Eye Irritation:** Irritant  
**Skin Sensitization:** Not a sensitizer.  
**Skin Irritation:** Not an irritant.  
**Human Patch:** N.D.  
**Mutagenicity:** N.D.  
**Carcinogens:** None present  
**Aquatic LC₅₀:** N.D.

**TLV:** 400 ppm  
**PEL:** 400 ppm  
**STEL:** 500 ppm  
**Ceiling:** N.E.  
**XEL²:** N.E.

**Additional Information:** Prolonged or repeated skin contact may cause defatting of the skin.

¹This product contains a toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40CFR Part 372. ²XEL-Xerox Exposure Limit.

N.A. - Not Applicable N.E. -None Established N.D. -Not Determined

600E71990

**Xerox**

**Trade Name:** Film Remover, Thermal Head Cleaner, 1/4inch Tape, Drive Cleaning Solution, Head Cleaning Kit Drive Head Cleaning Kit, Disk Drive Head Cleaning Kit, Alcohol Cleaning Swab

**MSDS No.:** D-0550

**Section IV - Physical Data**

<b>Appearance/Odor:</b>	Clear liquid/alcoholic odor	<b>Softening Range:</b>	N.A.
<b>Boiling Point:</b>	82°C (180°F)	<b>Melting Point:</b>	-89°C
<b>Solubility in Water:</b>	Completely	<b>Specific Gravity @ 20°C (H₂O=1):</b>	0.79
<b>Evaporation Rate:</b>	2,4 (n-butylacetate = 1)	<b>Vapor Pressure @ 20°C (mm Hg):</b>	33
<b>Vapor Density (Air=1):</b>	2.07	<b>pH:</b>	N.D.
<b>Volatile:</b>	N.A. % (Wt.) 100%(Vol.)	<b>Volatile Organics:</b>	790 g/l

**Section V - Fire and Explosion Data**

**Flash Point (Method Used):** 12°C (53°F) T.C.C.  
**Flammable Limits** LEL: 2% UEL: 12%  
**NFPA 704:** Health - 0, Fire - 3, Reactivity - 0  
**Extinguishing Media:** Dry chemical, carbon dioxide for small fires, alcohol-type foam for large fires.  
**Special Fire Fighting Procedures:** Use water spray to cool containers. Firefighters should wear self contained breathing apparatus.  
**Fire and Explosion Hazards:** A moderate explosion hazard occurs when this material is exposed to heat or flames.

**Section VI -Reactivity Data**

**Stability:** Stable  
**Hazardous Polymerization:** Will Not Occur  
**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide.  
**Incompatibility (Materials to Avoid):** Anhydride, isocyanate, monomer and organometallic combinations, strong oxidants, ethylene oxide, oleum.

**Section VII - Special Protection Information**

**Respiratory Protection:** None during normal use. For large spills, wear air-supplied masks.  
**Eye Protection:** Safety glasses with side shields or goggles required.  
**Protective Gloves:** Rubber or vinyl coated gloves required.  
**Other:** None required when used as intended in Xerox products.

**Section VIII - Special Precautions**

**Handling and Storage:** Do not store near heat, flames, sparks, or strong oxidants. Keep containers closed.  
**Conditions to Avoid:** Avoid heat, sparks and open flames.

**Section IX- Spill, Leak, and Disposal Procedures**

**For Spills or Leakage:** Use adequate ventilation. Eliminate sources of ignition. Small spills should be flushed with large quantities of water. Large spills should be collected for disposal.  
**Waste Disposal Method:** Absorb liquid on vermiculite or other absorbent material or atomize into an incinerator where permitted. Dispose of in accordance with federal, state, and local regulations.

**Section X - Transportation Information**

<u>Proper Shipping name</u>	<u>Hazard Class</u>	<u>ID#</u>	<u>Packing Group</u>	<u>Exception may apply</u>
D.O.T. Isopropyl alcohol	3	UN1219	II	49 CFR 173.150 (b)-Limited Quantity 49 CFR 173.150 (c)-Consumer Commodity, ORM -D
I.A.T.A. Isopropyl alcohol	3	UN1219	II	yes
I.M.O. Isopropyl alcohol	3.2	UN1219	II	yes
T.D.G. Isopropyl alcohol	3	UN1219	II	-

**SECTION I**

**TRADE NAME**.....: FANAPART PADDING ADHESIVE      000 000 0000 0000 0000000000  
**MSDS NUMBER** .....: CEHS-013E                    00 000 0000 0000 0 00000000 000  
**SYNONYMS** .....: EDGE PADDING ADHESIVE        000 00000000  
**MANUFACTURER** .....: APPLETON PAPERS INC  
**EMERGENCY PHONE** ...: 1-800-424-9300 (CHEMTREC) [FROM OUTSIDE USA 703/527-3887]  
**OTHER CALLS** .....: 1-800-922-1723 (TECHNICAL SERVICES)  
**ADDRESS** .....: 825 E. WISCONSIN AVENUE  
**CITY** .....: APPLETON                                 STATE ...:WI ZIP ...:54912  
**MSDS PREPARED BY** ..: PRODUCT SAFETY DEPARTMENT  
**DATE PREPARED** .....: 09/29/00; LAST REVISED 12/1/00

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INGREDIENT NAME	CAS#	OSHA PEL	ACGIH TLV	OTHER	%
PROPRIETARY MATERIAL .....	NOT HAZ	Not Established (NE)	NE	NE	0-10
PROPRIETARY GLYCOL ETHER*	NOT HAZ.	NE	NE	NE	5-15
DENATURED ETHANOL** .....	64-17-5	1000ppm	1000ppm	NE	5-15
ACRYLIC POLYMER (1) .....	Not Haz.	NE	NE	NE	30-40
WATER (1) .....	7732-18-5	NE	NE	NE	REST

***** ADDITIONAL INFORMATION *****

- (1) NON-HAZARDOUS COMPONENT AS DEFINED BY 29 CFR 1910.1200. LISTED HERE PER NEW JERSEY WORKER AND COMMUNITY RIGHT TO KNOW ACT.
- (2) ALL INGREDIENTS ARE CLEAR UNDER THE TOXIC SUBSTANCES CONTROL ACT
- * SARA 313 MATERIAL
- ** CONTAINS 5% METHANOL

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<b>BOILING POINT</b>	<b>MELTING POINT</b>	<b>FREEZING POINT</b>	<b>SPECIFIC GRAVITY (H2O = 1)</b>
201F	NA	NA	1.02
<b>PERCENT VOLATILE by VOLUME</b>	<b>THEORETICAL VOC CONTENT* (percent of WEIGHT)</b>		<b>WEIGHT PER GALLON</b>
< 85	< 30 (< 2.4#/gal)		Approx 8.5 lb
<b>pH (Conc):</b>	NA (NA = NOT APPLICABLE)		

* VOC LESS EXEMPT (VOCLX) = 2.4#/gal and VOC WITH EXEMPT (VOCWX) = 6.9#/gal [per California Rule 1124]



=====

XXXXXXXXXX XX 0 XXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXX

VAPOR PRESSURE (mm of Hg) 25 @ 20C	VAPOR DENSITY (Air = 1) < 1	DENSITY  NA	EVAPORATION RATE Basis (BUTYL ACET-1) NOT DETERMINED
------------------------------------------	-----------------------------------	-------------------	------------------------------------------------------------

SOLUBILITY IN WATER INFINITE	REACTIVITY IN WATER NOT REACTIVE
---------------------------------	-------------------------------------

APPEARANCE AND ODOR:  
MILKY LIQUID, SWEET ODOR

XXXXXXXXXX XX 0 XXXXX XX XXXXXXXXXXXX XXXXXXXX XXXX

FLASH POINT 111F	METHOD PMCC	FLAMMABLE LIMITS IN AIR (%) UPPER = ND	LOWER = ND	AUTOIGNITION TEMPERATURE ND
---------------------	----------------	----------------------------------------------	------------	--------------------------------

HMS CODES: (HEALTH/FLAMMABILITY/REACTIVITY/PROTECTION) = 1/2/0/-

EXTINGUISHER MEDIA: CARBON DIOXIDE, FOAM, OR DRY CHEMICAL

SPECIAL FIRE FIGHTING PROCEDURES: NONE KNOWN TO APPLETON PAPERS

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE KNOWN TO APPLETON PAPERS

COMBUSTION PRODUCTS: SMOKE; SOOT; CO; CO2

***** ADDITIONAL INFORMATION *****

NE = NOT ESTIMATED

ND = NOT DETERMINED

XXXXXXXXXX 0 0 XXXXXXXXXXXXXXXX XXXXX

IS THIS CHEMICAL STABLE UNDER NORMAL CONDITIONS OF HANDLING/STORAGE (Y/N)? Y

CONDITIONS TO AVOID (REGARDING STABILITY): NONE

INCOMPATIBILITY (MATERIALS TO AVOID): STRONG OXIDIZERS

HAZARDOUS DECOMPOSITION PRODUCTS: CO; CO2; SMOKE; SOOT; ETC.

HAZARDOUS POLYMERIZATION POSSIBLE (Y/N) ? N

CONDITIONS TO AVOID (REGARDING POLYMERIZATION): NONE KNOWN TO APPLETON PAPERS

XXXXXXXXXX 00 0 XXXXXXXX XXXXXXXX

ROUTES OF ENTRY: INHALATION, SKIN ABSORPTION (INGESTION UNLIKELY)

SIGNS AND SYMPTOMS OF ACUTE OVEREXPOSURE:

SKIN REDDENING AND/OR IRRITATION; CENTRAL NERVOUS SYSTEM EFFECTS SUCH AS  
DIZZINESS, NAUSEA AND HEADACHE.

CHRONIC OVEREXPOSURE:

REPEATED OR PROLONGED OVER-EXPOSURE TO PRODUCT VAPORS MAY CAUSE IRRITATION OF  
MUCOUS MEMBRANES, SKIN AND EYES; DAMAGE TO LIVER, KIDNEY AND THE CENTRAL  
NERVOUS SYSTEM; AND POSSIBLE REPRODUCTIVE EFFECTS (DUE TO ETHANOL).

CHEMICAL LISTED AS A CARCINOGEN OR POTENTIAL CARCINOGEN  
NATIONAL TOXICOLOGY PROGRAM

IARC MONOGRAPHS  
(Y/N): N

OSHA  
(Y/N): N

TERATOGEN: NOT FOR PRODUCT MUTAGEN: NOT FOR PRODUCT. NOT A SENSITIZER.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: NONE KNOWN TO APPLETON PAPERS

***** EMERGENCY AND FIRST AID PROCEDURES *****

*  
* EMERGENCY PHONE NUMBER OF MANUFACTURER: 1-800-424-9300 (CHEMTREC) *

*  
* INHALATION: IF AFFECTED, MOVE TO FRESH AIR. AVOID PROLONGED OR REPEATED  
* INHALATION OF PRODUCT VAPOR OR MIST *

*  
* EYE CONTACT: IN CASE OF EYE CONTACT, IMMEDIATELY FLUSH WITH PLENTY OF  
* CLEAN RUNNING WATER. *

*  
* SKIN CONTACT: IN CASE OF SKIN CONTACT, FLUSH WITH CLEAN WATER. WASH  
* WITH SOAP AND WATER. *

*  
* INGESTION: IF INGESTED, DO NOT INDUCE VOMITING. DRINK A LARGE AMOUNT  
* OF WATER OR MILK AND CALL A PHYSICIAN. *

*****

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HAZARD CLASS* . . . . .	COMB LIQUID	HAZARD CLASS** . . . . .	3 (Packing Group III)
US DOT ID NUMBER . . . . .	NONE	US DOT ID NUMBER . . . . .	1133
UN/NA NUMBER . . . . .	NONE	UN/NA NUMBER . . . . .	UN
* For surface shipments (and for OSHA Hazard Communication Standard)		** For air shipments	

WHMIS CLASS/DIVISION: Class B, Div. 3 and Class D, Div. 2, subdiv. A

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:  
DO NOT STORE OR HANDLE PRODUCTS IN THE PRESENCE OF HEAT, SPARKS, OR OPEN  
FLAME. GROUND AND BOND CONTAINERS WHEN TRANSFERRING.

TRADE NAME: FANAPART PADDING ADHESIVE

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

XXXXXXXXXX XXX X XXXXXXXXXXXXXXX XXX XXXX XXXXXXXXXXX XXX XXXX XXXXXXXXXXX

**OTHER PRECAUTIONS:** DO NOT TAKE INTERNALLY. CONTAINS HARMFUL ALCOHOL DENATURANTS WHICH CANNOT BE REMOVED BY NORMAL METHODS.

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:**  
REMOVE IGNITION SOURCES. CONTAIN SPILL. ADD ABSORBENT MATERIAL; PICK UP AND CONTAINERIZE FOR SUBSEQUENT DISPOSAL. FLUSH AREA WITH WATER TO REMOVE PRODUCT RESIDUE, DIRECTING FLUSHATE TO THE SEWER.

**WASTE DISPOSAL METHODS:**  
THIS PRODUCT, IF DISPOSED AS SHIPPED, MEETS EPA CRITERIA OF A HAZARDOUS WASTE ON THE BASIS OF ITS IGNITABILITY (RCRA NUMBER D001). DISPOSE OF IN ACCORDANCE WITH APPLICABLE STATE OR COMMUNITY REGULATIONS.

XXXXXXXXXX XXXX X XXXXXXXXX XXXXXXXXX

**RESPIRATORY PROTECTION:**  
NOT REQUIRED IN NORMAL USE

**VENTILATION REQUIREMENTS:**  
LOCAL OR MECHANICAL EXHAUST IS SATISFACTORY

**LOCAL EXHAUST:**  
NOT REQUIRED UNLESS TLV IS EXCEEDED

**MECHANICAL:**  
SATISFACTORY

**SPECIAL:**  
NOT REQUIRED UNDER NORMAL USE CONDITIONS

**OTHER:**  
NOT APPLICABLE

**PROTECTIVE GLOVES:**  
NOT REQUIRED IN NORMAL USE

**EYE PROTECTION:**  
NOT REQUIRED IN NORMAL USE

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:**  
APRON OR OTHER CLOTHING PROTECTION

**WORK/HYGIENIC PRACTICES:**  
KEEP WORK AREA CLEAN. AVOID CONTACTING SKIN AND CLOTHES (MATERIAL MAY BE DIFFICULT TO REMOVE)

103

51007 * FOR 1698 1699  
MSDS #1003

MATERIAL SAFETY DATA SHEET

16 OZ EYEWASH

**Identity:** Eyesaline Solution - Part #'s 1050, 400, 401, 500, 501, 502, 504, 505, 506, 507, 508, 510, 512, 520, 533, 534

**Section I:** 450, 451, 452, 453, 454, 455, 460, 461, 462

**Manufacturer:** Fendall Company  
**Address:** 5 East College Drive  
 Arlington Heights, IL 60004

**Emergency Telephone:** 847-577-7400  
**Information Telephone:** 800-543-4842  
**Date Prepared:** 01/22/96

**Section II: Hazardous Ingredients/Identity Information:**

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other limits recommended	% (optional)
BENZALKONIUM CHLORIDE CAS#8001-54-5	NONE	NONE	N/A	<0.1%

**Section III: Physical/Chemical Characteristics:**

**Boiling Point:** 212° F (100° C)      **Specific Gravity (H₂O=1):** NOT DETERMINED  
**Vapor Pressure (mm Hg.):** 760      **Melting Point:** N/A  
**Vapor Density (Air=1):** NOT DETERMINED      **Evaporation Rate (Butyl Acetate=1):** NOT DETERMINED  
**Solubility in Water:** 100%  
**Appearance and Odor:** COLORLESS LIQUID WITH NO DISCERNABLE ODOR

**Section IV: Fire and Explosion Hazard Data:**

**Flash Point (Method Used):** N/A      **Flammable Limits:**      **LEL:** N/A      **UEL:** N/A  
**Extinguishing Media:** THIS IS A NONFLAMMABLE AQUEOUS SOLUTION  
**Special Fire Fighting Procedures:** N/A  
**Unusual Fire and Explosion Hazards:** N/A

**Section V: Reactivity Data:**

**Stability:**      **Unstable:** NO      **Stable:** YES      **Conditions to Avoid:** THIS PRODUCT IS STABLE CONSIDERED NON-REACTIVE AND STABLE UNDER NORMAL CONDITIONS OF STORAGE AND USAGE.  
**Incompatibility (Materials to Avoid):** NONE KNOWN  
**Hazardous Decomposition or Byproducts:** NONE  
**Hazardous Polymerization:**      **May Occur:** NO      **Will Not Occur:** YES      **Conditions to Avoid:** NONE

**Section VI: Health Hazard Data:**

**Route(s) of Entry:** Inhalation? NO      Skin? NO      Ingestion? YES  
**Health Hazards (Acute and Chronic):** INGESTION OF VOLUMES IN EXCESS OF 20 LITERS MAY CAUSE GASTRIC IRRITATION  
**Carcinogenicity:** NTP? NO      IARC Monographs? NO      OSHA Regulated? NO  
**Signs and Symptoms of Exposure:** N/A  
**Medical Conditions Generally Aggravated by Exposure:** N/A  
**Emergency First Aid Procedures:** NOTES TO PHYSICIAN: IN THE UNLIKELY EVENT OF RAPID INGESTION OF LARGE VOLUMES OF THE SOLUTION, INDUCE VOMITING AND OBSERVE THE PATIENT FOR GASTRIC IRRITATION.

**Section VII: Precautions for Safe Handling and Use:**

**Steps to Be Taken in Case Material is Released or Spilled:** FLUSH AREA WITH WATER. THE SOLUTION IS NOT RCRA HAZARDOUS WASTE  
**Waste Disposal Method:** N/A  
**Precautions to Be Taken in Handling and Storing:** DO NOT FREEZE OR EXPOSE TO TEMPERATURES IN EXCESS OF 110° F (43° C) FOR EXTENDED PERIODS  
**Other Precautions:** N/A

**Section VIII: Control Measures:**

**Respiratory Protection:** N/A

<b>Ventilation</b>	<b>Local Exhaust:</b> N/A	<b>Special:</b> N/A
	<b>Mechanical:</b> N/A	

**Protective Gloves:** N/A      **Eye Protection:** N/A  
**Other Protective Clothing:** N/A  
**Work Hygienic Practices:** N/A

P.H. BALANCE 7.4

Post-It™ brand fax transmittal memo 7671 # of pages 1

To: Ann	From: Piper
Co.	Co.
Dept.	Phone #
Fax: 616 956 7708	Fax #

# MATERIAL SAFETY DATA SHEET

MSDS #: 81800

Page 1 of 2

Sanford NA  
2711 Washington Boulevard  
Bellwood, IL 60104  
Phone: 708-547-6650 or 800-323-0749

Emergency Medical Number: 888-786-0972

Creation Date: October 20, 2003

*Rec'd July 2004*

*059634/319-461*

## Section One: Product Information

Product Name: Expo Dry Erase Cleaner

Colors: Clear

Sanford is a member of The Art and Creative Materials Institute, Inc. This product is certified by the Institute to be labeled in accordance with the voluntary chronic hazard labeling standard ASTM D-4236 and is labeled with the CL (Cautionary Label) Seal. Products bearing the CL Seal are certified to be properly labeled in a program of toxicological evaluation by a medical expert for any known health risks and with information on safe and proper use of these materials. Conforms to ASTM D-4236.

## Section Two: Composition

Water, 2-Butoxyethanol (111-76-2), isopropyl alcohol (67-63-0)

## Section Three: Hazards Identification

WARNING: COMBUSTIBLE. VAPOR HARMFUL. MAY BE HARMFUL IF SWALLOWED, OR BY SKIN CONTACT. EYE IRRITANT. CONTAINS: 2-BUTOXYETHANOL, ISOPROPYL ALCOHOL. PRECAUTIONS: Avoid ingestion. Keep away from eyes. Do not store or use near heat or flame. Use only with adequate ventilation. KEEP OUT OF REACH OF CHILDREN. FIRST AID: If eye contact occurs, rinse with tap water for 5-10 minutes. If irritation persists, seek medical care. If skin contact occurs, wash with soap and water for 5 minutes. If swallowed, get prompt medical attention. For further health information, contact a poison control center or call 888-786-0972.

## Section Four: First Aid Measures

Inhalation: if symptoms occur, move to fresh air.

Skin Contact: If skin contact occurs, wash with soap and water for 5 minutes.

Eye Contact: If eye contact occurs, rinse with tap water for 5-10 minutes. If irritation persists, seek medical care.

Ingestion: If swallowed, get prompt medical attention.

## Section Five: Fire Fighting Measures

Flash Point: 105F (TCC)

Flammability Limits (% by volume): Lower: 2.2% (isopropyl alcohol) Upper: Not available

Extinguishing Media: As appropriate for surrounding area.

Special Fire Fighting Measures: None

Unusual Fire and Explosion Hazards: None

## Section Six: Accidental Release Measures

In Case of Spill or Accidental Release: Wipe up with absorbent material.

## Section Seven: Handling and Storage

Handling: Use in a well-ventilated area. Aim nozzle away from eyes.

Storage: Do not store or use near heat or flame.

**Section Eight: Exposure Controls and Personal Protection**

Eye Protection: None under normal use conditions. Avoid prolonged eye contact.  
 Clothing: None under normal use conditions.  
 Respirator: None under normal use conditions.  
 Ventilation: None under normal use conditions. Use in a well ventilated area.

**Section Nine: Physical and Chemical Properties**

For product unless otherwise specified:  
 Boiling Point: 180F (isopropyl alcohol)  
 Specific Gravity: 0.96  
 Vapor Pressure: 33 mg Hg (Isopropyl alcohol)  
 Solubility in Water: complete  
 Evaporation Rate: Not available  
 Appearance; Odor: Clear liquid; alcoholic odor

**Section Ten: Stability and Reactivity**

Stability: Stable  
 Conditions to Avoid: None known  
 Chemical Incompatibility: Strong oxidizers, acids, isocyanates  
 Hazardous Decomposition: None known  
 Hazardous Polymerization: Will not occur.

**Section Eleven: Toxicological Information**

IARC Monographs: No  
 National Toxicology Program: No  
 OSHA Regulated: No

**Section Twelve: Ecological Information**

Not available

**Section Thirteen: Disposal Considerations**

Dispose in accordance with Federal, State, and Local Regulations.

**Section Fourteen: Transport Information**

ORM-D Consumer Commodity  
 Flammable Liquid, n.o.s. (isopropanol), 3, UN1993, PGIII (105F TCC), Ltd. Q.tys, EmS#3-07  
 Consumer Commodity, 9, ID8000, packing instruction 910

**Section Fifteen: Regulatory Information**

TSCA INVENTORY: The product on this Material Safety Data Sheet is not listed on the Toxic Substances Control Act Inventory. All ingredients used to manufacture this product are listed on the TSCA Inventory

**Section Sixteen: Other Information**

HMIS Code	
Health	2
Flammability	2
Reactivity	0
Personal Protection	H

0=Minimal / 4 = Severe

Sanford NA has been advised by Counsel that the OSHA Hazard Communication Standard does not apply to the Sanford Product described in this Material Safety Data Sheet. The reason for the exemption is contained in 29 CFR 1910.1200(b)(6)(ix) as amended July 1, 2002 per the Code of Federal Regulations. The information contained in this MSDS is forwarded to you for your information, but is not meant to imply that the product is covered by the Hazard Communication Standard nor is this MSDS meant to comply with all requirements of the Hazard Communication Standard.

MATERIAL SAFETY DATA SHEET  
(Complies with OSHA 1910.1200)

EVANS ADHESIVE CORPORATION  
925 Old Henderson Road  
Columbus, OH 43220

IDENTITY (As Used on Label)

Evans 01005 Pads-It

Chemical Name/Family

Polyvinyl Acetate Emulsion

SECTION I

Manufacturer's Name/Address

Evans Adhesive Corporation

Emergency Telephone Number

614-451-2665

Telephone Number for Information

614-451-2665

925 Old Henderson Road

Columbus, OH 43220

Date Prepared (Revised)

January 6, 1986

SECTION II -

HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components

OSHA

ACGIH

%

Specific Chemical Identity; Common Name(s)

PEL

TLV

(OPTIONAL)

Evans 01005 is a water-based mixture whose ingredients are not considered hazardous as defined by the OSHA Hazard Communications Standard.

SECTION III -

PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point

Water 212°F

Specific Gravity (Water = 1)

1.07

Vapor Pressure (mm Hg)

Water 17.535

Percent Volatile by Volume (%)

approx. 60%

Vapor Density (AIR = 1)

Water 0.9822

Evaporation Rate

(Butyl Acetate = 1)

Less than one

Solubility in Water

Dispersible

pH

4.0 - 5.0

Appearance and Odor

White liquid, mild odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)

None

Flammable Limits

LEL

UEL

Not Applicable

Extinguishing Media

Water or carbon dioxide

Special Fire Fighting Procedures

When polymer burns, water, carbon dioxide and carbon monoxide are produced. Masks to remove smoke and organic vapor from respirable air are recommended.

Unusual Fire and Explosion Hazards

None known

**SECTION V**

Stability: Stable  Unstable _____  
Conditions to Avoid: Coagulation may occur following freezing, thawing or boiling.

Incompatibility (Materials to Avoid)  
Water sensitive material such as sulfuric acid or alkali materials.

Hazardous Decomposition or Byproducts  
Not applicable  
Hazardous Polymerization: May Occur _____ Will Not Occur   
Conditions to Avoid: Not applicable

**SECTION VI - HEALTH HAZARD DATA**

Route(s) of Entry: Inhalation? _____ Skin? _____ Ingestion?

Small ingested amounts are not believed to produce adverse health effects.  
Health Hazards (Acute and Chronic)  
Threshold Limit Values have not been established, however, hazards are believed to be minimal.

Carcinogenicity: NTP?  IARC MONOGRAPHS?  OSHA REGULATED?

Signs and Symptoms of Exposure  
Prolonged or repeated contact with liquid adhesive on the skin may cause irritation.

Emergency and First Aid Procedures  
Wash the skin with soap and water. If splashed in the eye, flush with water for at least 15 minutes and consult a physician.

**SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE**

Steps to Be Taken in Case Material is Released or Spilled  
Dam up to limit spreading. Mop up or absorb on inert material and place in containers. Incinerate or dispose of in landfill according to Federal, State and Local Regulations. Flush area with water.

Other Precautions  
Protect from freezing. Store adhesive in closed containers.

**SECTION VIII - CONTROL MEASURES**

Respiratory Protection (Specify Types)  
None required

Ventilation Local Exhaust _____ Special _____  
Not applicable _____ Not applicable _____  
Mechanical (General) _____ Other _____  
Provide adequate ventilation for proper air circulation.  
Not applicable _____

Protective Gloves  
Rubber gloves recommended for repeated or prolonged exposure to skin.

Other Protective Clothing or Equipment  
Use safety goggles when splash potential exists.

Work/Hygienic Practices  
Normal cleanliness should be observed.



(150900)

**MATERIAL SAFETY DATA SHEET**

NFPA RATING: Health = 1, Flammability = 0, Reactivity = 0

HMIS RATING: Health = 1, Flammability = 0, Reactivity = 0

**SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION**

(423N-62A)

**Manufacturer's Name:** HILLYARD INDUSTRIES**Product Name:** ENDEAVOUR**Address:** 302 North Fourth Street**Date Prepared:** March 21, 1994

St. Joseph, MO 64502

**Prepared by:** Regulatory Affairs Department**Emergency Telephone No.:** (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)**Other information calls:** (816)233-1321(Ext. 303)**SECTION II -- INGREDIENTS/IDENTITY INFORMATION****Components**

(Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Dipropylene Glycol Methyl Ether(1)	34590-94-8	100 ppm	100 ppm	STEL = 150	2-4
Zinc oxide	1314-13-2	5mg./m ³	5 mg./m ³	N.A.	less than 0.7
Water	7732-18-5	none	none	N.A.	—
Acrylic Copolymer Emulsion	Unknown to Hillyard	not established	not established	N.A.	—
Diethylene glycol monoethyl ether**	111-90-0	not established	not established	N.A.	1-3
Tributoxyethyl Phosphate**	78-51-3	not established	not established	N.A.	1-3

(1) Regulated by OSHA, FL., IL., LA., MA., NJ., PA., RI.

** This product contains the following chemical subject to reporting requirements of SARA Title III, Sec. 313: Diethylene Glycol Monoethyl Ether and Tributoxyethyl Phosphate

**SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS****Boiling Point:** 210°F.**Specific Gravity (H₂O = 1):** 25°C = 1.03 & 39°C = 1.03**Vapor Pressure (mm Hg.):** 18.8**Percent Volatile by Volume (%):** 81.7%**Vapor Density (AIR = 1):** 1.3**Evaporation Rate (ethyl ether = 1):** slower than 1**Solubility in Water:** complete**Appearance and Odor:** Milky white liquid, non objectionable odor.**SECTION IV -- FIRE AND EXPLOSION HAZARD DATA****Flash point:** None (T.C.C.) **Flammable Limits:** LEL = N.A. UEL = N.A.**Extinguishing Media:** Not applicable.**Special Fire Fighting Procedures:** Wear self-contained breathing apparatus (pressure-demand, MSHA/NIOSH - approved or equivalent) and full protective gear.**Unusual Fire and Explosion Hazards:** Material can spatter above 100 °C/212 °F. Polymer film can burn.**SECTION V -- PHYSICAL HAZARDS****Stability:** Stable **Conditions to Avoid:** Onset of decomposition is 77 °C/350 °F.**Incompatibility (Materials to Avoid):** None known to Hillyard.**Hazardous Decomposition Products or Byproducts:** None known to Hillyard.**Hazardous Polymerization:** Will not Occur **Conditions to Avoid:** None known to Hillyard.**SECTION VI -- HEALTH HAZARD DATA****Routes of entry:** Inhalation? yes Skin? yes Ingestion? yes**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. Not a skin or eye irritant per Federal Hazardous Substance Act. Prolonged exposure may cause moderate skin irritation in sensitive individuals. Prolonged eye contact may cause conjunctivae irritation in sensitive individuals. Overexposure to high airborne levels or liquid splashes of Dipropylene glycol methyl ether may cause eye, nose, throat, and skin irritation. Harmful if swallowed. 2. None known to Hillyard Industries

**Chemical listed as Carcinogen or Potential Carcinogen:****National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No**

This product has no carcinogens listed by IARC, NTP, NIOSH, OR ACGIH as of this date, greater than or equal to 0.1%.

**HEALTH HAZARD DATA (CONTINUED):**

**Signs and Symptoms of Exposure:** Prolonged eye contact with concentrate can cause slight irritation but eyes are expected to clear up in 48 hours. Prolonged skin contact with concentrate can cause moderate skin irritation but is expected to recover in eight days.

**Medical Conditions Generally Aggravated by Exposure:**

Dipropylene glycol methyl ether may aggravate obstructive airway diseases (persons with impaired pulmonary functions) and liver and kidney problems. Persons with pre-existing skin disorders may be more susceptible to irritation.

**Emergency and First Aid Procedures:**

If swallowed induce vomiting immediately. Immediately consult medical personnel. If inhaled, remove to fresh air. If discomfort persists, get medical attention. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes.

**SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Pick up with mop or wet vac and wash away with water. Absorb large spills with oil-dry or similar inert absorbent. Collect material for proper disposal.

**Waste Disposal Method:** Wash small quantities down sewer with large amount of water. Contains ammonia which may be toxic to aquatic life. Keep spills and cleaning runoffs out of municipal sewers and open bodies of water. Large spills should be picked up with wet vac or absorbent material. Landfill or incinerate solids. Dispose of liquid per local, state or federal regulations.

**Precautions To Be Taken In Handling And Storing:** Freezing of product may rupture container. Product shelf life is best retained by storage at 45 - 100 °F temperature.

**Other Precautions:** Inhalation exposure to spray mist should be maintained at less than 10 mg./m³ per eight hours exposure (TWA limit established for nuisance dust). **USE WITH ADEQUATE VENTILATION.** Avoid breathing vapors or spray mist. Open windows and doors, use exhaust fans or other means **to insure fresh air entry during application and drying.** Refer to OSHA Standard 29 CFR 1910.94 for technical guidelines on keeping air contamination below acceptable exposure limits. Keep container closed when not in use.

**SECTION VIII – CONTROL MEASURES:**

**Respiratory Protection (Specify Type):** Wear appropriate, properly fitted respirator (NIOSH or MSHA Approved) unless air monitoring demonstrates vapor or mist levels are below applicable limits.

**Ventilation:** Good ventilation for public areas is 10 air changes per hour.

**Local Exhaust =** Recommended      **Mechanical (General) =** Recommended      **Special =** N.A.      **Other =** N.A.  
**Protective Gloves:** Prolonged or repeated contact use solvent resistant rubber or neoprene gloves      **Eye Protection:** None needed for normal use.

**Other Protective Clothing or Equipment:** Protective clothing such as uniforms or coveralls.

**Work / Hygienic Practices:** Wash contaminated clothing before reuse (including shoes).

**SECTION IX - TRANSPORTATION INFORMATION:**

**DOT SHIPPING DESCRIPTION ON BILL OF LADING:**

**Applicable regulations:** 49 CFR = no; IMCO = no; IATA = no.

**Proper shipping name:** Liquid Floor Wax & Polish

**UN No.:** not applicable; **Limited Qty.:** not applicable; **Hazard Class:** not applicable.

**Labels required:** not required      **DOT Exception:** not applicable

**EPA Hazardous waste number / code:** not listed

**Hazardous waste characteristics:**

**Ignitability =** not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable.

**DISCLAIMER OF WARRANTIES**

**NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.**

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

**THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.**



433 EAST RANSOM STREET  
KALAMAZOO, MICHIGAN 49007

PHONE **616-343-3772**  
MI TOLL FREE **1-800-272-7202**  
FAX **616-344-6716**

# MATERIAL SAFETY DATA SHEET

SHA Form 174  
may be used to comply with  
OSHA Hazard Communication Standard (29 CFR 1910.1200)  
Consult OSHA standard for specific requirements

**NFPA HAZARD RATING**

4 - EXTREME  
3 - HIGH  
2 - MODERATE  
1 - SLIGHT  
0 - INSIGNIFICANT

Trade name: ELIMINATOR 535  
Family: BACTERIA CULTURE  
Formula: MIXTURE  
DOT Hazard Class: NONE

***** SECTION II - HAZARDOUS INGREDIENTS *****

Substance	CAS Reg. Number	Approximate Percentage	OSHA PEL	Carcinogenicity NTP IARC OSHA
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CONTAINS NO HAZARDOUS COMPONENTS AS LISTED IN 29 CFR 1910.1000 OR OTHER PERTINENT SECTIONS OF OSHA REGULATION.

***** SECTION III - PHYSICAL DATA *****

Boiling point (°F):	>212	Specific gravity:	1.01
Vapor pressure (mmHg):	NOT DET.	% volatile (volume %):	NOT DET.
Vapor density (air=1):	NOT DET.	Evap. rate (water=1):	<1
Solubility in water:	SOLUBLE	pH:	7.50

Appearance / odor: MILKY WHITE LIQUID, FLORAL FRAGRANCE.

***** SECTION IV - FIRE AND EXPLOSION HAZARD DATA *****

Flash point (°F):	NONE	Flammable limits in air (volume %)
(test method):		Upper: N/A Lower: N/A

Extinguishing media: WATER, FOAM, CARBON DIOXIDE, DRY CHEMICAL.  
Special fire fighting procedures: NONE  
Unusual fire / explosion hazard: NONE

The data contained herein is drawn from recognized sources and believed to be accurate as of the date of issue. This information is intended for use by persons who have or should obtain professional knowledge and experience in the subjects discussed, and is presented only for your evaluation of the suitability of this product for your use, and for compliance with Federal and state regulations. The manufacturer makes no warranty, express or implied, and disclaims all liability for the accuracy, completeness, and reliability of any information contained herein

***** SECTION V - HEALTH HAZARD DATA *****

Threshold limit value: NOT ESTABLISHED FOR MIXTURE

Primary Route of Exposure: INGESTION, EYE AND SKIN CONTACT

Effects of overexposure:

EYES: MILD IRRITATION, REDNESS.

SKIN: PROLONGED OR REPEATED CONTACT MAY CAUSE MILD IRRITATION. BACTERIAL INFECTION MAY OCCUR THROUGH OPEN WOUNDS OR BROKEN SKIN.

INGESTION: NAUSEA, VOMITING, DIARRHEA.

INHALATION: NO SYMPTOMS.

Emergency first aid procedures:

EYES: FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, OBTAIN MEDICAL ATTENTION.

SKIN: AVOID CONTACT WITH BROKEN SKIN OR OPEN WOUNDS. IN CASE OF CONTACT, WASH AREA AND APPLY TOPICAL ANTISEPTIC AGENT.

INGESTION: GIVE PERSON SEVERAL GLASSES OF WATER AND INDUCE VOMITING. OBTAIN MEDICAL ATTENTION. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

INHALATION: REMOVE PERSON TO FRESH AIR.

***** SECTION VI - REACTIVITY DATA *****

Stability: STABLE Conditions to avoid: TEMPERATURES ABOVE 100° F. OR BELOW 32° F.

Incompatibility: STRONG OXIDIZING AGENTS

Hazardous decomposition products: THERMAL DECOMPOSITION MAY YIELD CARBON MONOXIDE AND CARBON DIOXIDE.

Hazardous polymerization WILL NOT OCCUR. Conditions to avoid: NONE

***** SECTION VII - SPILL OR LEAK PROCEDURES *****

Steps to be taken if material is released or spilled: STOP LEAK OR SPILL BY REPOSITIONING CONTAINER, AND SOAK UP ON INERT ABSORBENT OR FLUSH INTO SANITARY SEWER WITH WATER.

Waste disposal method: FLUSH DOWN SANITARY SEWER.

***** SECTION VIII - SPECIAL PROTECTION INFORMATION *****

Respiratory protection: NOT REQUIRED FOR NORMAL USE ACCORDING TO LABEL INSTRUCTIONS.

Ventilation: NOT REQUIRED FOR NORMAL USE ACCORDING TO LABEL INSTRUCTIONS.

Protective gloves: NOT REQUIRED.

Eye protection: SAFETY GLASSES OR CHEMICAL GOGGLES.

Other protective equipment: NOT REQUIRED.

***** SECTION IX - SPECIAL PRECAUTIONS. *****

Precautions for handling and storage: STORE IN A COOL, DRY PLACE. DO NOT EXPOSE TO TEMPERATURES ABOVE 100° F. OR BELOW 32° F. CLOSE CONTAINER TIGHTLY WHEN NOT IN USE.

Other precautions: KEEP OUT OF REACH OF CHILDREN.

**MATERIAL SAFETY DATA SHEET**PRODUCT NAME: **ECOLO-WASH STEP B** (Less than 3.5 Lbs./Gallon V.O.C.)

USE: SECOND STEP OF TWO STEP ROLLER AND BLANKET CLEANING SYSTEM

DOT SHIPPING NAME: COMPOUND, CLEANING LIQUID

DOT CODE: Non-Regulated

N.O.S.

IMO CODE: Non-Regulated

**HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: (HMIS)**

HEALTH: 1 FLAMMABILITY: 1 REACTIVITY: 0 PERSONAL PROTECTION: B

KEY: 0 = Minimal 1 = Slight 2 = Moderate 3 = Severe 4 = Extreme

A = Glasses B = Glasses and Gloves

**SECTION II - PREPARATION INFORMATION**

Varn Products Company, Inc., 905 South Westwood, Addison, Illinois 60101  
 Telephone Number (800) 336-8276 Date Of Revision: January 2, 1992  
 CHEMTREC EMERGENCY TELEPHONE NUMBER: 24 HOURS: 800-424-9300

**SECTION III - HAZARDOUS INGREDIENTS**

INGREDIENT	CAS #	OSHA PEL	ACGIH TLV	MANF. REC.	PERCENT
1. Petroleum Naphtha	[64742-47-8]	---	---	100 ppm	< 45%
2. Petroleum Naphtha	[64742-94-5]	---	---	100 ppm	< 8%

All ingredients appear on the EPA TSCA Inventory.

**SECTION IV - ENVIRONMENTAL DATA****A. SARA TITLE III INFORMATION**

This product does not contain any Section 313 reportable chemicals.

**B. CERCLA INFORMATION - EPA - Comprehensive Environmental Response, Compensation and Liability Act.** Under EPA-CERCLA (Superfund) release to air, land, or water may be reportable to the National Response Center, 800-424-8802 (Circumstances surrounding the material, quantity, threat to environment and clean-up determine reportability).

**C. RCRA INFORMATION: UNDER EPA - RCRA (40 CFR 261.21):** If this product becomes a waste material, it could be classified as ignitable waste, EPA Waste ID # D001. See Section IX, Item #4 for additional information.

**OTHER REPORTING INFORMATION:** 402 grams per liter (3.42 pounds per gallon) volatile organic compounds. This product is NOT photochemically reactive. Contains no ingredients found on the California List (Proposition 65).

**SECTION V - PHYSICAL DATA**

1. APPEARANCE: White Liquid Emulsion	2. ODOR: Mild
3. ODOR THRESHOLD: Not Available	4. SPECIFIC GRAVITY: 0.91
5. VAPOR PRESSURE @ 21° (mmHg) < 2	6. VAPOR DENSITY (Air=1) 1.9
7. EVAPORATION: (Butyl Acetate=1) < 0.128.	8. BOILING POINT: 214°F (101°C)
9. FREEZING POINT: <0°C (<32°F)	10. pH: Not Applicable
11. SOLUBILITY IN WATER: Very Low	

SECTION IX - PREVENTIVE MEASURES

1. PERSONAL PROTECTIVE EQUIPMENT: Rubber gloves are suggested for extended periods of contact. Wear eye protection.
2. ENGINEERING CONTROLS: Insure adequate ventilation so that vapor concentration is maintained below the threshold limit value. Avoid prolonged breathing of vapors.
3. IN CASE OF LEAK OR SPILL: Soak up small spills on absorbent and shovel into non-hazardous refuse. Use soap and water to clean residue. Dike large spills and keep product from entering the sewer. Turn off all nearby sources of ignition. Soak up on non-reactive absorbant material. Clean up crew should wear rubber boots. Place material in a covered container for later disposal.
4. WASTE DISPOSAL: Contact an authorized hazardous waste hauler for reclamation or incineration. Check with local authorities.
5. HANDLING PROCEDURES: Follow regulations for empty container disposal.
6. STORAGE REQUIREMENTS: Store in cool, dry area away from sunlight and high heat sources.

SECTION X - FIRST AID MEASURES

1. EYES: Hold eye lids open and rinse with water for fifteen minutes. Contact a physician if irritation persists.
2. SKIN: Wash with soap and water.
3. INGESTION: Do not induce vomiting. Seek medical attention.
4. INHALATION: Move victim to fresh air.

NOTE TO PHYSICIAN: If product is ingested use best judgement. Petroleum distillates can cause liver and kidney damage, but may produce chemical pneumonitis if introduced into lungs.

The information contained herein is current as of the date of this Material Safety Data Sheet. The use of this information and the conditions of use of the product are not within the control of Varn Products Company, Inc. It is the user's obligation to determine the conditions of safe use of the product.

Federal law requires persons receiving the Material Safety Data sheet to study it carefully, become aware of the hazards, if any, of the product involved. In the interest of safety you should (1) notify your employees, agents, and contractors of the information on this sheet, (2) furnish a copy to each of your customers for the product, and (3) request your customers to inform their employees and customers as well.

This information may be reproduced locally.

SPARTAN CHEMICAL COMPANY, INC. - MATERIAL SAFETY DATA SHEET

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label)  
DUST MOP/DUST CLOTH TREATMENT (BULK)

Manufacturer's Name - Spartan Chemical Company, Inc.  
Emergency Telephone No. - 800/537-8990  
Address - 110 N. Westwood Ave., Toledo, OH 43607

NFPA RATINGS: Health-0 Fire-0 React-0  
HMIS RATINGS: Health-0 Fire-0 React-0 Pers. Prot.-A

SECTION II: HAZARDOUS INGREDIENTS

Chemical Name(s) - Ethylene glycol*  
CAS Registry No. - 107-21-1 Weight 2%  
TWA (mg/m3) - N/A STEL (mg/m3) - 125 Ceiling (mg/m3) - N/A  
Carcinogen - No

*This substance is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (SARA) and of 40 CFR 372.

SECTION III: PHYSICAL DATA

Boiling Point - 210-212 F  
Specific Gravity (H2O = 1) - 0.98  
Percent Solid by Weight - 10-12  
Vapor Pressure - 18 mm Hg @ 75 F  
Evaporation Rate (But. Ace. = 1) - <1  
Vapor Density (Air = 1) - Unknown  
Solubility in Water - Forms an emulsion  
Appearance and Odor - Opaque white, non-viscous liquid, fresh scent  
Material Is - Liquid  
pH - 8.5-9.0

SECTION IV: FIRE & EXPLOSION HAZARD DATA

Flash Point - None  
Method Used - ASTM - D56  
Flammable Limits - N/A  
Extinguishing Media - N/A  
Special Fire Fighting Procedures - None  
Unusual Fire and Explosion Hazards - None

SECTION V: HEALTH HAZARD DATA

Effects of Overexposure - Conditions to Avoid: May cause eye irritation.  
Threshold Limit Value - Not established  
Conditions Aggravated by Use - Unknown  
Primary Routes of Entry: N/A  
Emergency and First Aid Procedures -  
Eyes: Remove contact lenses. Flush eyes with water for at least 15 minutes. If irritation persists, call a physician.

SECTION VI: REACTIVITY DATA

Stability: Stable X  
Incompatibility (Materials to Avoid) - Strong oxidizers  
Hazardous Decomposition Products - CO, CO2  
Hazardous Polymerization: Will Not Occur X

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled - For small spills,  
clean up with absorbent material and incinerate. Large quantities should  
be contained and disposed of in accordance with state and local regulations.  
Waste Disposal Method - Same as above

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type) - None required  
Ventilation - Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.  
Protective Gloves (Specify Type) - None required  
Eye Protection (Specify Type) - None required  
Other Protective Equipment - None required

SECTION IX: SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storing - Keep from freezing.  
Other Precautions - None

Spartan Chemical Company, Inc. - DUST MOP/DUST CLOTH TREATMENT (BULK)  
Ref: 29 CFR 1910:1200 (OSHA)

NAME: Thomas J. Mitchell  
TITLE: Director of Research  
DATE: July 18, 1996  
SUPERCEDES: July 15, 1993

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## Section I

Manufacturer's Name HAVILAND PRODUCTS COMPANY	Emergency Telephone Number CHEMTREC (800) 424-9300
Address (Number, Street, City, State, and ZIP Code) 421 Ann St., N.W.	Telephone Number for Information (314) 694-2096 or (616) 361-6691
Grand Rapids, MI 49054	Date Prepared May 14, 1986
	Signature of Preparer (optional)

### PRODUCT IDENTIFICATION

**Synonyms:** 1,3-Dichloro-s-triazine-2,4,6 (1H,3H,5H)-trione sodium salt; Sodium dichloroisocyanurate; Sodium dichloro-s-triazinetrione also "Sodium dichlor".

**CAS No.:** 2893-78-9

**EPA Reg. No.:**

**Chemical Formula:**  $C_3N_3O_3Cl_2Na$

**DOT Proper Shipping Name:** Sodium dichloro-s-triazinetrione

**DOT Hazard Class/ I.D. No.:** Oxidizer/UN2465

**DOT Label(s):** Oxidizer

**Hazardous Substance(s)/ RQ(s):** Not Applicable

**U.S. Surface Freight Classification:** Sodium Dichloroisocyanurate (Bleach Assistant Compound, NOIBN, dry)

### WARNING STATEMENTS

Keep out of reach of children.

**DANGER!**  
**CORROSIVE.**  
**CAUSES EYE DAMAGE AND BURNS TO SKIN.**  
**CAUSES IRRITATION OF NOSE AND THROAT.**  
**HARMFUL IF SWALLOWED.**  
**STRONG OXIDIZER.**  
**CONTACT WITH ORGANIC MATTER MAY CAUSE FIRE.**  
**WILL BURN WITH EVOLUTION OF CHLORINE AND EQUALLY TOXIC GASES.**

**FOR CONTROL OF BACTERIA AND ALGAE IN SWIMMING POOL WATER**

## PRECAUTIONARY MEASURES

Do not get in eyes, on skin, or on clothing.  
 Use clean, dry utensils and wear goggles or face shield and rubber gloves when handling.  
 Avoid breathing dust or fumes.  
 Avoid contact with organic material.  
 Decomposes at 460 to 480°F with liberation of harmful gases.

## EMERGENCY AND FIRST AID PROCEDURES

**FIRST AID: IF IN EYES,** immediately flush with plenty of water for at least 15 minutes and call a physician.

**IF ON SKIN,** immediately brush off excess chemical and flush with plenty of water. Remove contaminated clothing. Wash clothing before reuse. If irritation persists, call a physician.

**IF SWALLOWED,** drink milk, water, or raw egg whites. Call a physician.

**IF INHALED,** remove person to fresh air. Call a physician.

**IN CASE OF: FIRE,** if possible, isolate container in open air or well ventilated area. Flood with large volume of water.

**CONTAMINATION or DECOMPOSITION,** do not reseal container.

## OCCUPATIONAL CONTROL PROCEDURES

**Eye Protection:** Wear chemical safety goggles to prevent eye contact. Have eye baths immediately available where eye contact can occur.

**Skin Protection:** Wear appropriate impervious gloves and protective clothing to prevent skin contact. Launder contaminated clothing and clean protective equipment before reuse. Provide safety showers at any location where skin contact can occur.

**Respiratory Protection:** Use NIOSH approved equipment with full facepiece when airborne exposure limits are exceeded. Consult respirator manufacturer to determine appropriate type equipment for given application.

**Ventilation:** Provide ventilation to control exposure levels below airborne exposure limits. Local exhaust ventilation preferred.

**Airborne Exposure Limits:** Product:

Active Ingredient:	Sodium dichloro-s-triazinetriene	96%
Inert Ingredients		4%
Available Chlorine		82%

Although OSHA and ACGIH have not established specific exposure limits for this material, they have established the following limits for nuisance dusts:

OSHA PEL/TWA: Total 15 mg/m³; Respirable 5 mg/m³  
 ACGIH TLV/TWA: Total 10 mg/m³; Respirable 5 mg/m³

These limits are stated only to indicate the least stringent airborne dust exposure levels applicable to nuisance dusts. This chlorinating composition may cause irritation at exposure concentrations below these limits.

**PHYSICAL DATA**

<b>Appearance and Odor:</b>	White crystalline solid; slight chlorine odor
<b>Melting Point:</b>	240-250°C (decomposes)
<b>Loose Bulk Density (lbs./cu. ft.):</b>	57 (granular) 59 (extra granular)
<b>Solubility @ 25°C:</b>	25 g/100 g H ₂ O
<b>pH (1% solution @ 25°C):</b>	6.0

**Note:** These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification items.

**SPILL, LEAK & DISPOSAL INFORMATION**

**Waste Disposal:** Dispose of in accordance with all local, state and federal regulations.

As currently defined in federal RCRA regulations, this chlorinating composition, when discarded, is a hazardous waste exhibiting the characteristics of reactivity (D-003). See 40 CFR 261.23. Its disposal, therefore, is regulated by federal RCRA regulations. Consult your attorney or appropriate regulatory officials for information regarding additional state and local waste disposal requirements.

Disposal by incineration in an EPA approved hazardous waste incinerator is recommended.

**Spill or Leakage Procedure:**

Contain spilled material.

KEEP SPILLED MATERIAL DRY. Do not allow water or other incompatible substances (see "Reactivity Data" section of this document) to come into contact with the spilled material.

Keep out of sewers, watersheds and water systems.

Follow all protective measures indicated in the "Occupational Control Procedures" section of this document.

Sweep, scoop, or vacuum up all spilled material, contaminated soil, and other contaminated material and place in clean, dry containers for disposal. Complete cleanup on a dry basis.

**ADDITIONAL COMMENTS****Environmental Toxicity Information:**

This product is toxic to fish. Do not discharge into lakes, streams, ponds, or public waters unless in accordance with NPDES Permit. For guidance contact the regional office of EPA.

96-hr LC ₅₀ Bluegill:	0.43 mg/l, Highly Toxic
96-hr LC ₅₀ Rainbow Trout:	0.37 mg/l, Highly Toxic
8-Day Oral LC ₅₀ Bobwhite Quail:	>10,000 mg/l, Practically Nontoxic
8-Day Oral LC ₅₀ Mallard Duck:	>10,000 mg/l, Practically Nontoxic
Acute LD ₅₀ Mallard Duck:	1,916 mg/kg, Slightly Toxic

(Additional Comments Continued On Next Page)

**OCCUPATIONAL CONTROL PROCEDURES (Continued)**

Monsanto has adopted an internal limit of 0.5 mg/m³ TWA, 1.5 mg/m³ STEL for this material.

Chlorine

- OSHA PEL/C: 1 ppm (3 mg/m³)
- ACGIH TLV/TWA: 1 ppm (3 mg/m³)
- TLV/STEL: 3 ppm (9 mg/m³)

**FIRE PROTECTION INFORMATION**

chlorinating composition is not flammable, but if heated by an outside source to a temperature of 460-480°F, this material will undergo self-sustaining decomposition with evolution of heat and dense noxious gases.

**Extinguishing Media:** A thermal decomposition can be extinguished by flooding with copious quantities of water or by isolating the decomposing material and allowing it to be consumed.

**Special Firefighting Procedures:** Firefighters and others subjected to products of decomposition should wear full protective clothing and self-contained breathing apparatus. Chlorine-containing gases with traces of phosgene can be liberated at temperatures in excess of 400°F.

**Unusual Fire And Explosion Hazards:** Nitrogen trichloride can be generated by reaction of water under certain conditions. The reaction of water with this chlorinating composition generally does not present an explosion hazard as the rate of nitrogen trichloride formation is very slow.

**REACTIVITY DATA**

**Materials to Avoid:** Avoid contact with water. Also avoid contact with easily oxidizable organic material; ammonia, urea, or similar nitrogen-containing compounds; inorganic reducing compounds; calcium hypochlorite; alkalis.

**Hazardous Decomposition Products:** Chlorine-containing gases can be produced. Traces of phosgene can be liberated at high temperatures >400°F.

**Hazardous Polymerization:** Does not occur.

**PHYSIOLOGICAL EFFECTS SUMMARY**

- Oral LD₅₀ (Rat): 700 mg/kg, Slightly Toxic
- Dermal LD₅₀ (Rabbit) : 6,000 mg/kg, Practically Nontoxic
- Eye Irritation (Rabbit) : (FHSA) Corrosive
- Skin Irritation (Rabbit) : (FHSA) Corrosive

**ADDITIONAL COMMENTS (Continued)****Container Handling and Storage:**

Retie polyethylene liner after each use and keep container tightly closed. Store in a dry place. Do not allow water to get into container. Keep containers off wet floors.

Dispose of liner according to approved federal, state or local procedures under the Resource Conservation and Recovery Act. Rinse empty container with water and discard.

Refer to Monsanto Technical Bulletin IC/SCS-326 for detailed information on handling and storing.

700190



# MATERIAL SAFETY DATA SHEET

## SECTION 1 - MANUFACTURER OR SUPPLIER DATA

MSDS NUMBER

100459

MANUFACTURER'S NAME & MAILING ADDRESS U S Chemical Corporation 316 Hart Street Watertown, Wisconsin 53094 USA	PREPARED BY D. E. Kenas	SIGNATURE <i>David E. Kenas</i>	H
	TITLE Quality Assurance Manager	DATE 1-4-02	
EMERGENCY TELEPHONE NO. (24 HOUR SERVICE) Medical Emergency ONLY: 1-800-851-7145 Ext. 075	PRODUCT INFORMATION TELEPHONE NO. (8 AM TO 5 PM CST, MON - FRI) Product Information: 1-800-558-9566		

## SECTION 2 - IDENTITY OF MATERIAL

PRODUCT NAME DRY IT			
PRODUCT DESCRIPTION Mechanical Dishmachine Rinse Additive (Nonionic Surfactants)		FORMULA Proprietary Blend	CHEMICAL FAMILY N.A.
REGULATED IDENTIFICATION	DOT PROPER SHIPPING NAME Not Regulated by D.O.T.		
	SHIPPING ID NUMBER N.A.	PACKING GROUP N.A.	HAZARD CLASS N.A.

## SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT N.A.	SPECIFIC GRAVITY (H ₂ O = 1) 1.012	PHYSICAL FORM Liquid	COLOR Green
VAPOR PRESSURE (mm Hg) N.A.	MELTING POINT N.A.	SOLUBILITY IN WATER Complete	SCENT None Added
VAPOR DENSITY (AIR = 1) N.A.	EVAPORATION RATE (BUTYL ACETATE = 1) N.A.	pH 2500 ppm SOLUTION N.A.	pH CONCENTRATE 5.0
OTHER Slightly Viscous, Clear Green Solution.			

## SECTION 4 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS (CHEMICAL NAME; COMMON NAME)	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	PERCENT WT/WT
Polyoxypropylene-Polyoxyethylene Block Copolymer	Not	Not	None	1.0-5.0
CAS Registry Number 9003-11-6	Established	Established		

This product contains no other ingredient considered hazardous according to the criteria of 29 CFR 1910.1200, OSHA. However, this product contains chemicals which may be subject to reporting requirements according to the criteria of SARA Title III, 40 CFR, Part 370, Section 311 and Section 312.

### STATE RIGHT TO KNOW INFORMATION

THIS PRODUCT CONTAINS: WATER/7732-18-5, AMINE POLYGLYCOL CONDENSATE/68603-58-7, MEROXAPOL/9003-11-6, ALKYLARYL POLYETHER/60864-33-7

NFPA RATING: Health-1/Flammability-0/Reactivity-0  
HMIS RATING: Health-1/Flammability-0/Reactivity-0

See Section 5 for Protective Equipment.  
See Section 5 for Protective Equipment.

### CARCINOGENICITY:

This product does not contain any known carcinogens or anticipated carcinogens according to the criteria of the NTP Annual Report on Carcinogens, IARC Monographs, and OSHA 29 CFR 1910, Subpart Z.

(CONTINUED IN SECTIONS 5 TO 8)

## SECTION 5 - SAFE USAGE DATA

PROTECTIVE EQUIPMENT TYPES	EYES None required with normal use.	
	RESPIRATORY None required with normal use.	GLOVES None required with normal use.
	OTHER Use Good Standard Industrial Hygiene Practices.	
VENTILATION	GENERAL MECHANICAL Satisfactory. Maintain adequate ventilation. Keep levels below recommended TLV.	
	LOCAL EXHAUST None required with normal use.	
PRECAUTIONS	HANDLING & STORAGE Follow all label directions. Instruct personnel about proper use, hazards, precautions, and first-aid measures. Avoid ingestion and contact with eyes. Rotate stock regularly. Handle carefully to avoid damaging container. Keep container closed when not in use. Recommended storage temperature below 100°F. Do not freeze. Keep out of children's reach.	

## SECTION 6 - HEALTH HAZARD DATA

EFFECTS OF EXPOSURE	INHALATION None Known.
	INGESTION May cause discomfort, nausea, vomiting, and irritation to mouth, esophagus, stomach, and to other tissues with which contact is made.
	SKIN & EYES SKIN: Prolonged exposure to concentrate may cause slight irritation to highly sensitive skin. EYES: Contact may cause tearing, and mild to severe irritation depending upon exposure.
	ACUTE & CHRONIC ACUTE: Irritation to eyes. CHRONIC: None Known.
ROUTES OF ENTRY	INGESTION-X SKIN ABSORPTION- TARGET ORGANS SKIN- EYES-X INHALATION- None Known.

## SECTION 7 - PHYSICAL HAZARD DATA

FLAMMABILITY	LEL = N.A. UEL = N.A.	FLASH POINT = N.A.	METHOD USED = N.A.
STABILITY	STABLE	X	CONDITIONS TO AVOID Avoid mixing with any other cleaning product. Mix only with water. Do not store at high temperatures. Recommended storage temperature below 100°F.
	UNSTABLE		HAZARDOUS DECOMPOSITION PRODUCTS None known.
HAZARDOUS POLYMERIZATION	MAY OCCUR	X	CONDITIONS TO AVOID
	WILL NOT OCCUR		N.A.
INCOMPATIBILITY	MATERIALS TO AVOID Strong oxidizing agents. Avoid direct contact with sodium hypochlorite or bleach and reducing agents.		

## SECTION 8 - EMERGENCY RESPONSE DATA

FIRE	EXTINGUISHING MEDIA For fires in area, use appropriate media. For example: Water spray, dry chemical, carbon dioxide, or alcohol foam.
	SPECIAL PROCEDURES Evacuate area of unprotected and unnecessary personnel.
	UNUSUAL HAZARDS Not Applicable.
FIRST AID MEASURES	INGESTION: Do not induce vomiting. If patient is conscious and can swallow, administer milk or water. SKIN: Remove contaminated clothes, then flood with water. EYES: Flood with lukewarm (not hot) water poured from a large glass 2 or 3 inches from eyes. Remove contacts. Have patient blink as much as possible while flooding the eyes. Continue for 15 minutes. ADMINISTER FIRST AID TREATMENT AS STATED ABOVE, THEN CALL 1-800-851-7145 Ext. 075 OR CONTACT A PHYSICIAN FOR FURTHER MEDICAL INSTRUCTIONS.
SPILLS	STEPS TO BE TAKEN Wear proper protective equipment including rubber boots. Stop leak if you can do so without risk. Dike or dam large spills. Ventilate area if needed. Soak up with sand or other non-combustible inert absorbent materials. Flush area with water and follow with normal clean-up procedures. Keep combustibles away! Be careful as spills are slippery.
WASTE DISPOSAL METHOD	Comply with all federal, state, and local regulations. Consult state and local authorities for restrictions on disposal of chemical waste. If approved, may be diluted and drained to a municipal sewer or waste treatment plant. Rinse empty container thoroughly with water before discarding. Please recycle empty container whenever possible.

THE DATA IN THIS MATERIAL SAFETY DATA SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND DOES NOT RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR PROCESS. THE DATA CONTAINED IS BELIEVED TO BE ACCURATE. HOWEVER, SINCE USE CONDITIONS VARY AND ARE OUTSIDE OUR CONTROL, THE MANUFACTURER MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, AND ASSUMES NO LIABILITY FOR FAILURE TO FOLLOW PRODUCT USE DIRECTIONS AND SAFETY PRECAUTIONS.

## MATERIAL SAFETY DATA SHEET

### I. IDENTIFICATION

**Name:** DRI All Purpose Lubricant -- Aerosol

**Type:** A formulated penetrating compound

**D.O.T. Shipping Name:** Consumer Commodity

**D.O.T. Hazard Class:** ORM-D

**D.O.T. ID No:** N/A

**D.O.T. Label:** None Required

### II. HAZARDOUS INGREDIENTS

<u>Material</u>	<u>Weight %</u>	<u>TLV</u>
Mineral Spirits (CAS #8052-41-3)	< 14%	100 ppm
Perchloroethylene (CAS #127-18-4)	< 58%	25 ppm
1,1,1-trichloroethane (CAS #71-55-6)	< 20%	350 ppm
Carbon Dioxide (CAS #124-38-9)	< 3%	5000 ppm
Corrosion Inhibitors (CAS #25619-56-1)	< 4%	5 mg/m ³ oil mist
Petroleum Oil (CAS #64742-88-4)	< 1%	5 mg/m ³

Short term exposure limit for 1,1,1-trichloroethane is 450 ppm.

Short term exposure limit for perchloroethylene is 200 ppm.

This product contains 1,1,1-trichloroethane and Perchloroethylene which are toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA).

### III. PHYSICAL DATA

**Boiling Point(F°):** 165-388°F

**Specific Gravity(Water=1):** (water = 1) 1.3

**Volatile By Weight(%):** 95%

**Weight Per Gallon(pounds):** N/A

**Solubility in Water:** NEGLIGIBLE

**pH:** N/A

**Appearance & Odor:** Clear, with a solvent odor.

### IV. FIRE & HAZARD DATA

**Flashpoint (Method Used):** No flame extension.

**Extinguishing Media:** Water fog, dry chemical or Carbon Dioxide.

**Special Fire Fighting Procedures:** Keep containers cool. Use shielding to protect personnel from venting, rupturing or bursting cans.

**Unusual Fire & Explosion Hazards:** Exposure to temperatures above 120°F. Vapors of 1,1,1-trichloroethane in confined or poorly ventilated areas can form flammable mixtures in air.

### V. HEALTH HAZARD DATA

**EFFECTS OF OVEREXPOSURE:** Prolonged exposure to vapors may result in dizziness, headache, or nausea. Repeated contact with this product may be irritating and cause anesthetic effects to the skin. Harmful or fatal if swallowed. Direct eye contact causes irritation.

**CHRONIC EFFECTS:** Overexposure to this material (or its components) has been suggested as a cause of liver abnormalities, kidney damage, lung damage, brain damage, and spleen damage in humans. The National Cancer Institute has concluded from the results of the bioassay that Perchloroethylene is a liver carcinogen when given orally to mice. The solvents listed have been reported to affect the central nervous system.

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** Liver disease and rhythm disorders of the heart and respiratory disorders.

### FIRST AID PROCEDURES:

**If Swallowed:** Seek medical attention immediately. Do not induce vomiting due to aspiration hazard.

**If Inhaled:** Remove person to fresh air. Seek medical attention promptly. If breathing has stopped, perform artificial respiration.

**NOTE TO PHYSICIAN:** Do not give stimulants. Epinephrine, or Ephedrine may adversely affect the heart with fatal results.



**If in Eyes:** Flush eyes immediately with plenty of cool water for at least 15 minutes. If irritation persists, seek medical attention. Contact lenses should not be worn when working with this product.  
**If on Skin:** Wash immediately with plenty of soap and water. Remove soaked clothing promptly. If irritation persists, contact a physician.

#### **VI. REACTIVITY DATA**

**Stability:** STABLE

**Conditions to avoid:** Exposure to 120°F

**Incompatibility(Materials to avoid):** Pure oxygen, strong caustics, strong oxidizers, and chemically active light metals such as Aluminum, Lithium and Sodium.

**Hazardous Decomposition Products:** Exposure to extreme temperatures may produce Carbon monoxide, Carbon dioxide, Hydrogen chloride, or Phosgene gases.

**HAZARDOUS POLYMERIZATION WILL NOT OCCUR**

#### **VII. SPILL OR LEAK PROCEDURES**

**Steps To Be Taken If Material Is Released Or Spilled:** Ventilate spill area. Absorb spill on State Oil Absorbent. Put into container. Dispose of as hazardous waste.

**Waste Disposal Method:** Do not incinerate or puncture cans. Give cans to a disposal service equipped to safely dispose of pressurized containers. The used liquid is a RCRA hazardous waste (No. F001).

**Follow All Federal, State and Local Regulations Regarding Waste Disposal.**

#### **VIII. SPECIAL PROTECTION INFORMATION**

**Eye protection and protective gloves are recommended any time you work with any concentrated industrial strength products.**

**Respiratory Protection:** Use self-contained breathing apparatus when using this product in any area without ventilation. In areas with vapor above TLV but still plenty of oxygen, use a NIOSH approved cartridge type respirator fitted with organic vapor cartridges.

**Ventilation:** Use ventilation to keep vapor concentration below TLV.

**Protective Gloves:** REQUIRED

**Eye Protection:** Splashproof safety goggles required

**Other Protective Equipment:** An eyewash station or source of clean water nearby in case of accidental eye splashing. Neoprene apron is optional.

#### **IX. SPECIAL PRECAUTIONS**

**Precautions To Be Taken In Handling And Storage:** Contents under pressure. Do not puncture or incinerate cans. Do not store cans where temperatures may exceed 120°F. Nonflammable. Harmful or fatal if swallowed. Do not store in direct sunlight. Do not use in poorly ventilated or confined spaces. Vapors are heavier than air and will collect in low areas such as pits, degreasers, storage tanks, and other confined areas.

**OTHER PRECAUTIONS:** This product contains solvents which may affect plastics and paints. Not for use on electronic computers or electronic memory systems. Be careful around painted surfaces. Always test in an inconspicuous area before using. Wipe off overspray immediately.

**HMIS/NFPA RATINGS:** Health 3 Flammability 2 Reactivity 0

**Read and follow all label directions and precautions before using the product. These products are intended for industrial and institutional use only.**

**NOT FOR HOUSEHOLD USE OR RESALE KEEP OUT OF THE REACH OF CHILDREN**  
While we believe that the data contained herein is factual and the opinion expressed are those of qualified experts, the data are not to be taken as a warranty or representation for which the company assumes legal responsibility. They are offered solely for your consideration, investigation, and verification. Any use of these data and information must be determined by the user to be in accordance with applicable Federal, State, and Local Laws and regulations.

**HEALTH AND SAFETY INFORMATION**

(216) 861-7114

OCTOBER 1991

MATERIAL SAFETY DATA SHEET

DURACHLOR STICKS

SECTION I - IDENTIFICATION

MANUFACTURER'S NAME..... Haviland Products Company
ADDRESS (STREET,CITY,STATE,ZIP) 421 Ann St., N.W., Grand Rapids, MI 49504
PHONE NUMBER..... (616) 361-6691
EMERGENCY PHONE NUMBER..... CHEMTRED (800) 424-9300
EFFECTIVE DATE..... 1/21/88
TRADE NAME..... DURACHLOR STICKS
CHEMICAL FAMILY..... Miscellaneous Blend

SECTION II - HAZARDOUS INGREDIENTS

Table with 4 columns: HAZARDOUS COMPONENTS, OSHA/FEL, ACGIH/TLV (Units), PROD. CAS #. Row 1: Chlorine, 1ppm, 1ppm, 87-90-1

SECTION III - PHYSICAL DATA

BOILING POINT..... No Information Available
FREEZING POINT ..... 235-230°C
VAPOR PRESSURE (mm Hg)..... No Information Available
VAPOR DENSITY (Air=1)..... No Information Available
SOLUBILITY IN H2O..... 1.2g/100g @ 25°C
APPEARANCE/ODOR..... White Crystalline Solid; Slight Chlorine Odor
SPECIFIC GRAVITY (H2O=1)..... No Information Available
PH..... 1% Solution: 3.0

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT..... Will Not Burn
LOWER EXPLOSIVE LIMIT (% by Volume) Not Applicable
UPPER EXPLOSIVE LIMIT (% by Volume) Not Applicable
EXTINGUISH MEDIA..... A thermal decomposition can be extinguished by flooding with copious quantities of water or by isolating the decomposing material and allowing it to be consumed.
SPECIAL FIRE FIGHTING PROCEDURES... Firefighters and others subjected to products of decomposition should wear full protective clothing and self contained breathing apparatus. Chlorine-containing gases with traces of phosgene can be liberated at temperatures in excess of 400°F.

MATERIAL SAFETY DATA SHEET

DURACHLOR STICKS

UNUSUAL FIRE HAZARD..... Small quantities of water react with product's chlorinating composition to form hazardous quantities of nitrogen trichloride which is violently explosive.

SECTION V - HEALTH HAZARD DATA

CARCINOGENICITY..... None  
NTP..... No  
IARC..... No  
OVER EXPOSURE EFFECTS..... Burns to skin and eyes  
PRIMARY ROUTE(S) OF ENTRY..... Skin Contact  
FIRST AID PROCEDURES..... In case of eye contact: Flush immediately with plenty of water for at least 15 minutes and get medical attention; for skin, wash thoroughly with soap and water; wash contaminated clothing before reuse. If inhaled: Remove to fresh air. If swallowed: Drink milk, water or raw egg whites. Get medical attention.  
EXPOSURE AGGRAVATED MEDICAL CONDITIONS None Currently Known

SECTION VI - REACTIVITY DATA

CHEMICAL STABILITY..... Stable  
CONDITIONS TO AVOID..... Contact with water.  
INCOMPATIBLE MATERIALS..... Water; oxidizable organic material; ammonia, urea or similar nitrogen-containing compounds; inorganic reducing compounds; calcium hypochlorite; alkalis.  
DECOMPOSITION PRODUCTS..... Chlorine-containing gases can be produced. Traces of phosgene can be liberated at high temperatures > 400°F.  
HAZARDOUS POLYMERIZATION..... Will Not Occur  
POLYMERIZATION AVOID..... Not Applicable

SECTION VII - SPILL OR LEAK PROCEDURE

FOR SPILL ..... Contain spill. sweep, scoop or vacuum up all spilled material, contaminated soil and other contaminated material and place in clean, dry containers for disposal. Complete cleanup on a dry basis.  
WASTE DISPOSAL METHOD..... If dry: Incinerate. Comply with all federal, state and local regulations.

SECTION VIII - SPECIAL PROTECTION

MATERIAL SAFETY DATA SHEET

DURACHLOR STICKS

=====

RESPIRATORY PROTECTION..... NIOSH approved full facepiece with airborne exposure limits are exceeded.

VENTILATION..... To maintain dusts below limits.

PROTECTIVE GLOVES..... Rubber or other impervious materials.

EYE PROTECTION..... Chemical splash proof goggles.

OTHER PROTECTIVE EQUIPMENT.... A safety shower and eye bath should be available. For operations where spills or splashing may occur, use an impervious body covering and boots.

HANDLING AND STORAGE..... Keep containers closed tightly. Store in dry place. Do not allow water to get into container. Keep containers off wet floors.

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SECTION IX - SPECIAL PRECAUTIONS

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HAZARD CLASS..... Oxidizer

DOT SHIPPING NAME..... Trichloro-s-triazinetriene, Mixture

UN NUMBER..... UN2468

REPORTABLE QUANTITY (RQ)..... Not Listed

=====

REFERENCES ZZ1HASTK

**XEROX**

**Material Safety Data Sheet**

**MSDS No:** B-0241  
**Date:** 5/27/87  
**Revision:** 4/2/02

**Manufacturer:**  
Xerox Corporation  
Rochester, NY 14644

**Telephone #(s):** *Safety Information: (800) 828-6571*  
*Health Emergency: (716) 422-2177*  
*Transportation Emergency (Chemtec): (800) 424 - 9300*

**Section I - Product Identification**

**Trade Names/Synonyms:** 5090/S, DocuTech 135/4135/4635/5135/5135 PP/  
5135 NP/5390/5690/6100/ 6135/ 6155/6180  
DocuPrint 96/115/ 155 EPS/180 LPS Developer  
**Part No.:** 5R161, 5R200*, 5R561*;  
XCI: 5R519*;  
RX: 5R90095;  
FX: 5R182

**Chemical Name:** None

**WHMIS Status:** This is not a WHMIS controlled product. *Cancelled

<u>Ingredients (% by wt.)</u>	<u>CAS No.</u>
Steel powder (90-100%)	7439-89-6
Styrene/butadiene copolymer (1-5%)	9003-55-8
Iron oxide (<1%)	1317-61-9
Carbon black (<1%)	1333-86-4

**Section II - Emergency and First Aid**

**Primary Route of Entry:**

Inhalation

**Eyes:**

Flush with water.

**Skin:**

Wash with soap and water.

**Inhalation:**

Remove from exposure.

**Ingestion:**

Dilute stomach contents with several glasses of water.

**Symptoms of Overexposure:**

Minimal respiratory tract irritation may occur as with exposure to large amounts of any non-toxic dust.

**Medical Conditions Generally Aggravated by Exposure:**

None when used as described by product literature.

**Additional Information:**

None

**Section III - Toxicology and Health Information**

*The toxicology of this developer has been evaluated by Xerox Corporation. Data presented in this section is based on the test results of the toner or similar reprographic toners. The major component is not included due to its toxicological inertness and large particle size.*

<b>Oral LD₅₀:</b>	>5 g/kg (rats)	<b>TLV:</b>	10 mg/m ³ (total dust)
<b>Dermal LD₅₀:</b>	>5 g/kg (rabbits)	<b>PEL:</b>	15 mg/m ³ (total dust)
<b>Inhalation LC₅₀:</b>	>5 mg/l (rats, 4 hr exposure)		5 mg/m ³ (respirable dust)
	>20 mg/l (calculated 1 hr exposure)	<b>STEL:</b>	N.E.
<b>Eye Irritation:</b>	Non-irritating (rabbits).	<b>Ceiling:</b>	N.E.
<b>Skin Irritation:</b>	Non-irritating (rabbits; human patch).	<b>XEL¹:</b>	2.5 mg/m ³ (total dust)
<b>Skin Sensitization:</b>	Non-sensitizing (guinea pigs; human patch).		0.4 mg/m ³ (respirable dust)
<b>Mutagenicity:</b>	No mutagenicity detected in Ames, PoI A+/A, CHO/CA, and CHO/HGPRT Assays.		
<b>Carcinogens:</b>	None known.		
<b>Aquatic LC₅₀:</b>	>1000 mg/l (fathead minnows; rainbow trout)		

**Additional Information:** The results obtained from a Xerox sponsored Chronic Toner Inhalation Study, demonstrated no lung change in rats for the lowest (1mg/m³) exposure level (i.e. the level most relevant to potential human exposure). A very slight degree of fibrosis was noted in 25% of the animals at the middle (4mg/m³) exposure level, while a slight degree of fibrosis was noted in all the animals at the highest (16mg/m³) exposure level. These findings are attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lungs for a prolonged period. This study was conducted using a special test toner to comply with EPA testing protocol. The test toner was ten times more respirable than commercially available Xerox toner, and would not be functionally suitable for Xerox equipment.

¹XEL-Xerox Exposure Limit

N.A. - Not Applicable N.E. -None Established N.D. -Not Determined

600E58030

**Section IV - Physical Data**

<b>Appearance/Odor:</b>	Black granular / slight	<b>Softening Range:</b>	N.A.
<b>Boiling Point:</b>	N.A.	<b>Melting Point:</b>	>780 °C
<b>Solubility in Water:</b>	Insoluble	<b>Specific Gravity (H₂O=1):</b>	~5
<b>Evaporation Rate:</b>	N.A.	<b>Vapor Pressure (mm Hg):</b>	N.A.
<b>Vapor Density (Air=1):</b>	N.A.	<b>pH:</b>	N.A.
<b>Volatile:</b>	N.A. % (Wt.) N.A. % (Vol.)		

**Section V - Fire and Explosion Data**

<b>Flash Point (Method Used):</b>	N.A.
<b>Flammable Limits:</b>	LEL: N.A., UEL: N.A.
<b>NFPA 704:</b>	Health - 0, Fire - 1, Reactivity - 0
<b>Extinguishing Media:</b>	Water, foam, dry chemical.
<b>Special Fire Fighting Procedures:</b>	Avoid inhalation of smoke. Wear protective clothing and self-contained breathing apparatus.
<b>Fire and Explosion Hazards:</b>	None

**Section VI -Reactivity Data**

<b>Stability:</b>	Stable
<b>Hazardous Polymerization:</b>	Will Not Occur
<b>Hazardous Decomposition Products:</b>	Products of combustion may be toxic. Avoid breathing smoke.
<b>Incompatibility (Materials to Avoid):</b>	None

**Section VII - Special Protection Information**

<b>Respiratory Protection:</b>	None required when used as intended in Xerox equipment.
<b>Eye Protection:</b>	None required when used as intended in Xerox equipment.
<b>Protective Gloves:</b>	None required when used as intended in Xerox equipment.
<b>Other:</b>	For use other than normal customer - operating procedures (such as in bulk toner processing facilities), goggles and respirators may be required.

**Section VIII - Special Precautions**

<b>Handling and Storage:</b>	None
<b>Conditions to Avoid:</b>	Avoid prolonged inhalation of excessive dust.

**Section IX- Spill, Leak, and Disposal Procedures**

<b>For Spills or Leakage:</b>	If spilled, sweep up or vacuum.
<b>Waste Disposal Method:</b>	This material is not a hazardous waste according to Federal Regulation 40 CFR 261. State and Local waste disposal requirements may be more restrictive. Please consult with the appropriate State and Local waste disposal authorities. Incinerate only in a closed container.

**Section X - Transportation Information**

<b>DOT Proper Shipping Name:</b>	N.A. (Not Regulated)	<b>ID Number:</b>	N.A.
<b>Hazard Classification:</b>	N.A.	<b>Packing Group:</b>	N.A.

XEROX

# Material Safety Data Sheet

MSDS No: P-04  
Date: 10/29/99  
Revision: 7/17/00

**Manufacturers:**  
Oakville Colour Toner Plant  
1333 N. Service Road East  
Oakville, Ontario, Canada L6J 5A8

**Telephone # (s):** *Safety Information:* (800) 828-6571  
*Health Emergency:* (716) 422-2177  
*Transportation Emergency(Chemtrec)* (800) 424-9300

Fuji Xerox Co.Ltd, 2-17-22 Akasaka, Minato-Ku,Tokyo, Japan

Dundalk Color Toner Plant, Xerox Technology Park, Dublin Road  
Dundalk, County Louth, Ireland

## Section I - Product Identification

**Trade Names /Synonyms:** DocuColor 12 / Document Centre Color Series 50  
DocuColor 2045 / 2060 Yellow Dry Ink  
**Part No:** WH: 6R948, 6R978,  
XE: 6R90283,6R90292  
**Chemical Name:** None  
**WHMIS:** This is not a WHMIS controlled product.

<u>Ingredients (% by wt.)</u>	<u>CAS No.</u>
<u>Toner (85-95%):</u>	
Polyester resin (80 - 90%)	122970-65-4
Indene/propenyltoluene copolymer (2-5%)	68131-99-7
C.I. Pigment Yellow 180 (5-12%)	77804-81-0
<u>Carrier (5-15%):</u>	
Mn-Mg-Sr Ferrite (>95%)	65997-18-4

## Section II - Emergency and First Aid

### Primary Route of Entry:

Inhalation

Eyes:

Flush with water.

Skin:

Wash with soap and water

Inhalation:

Remove from exposure.

Ingestion:

Dilute stomach contents with several glasses of water.

### Symptoms of Overexposure:

Minimal respiratory tract irritation may occur as with exposure to large amounts of any non-toxic dust.

### Medical Conditions Generally Aggravated by Exposure:

None when used as described by product literature.

### Additional Information:

See Sections V and VII.

## Section III - Toxicology and Health Information

*This material has been evaluated by Xerox Corporation. The toxicity data noted below is for toner only and based on test results of similar xerographic materials.*

**Oral LD₅₀:** >5.0 g/kg (rats) practically non-toxic.¹

**Dermal LD₅₀:** >5.0 g/kg (rabbits) practically non-toxic.¹

**Inhalation LC₅₀:** >4.1 mg/l (rats, 4 hr exposure) practically non-toxic¹.  
>20 mg/l (rats, calculated 1 hr exposure) non-poisonous, DOT-

**Eye Irritation:** Not an irritant¹

**Skin Sensitization:** Not a sensitizer¹

**Skin Irritation:** Not an irritant¹.

**Human Patch:** Non- irritating, non-sensitizing¹

**Mutagenicity:** No mutagenicity detected in Ames Assay

**Carcinogens:** None present

**Aquatic LC₅₀:** >500 mg/l (fathead minnows) non-toxic.¹

**TLV:** 10mg/m³ (total dust)

**PEL:** 15 mg/m³ (total dust)  
5 mg/m³ (respirable dust)

**STEL:** N.E.

**Ceiling:** N.E.

**XEL²:** 2.5 mg/m³ (total dust)  
0.4 mg/m³ (respirable dust)

**Additional Information:** The results obtained from a Xerox sponsored, Chronic Toner Inhalation Study, demonstrated no lung change in rats for the lowest (1mg/m³) exposure level (i.e. the level most relevant to potential human exposure). A very slight degree of fibrosis was noted in 25% of the animals at the middle (4 mg/m³) exposure level, while a slight degree of fibrosis was observed at the highest (16 mg/m³) exposure level. These findings are attributed to "lung overloading," a generic response to excessive amounts of any dust retained in the lungs for a prolonged period. This study was conducted using a special test toner to comply with EPA testing protocol. The test toner was ten times more respirable than commercially available Xerox toner, and would not be functionally suitable for Xerox equipment.

¹Based on toxicology data of similar materials and ingredients. ²XEL-Xerox Exposure Limit

N.A. - Not Applicable N.E. -None Established N.D. -Not Determined

XEROX

Trade Name: DocuColor 12/ Document Centre Color Series 50  
DocuColor 2045 / 2060 Yellow Dry Ink

Article No.: P-04

#### Section IV - Physical Data

Appearance/Odor:	Yellow powder/ faint odor	Softening Range:	N.D.
Boiling Point:	N.A.	Melting Point:	N.A.
Solubility in Water:	Negligible	Specific Gravity (H ₂ O=1):	~2
Evaporation Rate:	N.A.	Vapor Pressure (mm Hg):	N.A.
Vapor Density (Air=1):	N.A.	pH:	N.A.
Volatile:	N.A.% (Wgt) N.A. % (Vol.)		

#### Section V - Fire and Explosion Data

Flash Point (Method Used): N.A.  
Flammable Limits: LEL: N.A. UEL: N.A.  
NFPA 704: Health - 0, Fire-1, Reactivity -0  
Extinguishing Media: Water, foam, dry chemical, and carbon dioxide.  
Special Fire Fighting Procedures: Avoid inhalation of smoke. Wear protective clothing and self-contained breathing apparatus.  
Fire and Explosion Hazards: Toner is a combustible powder. Like most organic materials in powder form, it can form explosive mixtures when dispersed in air.

#### Section VI - Reactivity Data

Stability: Stable  
Hazardous Polymerization: Will Not Occur  
Hazardous Decomposition Products: Products of combustion may be toxic. Avoid breathing smoke.  
Incompatibility (Materials to Avoid): None known

#### Section VII - Special Protection Information

Respiratory Protection: None required when used as intended.  
Eye Protection: None required when used as intended.  
Protective Gloves: None required when used as intended.  
Other: For use other than normal customer - operating procedures (such as in bulk toner processing facilities), goggles and respirators may be required. For more information, contact Xerox.

#### Section VIII - Special Precautions

Handling and Storage: Store in cool and dry place. Use with adequate ventilation  
Conditions to Avoid: Avoid prolonged inhalation of excessive dust.

#### Section IX- Spill, Leak, and Disposal Procedures

For Spills or Leakage: If spilled, sweep up or vacuum.  
Waste Disposal Method: When disposed, this material is not a hazardous waste according to US Federal Regulation 40 CFR 261. However, State and Local requirements may be more restrictive. Therefore, consultation with the appropriate State and Local waste disposal authorities is advised.

#### Section X - Transportation Information

DOT Proper Shipping Name:	Not Regulated	ID Number:	N.A.
Hazard Classification:	N.A.	Packing Group:	N.A.



**XEROX**

**Material Safety Data Sheet**

**MSDS No:** B-0314  
**Date:** 2/16/99  
**Revision:** 03/22/00

**Manufacturer:** Xerox Corporation  
Rochester, NY 14644

**Telephone # (s):** *Safety Information:* (800) 828-6571  
*Health Emergency:* (716) 422-2177  
*Transportation Emergency (Chemtrec):* (800) 424-9300

**Section I - Product Identification**

**Trade Names/Synonyms:** DocuColor 12/Document Centre ColorSeries 50,  
DocuColor 2045/ 2060 Yellow Developer

**Part No.:** WH: 5R619,5R632  
XE: 5R90249

**Chemical Name:** None

**WHMIS Status:** This is not a WHMIS controlled product.

<u>Ingredients (% by wt.)</u>	<u>CAS No.</u>
<u>Carrier (&gt;93%)</u>	
Manganese/magnesium/strontium ferrite	65997-18-4
<u>Toner (&lt;7%)</u>	
Bisphenol A polyester resin (80 - 90%)	122970-65-4
C.I. Pigment Yellow 180 (5 -10%)	77804-81-0
Indene/propenyltoluene copolymer (3 - 6%)	68131-99-7

**Section II - Emergency and First Aid**

**Primary Route of Entry:**

Inhalation

**Eyes:**

Flush with water.

**Skin:**

Wash with soap and water.

**Inhalation:**

Remove from exposure.

**Ingestion:**

Dilute stomach contents with several glasses of water.

**Symptoms of Overexposure:**

Minimal respiratory tract irritation may occur as with exposure to large amounts of any non-toxic dust.

**Medical Conditions Generally Aggravated by Exposure:**

None when used as described by product literature.

**Additional Information:**

None

**Section III - Toxicology and Health Information**

*This material has been evaluated by Xerox Corporation. The following toxicity data is based on toner only.*

<b>Oral LD₅₀:</b>	Practically non-toxic.	<b>TLV:</b>	10 mg/m ³ (total dust)
<b>Dermal LD₅₀:</b>	Practically non-toxic.	<b>PEL:</b>	15 mg/m ³ (total dust)
<b>Inhalation LC₅₀:</b>	Practically non-toxic.		5 mg/m ³ (respirable dust)
<b>Eye Irritation:</b>	Not an irritant.	<b>STEL:</b>	N.E.
<b>Skin Sensitization:</b>	Not a sensitizer.	<b>Ceiling:</b>	N.E.
<b>Skin Irritation:</b>	Not an irritant.	<b>XEL¹:</b>	2.5 mg/m ³ (total dust)
<b>Human Patch:</b>	Non-irritating, non-sensitizing.		0.4 mg/m ³ (respirable dust)
<b>Mutagenicity:</b>	Ames negative		
<b>Carcinogens:</b>	None present		
<b>Aquatic LC₅₀:</b>	N.E.		

**Additional Information:**

The results obtained from a Xerox sponsored Chronic Toner Inhalation Study, demonstrated no lung change in rats for the lowest (1mg/m³) exposure level (i.e. the level most relevant to potential human exposure). A very slight degree of fibrosis was noted in 25% of the animals at the middle (4mg/m³) exposure level, while a slight degree of fibrosis was noted in all the animals at the highest (16mg/m³) exposure level. These findings are attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lungs for a prolonged period. This study was conducted using a special test toner to comply with EPA testing protocol. The test toner was ten times more respirable than commercially available Xerox toner, and would not be functionally suitable for Xerox equipment.

¹XEL-Xerox Exposure Limit

N.A. - Not Applicable N.E. -None Established N.D. -Not Determined

**XEROX**

Trade Name: DocuColor 12/Document Centre ColorSeries 50,  
DocuColor 2045/ 2060 Yellow Developer

MSDS No.: B-0314

**Section IV - Physical Data**

<b>Appearance/Odor:</b>	Yellow granular / faint odor	<b>Softening Range:</b>	N.D.
<b>Boiling Point:</b>	N.A.	<b>Melting Point:</b>	N.D.
<b>Solubility in Water:</b>	Negligible	<b>Specific Gravity (H₂O=1):</b>	N.D.
<b>Evaporation Rate:</b>	N.A.	<b>Vapor Pressure (mm Hg):</b>	N.A.
<b>Vapor Density (Air=1):</b>	N.A.	<b>pH:</b>	N.A.
<b>Volatile:</b>	N.A. % (Wt.) N.A. % (Vol.)		

**Section V - Fire and Explosion Data**

<b>Flash Point (Method Used):</b>	N.A.
<b>Flammable Limits:</b>	LEL: N.A. UEL: N.A.
<b>NFPA 704:</b>	Health - 0, Fire - 1, Reactivity - 0
<b>Extinguishing Media:</b>	Water, foam, dry chemical.
<b>Special Fire Fighting Procedures:</b>	Avoid inhalation of smoke. Wear protective clothing and self-contained breathing apparatus.
<b>Fire and Explosion Hazards:</b>	None

**Section VI - Reactivity Data**

<b>Stability:</b>	Stable
<b>Hazardous Polymerization:</b>	Will Not Occur
<b>Hazardous Decomposition Products:</b>	Products of combustion may be toxic. Avoid breathing smoke.
<b>Incompatibility (Materials to Avoid):</b>	None

**Section VII - Special Protection Information**

<b>Respiratory Protection:</b>	None required when used as intended in Xerox equipment.
<b>Eye Protection:</b>	None required when used as intended in Xerox equipment.
<b>Protective Gloves:</b>	None required when used as intended in Xerox equipment.
<b>Other:</b>	For use other than normal customer - operating procedures (such as in bulk toner processing facilities), goggles and respirators may be required. For more information, contact Xerox.

**Section VIII - Special Precautions**

<b>Handling and Storage:</b>	None
<b>Conditions to Avoid:</b>	Avoid prolonged inhalation of excessive dust.

**Section IX - Spill, Leak, and Disposal Procedures**

<b>For Spills or Leakage:</b>	If spilled, sweep up or vacuum.
<b>Waste Disposal Method:</b>	This material is not a hazardous waste according to Federal Regulation 40 CFR 261 when disposed. State and Local waste disposal requirements may however, be more restrictive. Consult with the appropriate State and Local authorities for specific information.

**Section X - Transportation Information**

<b>DOT Proper Shipping Name:</b>	N.A. (Not Regulated)	<b>ID Number:</b>	N.A.
<b>Hazard Classification:</b>	N.A.	<b>Packing Group:</b>	N.A.

**Manufacturers:**  
 Oakville Colour Toner Plant  
 1333 N. Service Road East  
 Oakville, Ontario, Canada L6J 5A8

**Telephone # (s):** *Safety Information:* (800) 828-6571  
*Health Emergency:* (716) 422-2177  
*Transportation Emergency(Chemtrec)* (800)-424-9300

Fuji Xerox Co.Ltd, 2-17-22 Akasaka, Minato-Ku,Tokyo, Japan

Dundalk Color Toner Plant, Xerox Technology Park, Dublin Road  
 Dundalk, County Louth, Ireland

**Section I - Product Identification**

**Trade Names/Synonyms:** DocuColor 12/ Document Centre Color Series 50, **Part No.:** WH:6R947, 6R977  
 DocuColor 2045 / 2060 Magenta Dry Ink **XE:** 6R90282, 6R90291

**Chemical Name:** None  
**WHMIS:** This is not a WHMIS controlled product.

<u>Ingredients (% by wt.)</u>	<u>CAS No.</u>
<b>Toner (70-85%):</b>	
Polyester resin (80- 90%)	122970-65-4
Indene/ propenyltoluene copolymer (4-7%)	68131-99-7
C.I. Pigment Red 122 (3-5%)	980-26-7
C.I. Pigment Red 57:1 (2-4%)	5281-04-9
<b>Carrier (15-30%):</b>	
Mn-Mg-Sr Ferrite (>95%)	65997-18-4

**Section II - Emergency and First Aid**

**Primary Route of Entry:**

Inhalation

**Eyes:**

Flush with water.

**Skin:**

Wash with soap and water

**Inhalation:**

Remove from exposure.

**Ingestion:**

Dilute stomach contents with several glasses of water.

**Symptoms of Overexposure:**

Minimal respiratory tract irritation may occur as with exposure to large amounts of any non-toxic dust.

**Medical Conditions Generally Aggravated by Exposure:**

None when used as described by product literature.

**Additional Information:**

See Sections V and VII.

**Section III - Toxicology and Health Information**

*This material has been evaluated by Xerox Corporation. The toxicity data noted below is for toner only and based on test results of similar xerographic materials.*

**Oral LD₅₀:** >5g/kg (rats) practically non-toxic.¹  
**Dermal LD₅₀:** >5g/kg (rabbits) practically non-toxic.¹  
**Inhalation LC₅₀:** >5 mg/l (rats, 4 hr exposure) practically non-toxic¹.  
 >20 mg/l (rats, calculated 1 hr exposure) non-poisonous, DOT.  
**Eye Irritation:** Not an irritant¹  
**Skin Sensitization:** Not a sensitizer.¹  
**Skin Irritation:** Not an irritant¹.  
**Human Patch:** Non- irritating, non-sensitizing¹  
**Mutagenicity:** No mutagenicity detected in Ames Assay  
**Carcinogens:** None present  
**Aquatic LC₅₀:** >500 mg/l (fathead minnows) non-toxic.¹

**TLV:** 10mg/m³ (total dust)  
**PEL:** 15 mg/m³ (total dust)  
 5 mg/m³ (respirable dust)  
**STEL:** N.E.  
**Ceiling:** N.E.  
**XEL²:** 2.5 mg/m³ (total dust)  
 0.4 mg/m³ (respirable dust)

**Additional Information:** The results obtained from a Xerox sponsored, Chronic Toner Inhalation Study, demonstrated no lung change in rats for the lowest (1mg/m³) exposure level (i.e. the level most relevant to potential human exposure). A very slight degree of fibrosis was noted in 25% of the animals at the middle (4 mg/m³) exposure level, while a slight degree of fibrosis was observed at the highest (16 mg/m³) exposure level. These findings are attributed to "lung overloading," a generic response to excessive amounts of any dust retained in the lungs for a prolonged period. This study was conducted using a special test toner to comply with EPA testing protocol. The test toner was ten times more respirable than commercially available Xerox toner, and would not be functionally suitable for Xerox equipment.

¹Based on toxicology data of similar materials and ingredients. ²XEL-Xerox Exposure Limit  
 N.A. - Not Applicable N.E. -None Established N.D. -Not Determined

**XEROX**

**Trade Name:** DocuColor 12/ Document Centre Color Series 50  
DocuColor 2045/2060 Magenta Dry Ink

**Article No.:** P-02

**Section IV - Physical Data**

<b>Appearance/Odor:</b>	Magenta powder/ faint odor	<b>Softening Range:</b>	N.D.
<b>Boiling Point:</b>	N.A.	<b>Melting Point:</b>	N.A.
<b>Solubility in Water:</b>	Negligible	<b>Specific Gravity (H₂O=1):</b>	~2
<b>Evaporation Rate:</b>	N.A.	<b>Vapor Pressure (mm Hg):</b>	N.A.
<b>Vapor Density (Air=1):</b>	N.A.	<b>pH:</b>	N.A.
<b>Volatile:</b>	N.A.% (Wgt) N.A. % (Vol.)		

**Section V - Fire and Explosion Data**

**Flash Point (Method Used):** N.A.  
**Flammable Limits:** LEL: N.A. UEL: N.A.  
**NFPA 704:** Health - 0, Fire-1, Reactivity -0  
**Extinguishing Media:** Water, foam, dry chemical, and carbon dioxide.  
**Special Fire Fighting Procedures:** Avoid inhalation of smoke. Wear protective clothing and self-contained breathing apparatus.  
**Fire and Explosion Hazards:** Toner is a combustible powder Like most organic materials in powder form, it can form explosive mixtures when dispersed in air.

**Section VI -Reactivity Data**

**Stability:** Stable  
**Hazardous Polymerization:** Will Not Occur  
**Hazardous Decomposition Products:** Products of combustion may be toxic. Avoid breathing smoke.  
**Incompatibility (Materials to Avoid):** None known

**Section VII - Special Protection Information**

**Respiratory Protection:** None required when used as intended.  
**Eye Protection:** None required when used as intended.  
**Protective Gloves:** None required when used as intended.  
**Other:** For use other than normal customer - operating procedures (such as in bulk toner processing facilities), goggles and respirators may be required. For more information, contact Xerox.

**Section VIII - Special Precautions**

**Handling and Storage:** Store in cool and dry place. Use with adequate ventilation  
**Conditions to Avoid:** Avoid prolonged inhalation of excessive dust.

**Section IX- Spill, Leak, and Disposal Procedures**

**For Spills or Leakage:** If spilled, sweep up or vacuum.  
**Waste Disposal Method:** When disposed, this material is not a hazardous waste according to US Federal Regulation 40 CFR 261. However, State and Local requirements may be more restrictive. Therefore, consultation with the appropriate State and Local waste disposal authorities is advised.

**Section X - Transportation Information**

<b>DOT Proper Shipping Name:</b>	Not Regulated	<b>ID Number:</b>	N.A.
<b>Hazard Classification:</b>	N.A.	<b>Packing Group:</b>	N.A.

**XEROX**

**Material Safety Data Sheet**

**MSDS No:** B-0313  
**Date:** 2/16/99  
**Revision:** 12/15/99

**Manufacturer:** Xerox Corporation  
Rochester, NY 14644

**Telephone # (s):** *Safety Information: (800) 828-6571*  
*Health Emergency: (716) 422-2177*  
*Transportation Emergency (Chemtrec): (800) 424-9300*

**Section I - Product Identification**

**Trade Names/Synonyms:** DocuColor 12/Document Centre ColorSeries 50,  
DocuColor 2045/ 2060 Magenta Developer

**Part No.:** WH: 5R618, 5R631  
XE: 5R90248

**Chemical Name:** None

**WHMIS Status:** This is not a WHMIS controlled product.

<u>Ingredients (% by wt.)</u>	<u>CAS No.</u>
<u>Carrier (&gt;93%)</u>	
Manganese/magnesium/strontium ferrite	65997-18-4
<u>Toner (&lt;7%)</u>	
Bisphenol A polyester resin (80 - 90%)	122970-65-4
C.I. Pigment Red 122 (3 - 5%)	980-26-7
C.I. Pigment Red 57:1 (2 - 3%)	5281-04-9

**Section II - Emergency and First Aid**

**Primary Route of Entry:**

Inhalation

**Eyes:**

Flush with water.

**Skin:**

Wash with soap and water.

**Inhalation:**

Remove from exposure.

**Ingestion:**

Dilute stomach contents with several glasses of water.

**Symptoms of Overexposure:**

Minimal respiratory tract irritation may occur as with exposure to large amounts of any non-toxic dust.

**Medical Conditions Generally Aggravated by Exposure:**

None when used as described by product literature.

**Additional Information:**

None

**Section III - Toxicology and Health Information**

*This material has been evaluated by Xerox Corporation. The following toxicity data is based on toner only.*

<b>Oral LD₅₀:</b>	Practically non-toxic.	<b>TLV:</b>	10 mg/m ³ (total dust)
<b>Dermal LD₅₀:</b>	Practically non-toxic.	<b>PEL:</b>	15 mg/m ³ (total dust)
<b>Inhalation LC₅₀:</b>	Practically non-toxic.		5 mg/m ³ (respirable dust)
<b>Eye Irritation:</b>	Not an irritant.	<b>STEL:</b>	N.E.
<b>Skin Sensitization:</b>	Not a sensitizer.	<b>Ceiling:</b>	N.E.
<b>Skin Irritation:</b>	Not an irritant.	<b>XEL¹:</b>	2.5 mg/m ³ (total dust)
<b>Human Patch:</b>	Non-irritating, non-sensitizing.		0.4 mg/m ³ (respirable dust)
<b>Mutagenicity:</b>	Ames negative		
<b>Carcinogens:</b>	None present		
<b>Aquatic LC₅₀:</b>	N.E.		

**Additional Information:**

The results obtained from a Xerox sponsored Chronic Toner Inhalation Study, demonstrated no lung change in rats for the lowest (1mg/m³) exposure level (i.e. the level most relevant to potential human exposure). A very slight degree of fibrosis was noted in 25% of the animals at the middle (4mg/m³) exposure level, while a slight degree of fibrosis was noted in all the animals at the highest (16mg/m³) exposure level. These findings are attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lungs for a prolonged period. This study was conducted using a special test toner to comply with EPA testing protocol. The test toner was ten times more respirable than commercially available Xerox toner, and would not be functionally suitable for Xerox equipment.

¹XEL-Xerox Exposure Limit

N.A. - Not Applicable N.E. -None Established N.D. -Not Determined

602E40240

**Section IV - Physical Data**

<b>Appearance/Odor:</b>	Red granular / faint odor	<b>Softening Range:</b>	N.D.
<b>Boiling Point:</b>	N.A.	<b>Melting Point:</b>	N.D.
<b>Solubility in Water:</b>	Negligible	<b>Specific Gravity (H₂O=1):</b>	N.D.
<b>Evaporation Rate:</b>	N.A.	<b>Vapor Pressure (mm Hg):</b>	N.A.
<b>Vapor Density (Air=1):</b>	N.A.	<b>pH:</b>	N.A.
<b>Volatile:</b>	N.A. % (Wt.) N.A. % (Vol.)		

**Section V - Fire and Explosion Data**

<b>Flash Point (Method Used):</b>	N.A.		
<b>Flammable Limits:</b>	LEL: N.A.	UEL: N.A.	
<b>NFPA 704:</b>	Health - 0, Fire - 1, Reactivity - 0		
<b>Extinguishing Media:</b>	Water, foam, dry chemical.		
<b>Special Fire Fighting Procedures:</b>	Avoid inhalation of smoke. Wear protective clothing and self-contained breathing apparatus.		
<b>Fire and Explosion Hazards:</b>	None		

**Section VI - Reactivity Data**

<b>Stability:</b>	Stable
<b>Hazardous Polymerization:</b>	Will Not Occur
<b>Hazardous Decomposition Products:</b>	Products of combustion may be toxic. Avoid breathing smoke.
<b>Incompatibility (Materials to Avoid):</b>	None

**Section VII - Special Protection Information**

<b>Respiratory Protection:</b>	None required when used as intended in Xerox equipment.
<b>Eye Protection:</b>	None required when used as intended in Xerox equipment.
<b>Protective Gloves:</b>	None required when used as intended in Xerox equipment.
<b>Other:</b>	For use other than normal customer - operating procedures (such as in bulk toner processing facilities), goggles and respirators may be required. For more information, contact Xerox.

**Section VIII - Special Precautions**

<b>Handling and Storage:</b>	None
<b>Conditions to Avoid:</b>	Avoid prolonged inhalation of excessive dust.

**Section IX - Spill, Leak, and Disposal Procedures**

<b>For Spills or Leakage:</b>	If spilled, sweep up or vacuum.
<b>Waste Disposal Method:</b>	This material is not a hazardous waste according to Federal Regulation 40 CFR 261 when disposed. State and Local waste disposal requirements may however, be more restrictive. Consult with the appropriate State and Local authorities for specific information.

**Section X - Transportation Information**

<b>DOT Proper Shipping Name:</b>	N.A. (Not Regulated)	<b>ID Number:</b>	N.A.
<b>Hazard Classification:</b>	N.A.	<b>Packing Group:</b>	N.A.

XEROX

# Material Safety Data Sheet

Article No: P-03

Date: 10/29/99

Revision: 7/17/00

**Manufacturers:**  
Oakville Colour Toner Plant  
1333 N. Service Road East  
Oakville, Ontario, Canada L6J 5A8

**Telephone # (s):** *Safety Information:* (800) 828-6571  
*Health Emergency:* (716) 422-2177  
*Transportation Emergency (Chemtrec)* (800) 424-9300

Fuji Xerox Co.Ltd, 2-17-22 Akasaka, Minato-Ku, Tokyo, Japan

Dundalk Color Toner Plant, Xerox Technology Park, Dublin Road  
Dundalk, County Louth, Ireland

## Section I - Product Identification

**Trade Names/Synonyms:** DocuColor 12/ Document Centre Color Series 50  
DocuColor 2045 / 2060 Cyan Dry Ink

**Part No.:** WH: 6R946, 6R976,  
XE: 6R90281, 6R90290

**Chemical Name:** None

**WHMIS:** This is not a WHMIS controlled product.

<u>Ingredients (% by wt.)</u>	<u>CAS No.</u>
<u>Toner (70-85%):</u>	
Polyester resin (80-90%)	122970-65-4
Indene/propenyltoluene copolymer (4-7%)	68131-99-7
C.I. Blue Pigment: 15:3 (3-5%)	147-14-8
<u>Carrier (15-30%):</u>	
Mn-Mg-Sr Ferrite (>95%)	65997-18-4

## Section II - Emergency and First Aid

### Primary Route of Entry:

Inhalation

### Eyes:

Flush with water.

### Skin:

Wash with soap and water

### Inhalation:

Remove from exposure.

### Ingestion:

Dilute stomach contents with several glasses of water.

### Symptoms of Overexposure:

Minimal respiratory tract irritation may occur as with exposure to large amounts of any non-toxic dust.

### Medical Conditions Generally Aggravated by Exposure:

None when used as described by product literature.

### Additional Information:

See Sections V and VII.

## Section III - Toxicology and Health Information

*This material has been evaluated by Xerox Corporation. The toxicity data noted below is for toner only and based on test results of similar xerographic materials.*

**Oral LD₅₀:** >5g/kg (rats) practically non-toxic.¹

**Dermal LD₅₀:** >5g/kg (rabbits) practically non-toxic.¹

**Inhalation LC₅₀:** >5mg/l (rats, 4 hr exposure) practically non-toxic.¹  
>20 mg/l (rats, calculated 1 hr exposure) non-poisonous, DOT.

**Eye Irritation:** Not an irritant¹

**Skin Sensitization:** Not a sensitizer¹

**Skin Irritation:** Not an irritant¹.

**Human Patch:** Non-irritating, non-sensitizing¹

**Mutagenicity:** No mutagenicity detected in Ames Assay

**Carcinogens:** None present

**Aquatic LC₅₀:** >500 mg/l (fathead minnows) non-toxic.¹

**TLV:** 10mg/m³ (total dust)

**PEL:** 15 mg/m³ (total dust)  
5 mg/m³ (respirable dust)

**STEL:** N.E.

**Ceiling:** N.E.

**XEL²:** 2.5 mg/m³ (total dust)  
0.4 mg/m³ (respirable dust)

**Additional Information:** The results obtained from a Xerox sponsored, Chronic Toner Inhalation Study, demonstrated no lung change in rats for the lowest (1mg/m³) exposure level (i.e. the level most relevant to potential human exposure). A very slight degree of fibrosis was noted in 25% of the animals at the middle (4 mg/m³) exposure level, while a slight degree of fibrosis was observed at the highest (16 mg/m³) exposure level. These findings are attributed to "lung overloading," a generic response to excessive amounts of any dust retained in the lungs for a prolonged period. This study was conducted using a special test toner to comply with EPA testing protocol. The test toner was ten times more respirable than commercially available Xerox toner, and would not be functionally suitable for Xerox equipment.

¹Based on toxicology data of similar materials and ingredients. ²XEL-Xerox Exposure Limit  
N.A. - Not Applicable N.E. -None Established N.D. -Not Determined

**Section IV - Physical Data**

<b>Appearance/Odor:</b>	Cyan powder/ faint odor	<b>Softening Range:</b>	N.D.
<b>Boiling Point:</b>	N.A.	<b>Melting Point:</b>	N.A.
<b>Solubility in Water:</b>	Negligible	<b>Specific Gravity (H₂O=1):</b>	~2
<b>Evaporation Rate:</b>	N.A.	<b>Vapor Pressure (mm Hg):</b>	N.A.
<b>Vapor Density (Air=1):</b>	N.A.	<b>pH:</b>	N.A.
<b>Volatile:</b>	N.A.% (Wgt) N.A. % (Vol.)		

**Section V - Fire and Explosion Data**

<b>Flash Point (Method Used):</b>	N.A.
<b>Flammable Limits:</b>	LEL: N.A. UEL: N.A.
<b>NFPA 704:</b>	Health - 0, Fire-1, Reactivity -0
<b>Extinguishing Media:</b>	Water, foam, dry chemical, and carbon dioxide.
<b>Special Fire Fighting Procedures:</b>	Avoid inhalation of smoke. Wear protective clothing and self-contained breathing apparatus.
<b>Fire and Explosion Hazards:</b>	Toner is a combustible powder. Like most organic materials in powder form, it can form explosive mixtures when dispersed in air.

**Section VI -Reactivity Data**

<b>Stability:</b>	Stable
<b>Hazardous Polymerization:</b>	Will Not Occur
<b>Hazardous Decomposition Products:</b>	Products of combustion may be toxic. Avoid breathing smoke.
<b>Incompatibility (Materials to Avoid):</b>	None known

**Section VII - Special Protection Information**

<b>Respiratory Protection:</b>	None required when used as intended.
<b>Eye Protection:</b>	None required when used as intended.
<b>Protective Gloves:</b>	None required when used as intended.
<b>Other:</b>	For use other than normal customer - operating procedures (such as in bulk toner processing facilities), goggles and respirators may be required. For more information, contact Xerox.

**Section VIII - Special Precautions**

<b>Handling and Storage:</b>	Store in cool and dry place. Use with adequate ventilation
<b>Conditions to Avoid:</b>	Avoid prolonged inhalation of excessive dust.

**Section IX- Spill, Leak, and Disposal Procedures**

<b>For Spills or Leakage:</b>	If spilled, sweep up or vacuum.
<b>Waste Disposal Method:</b>	When disposed, this material is not a hazardous waste according to US Federal Regulation 40 CFR 261. However, State and Local requirements may be more restrictive. Therefore, consultation with the appropriate State and Local waste disposal authorities is advised.

**Section X - Transportation Information**

<b>DOT Proper Shipping Name:</b>	Not Regulated	<b>ID Number:</b>	N.A.
<b>Hazard Classification:</b>	N.A.	<b>Packing Group:</b>	N.A.



**XEROX**

**Material Safety Data Sheet**

**MSDS No:** B-0312  
**Date:** 2/16/99  
**Revision:** 12/15/99

**Manufacturer:** Xerox Corporation  
Rochester, NY 14644

**Telephone # (s):** *Safety Information:* (800) 828-6571  
*Health Emergency:* (716) 422-2177  
*Transportation Emergency (Chemtrec):* (800) 424-9300

**Section I - Product Identification**

**Trade Names/Synonyms:** DocuColor 12/Document Centre ColorSeries 50,  
DocuColor 2045/ 2060 Cyan Developer

**Part No.:** WH: 5R617,5R630  
XE: 5R90247

**Chemical Name:** None

**WHMIS Status:** This is not a WHMIS controlled product.

<u>Ingredients (% by wt.)</u>	<u>CAS No.</u>
<u>Carrier (&gt;93%)</u>	
Manganese/magnesium/strontium ferrite	65997-18-4
<u>Toner (&lt;7%)</u>	
Bisphenol A polyester resin (80 - 90%)	122970-65-4
C.I. Pigment Blue 15:3 (3 - 5%)	147-14-8
Indene/propenyltoluene copolymer (4 - 7%)	68131-99-7

**Section II - Emergency and First Aid**

**Primary Route of Entry:**

Inhalation

**Eyes:**

Flush with water.

**Skin:**

Wash with soap and water.

**Inhalation:**

Remove from exposure.

**Ingestion:**

Dilute stomach contents with several glasses of water.

**Symptoms of Overexposure:**

Minimal respiratory tract irritation may occur as with exposure to large amounts of any non-toxic dust.

**Medical Conditions Generally Aggravated by Exposure:**

None when used as described by product literature.

**Additional Information:**

None

**Section III - Toxicology and Health Information**

*This material has been evaluated by Xerox Corporation. The following toxicity data is based on toner only.*

<b>Oral LD₅₀:</b>	Practically non-toxic.	<b>TLV:</b>	10 mg/m ³ (total dust)
<b>Dermal LD₅₀:</b>	Practically non-toxic.	<b>PEL:</b>	15 mg/m ³ (total dust) 5 mg/m ³ (respirable dust)
<b>Inhalation LC₅₀:</b>	Practically non-toxic.	<b>STEL:</b>	N.E.
<b>Eye Irritation:</b>	Not an irritant.	<b>Ceiling:</b>	N.E.
<b>Skin Sensitization:</b>	Not a sensitizer.	<b>XEL¹:</b>	2.5 mg/m ³ (total dust) 0.4 mg/m ³ (respirable dust)
<b>Skin Irritation:</b>	Not an irritant.		
<b>Human Patch:</b>	Non-irritating, non-sensitizing.		
<b>Mutagenicity:</b>	Ames negative		
<b>Carcinogens:</b>	None present		
<b>Aquatic LC₅₀:</b>	N.E.		

**Additional Information:**

The results obtained from a Xerox sponsored Chronic Toner Inhalation Study, demonstrated no lung change in rats for the lowest (1mg/m³) exposure level (i.e. the level most relevant to potential human exposure). A very slight degree of fibrosis was noted in 25% of the animals at the middle (4mg/m³) exposure level, while a slight degree of fibrosis was noted in all the animals at the highest (16mg/m³) exposure level. These findings are attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lungs for a prolonged period. This study was conducted using a special test toner to comply with EPA testing protocol. The test toner was ten times more respirable than commercially available Xerox toner, and would not be functionally suitable for Xerox equipment.

¹XEL-Xerox Exposure Limit

N.A. - Not Applicable N.E. -None Established N.D. -Not Determined

**XEROX**

**Trade Name:** DocuColor 12/Document Centre ColorSeries 50,  
DocuColor 2045/ 2060 Cyan Developer

**MSDS No.:** B-0312

**Section IV - Physical Data**

<b>Appearance/Odor:</b>	Blue granular / faint odor	<b>Softening Range:</b>	N.D.
<b>Boiling Point:</b>	N.A.	<b>Melting Point:</b>	N.D.
<b>Solubility in Water:</b>	Negligible	<b>Specific Gravity (H₂O=1):</b>	N.D.
<b>Evaporation Rate:</b>	N.A.	<b>Vapor Pressure (mm Hg):</b>	N.A.
<b>Vapor Density (Air=1):</b>	N.A.	<b>pH:</b>	N.A.
<b>Volatile:</b>	N.A. % (Wt.) N.A. % (Vol.)		

**Section V - Fire and Explosion Data**

<b>Flash Point (Method Used):</b>	N.A.
<b>Flammable Limits:</b>	LEL: N.A. UEL: N.A.
<b>NFPA 704:</b>	Health - 0, Fire - 1, Reactivity - 0
<b>Extinguishing Media:</b>	Water, foam, dry chemical.
<b>Special Fire Fighting Procedures:</b>	Avoid inhalation of smoke. Wear protective clothing and self-contained breathing apparatus.
<b>Fire and Explosion Hazards:</b>	None

**Section VI -Reactivity Data**

<b>Stability:</b>	Stable
<b>Hazardous Polymerization:</b>	Will Not Occur
<b>Hazardous Decomposition Products:</b>	Products of combustion may be toxic. Avoid breathing smoke.
<b>Incompatibility (Materials to Avoid):</b>	None

**Section VII - Special Protection Information**

<b>Respiratory Protection:</b>	None required when used as intended in Xerox equipment.
<b>Eye Protection:</b>	None required when used as intended in Xerox equipment.
<b>Protective Gloves:</b>	None required when used as intended in Xerox equipment.
<b>Other:</b>	For use other than normal customer - operating procedures (such as in bulk toner processing facilities), goggles and respirators may be required. For more information, contact Xerox.

**Section VIII - Special Precautions**

<b>Handling and Storage:</b>	None
<b>Conditions to Avoid:</b>	Avoid prolonged inhalation of excessive dust.

**Section IX- Spill, Leak, and Disposal Procedures**

<b>For Spills or Leakage:</b>	If spilled, sweep up or vacuum.
<b>Waste Disposal Method:</b>	This material is not a hazardous waste according to Federal Regulation 40 CFR 261 when disposed. State and Local waste disposal requirements may however, be more restrictive. Consult with the appropriate State and Local authorities for specific information.

**Section X - Transportation Information**

<b>DOT Proper Shipping Name:</b>	N.A. (Not Regulated)	<b>ID Number:</b>	N.A.
<b>Hazard Classification:</b>	N.A.	<b>Packing Group:</b>	N.A.

XEROX

Material Safety Data Sheet

MSDS No: A-0058

Date: 5/27/89

Revision: 3/7/02

Manufacturer: Xerox Corporation Rochester, NY 14644

Telephone #(s): Safety Information: (800) 828-6571 Health Emergency: (716) 422-2177 Transportation Emergency (Chemtrec): (800) 424-9300

Section I - Product Identification

Trade Names/Synonyms: 5090/S, DocuTech 135/4135/4635/5135/5135 PP/5135 NP/ 5390/5690/6100/ 6135/ 6155/ 6180/ DocuPrint 96 /115/ 155 EPS/180 LPS Black Dry Ink

Part No.: WH: 6R206; XCI: 6R516*; RX: 6R90100; FX: 6R272 502S66183

Chemical Name: None

*Cancelled

WHMIS Status: This is not a WHMIS controlled product

Ingredients (% by wt.)

Styrene/butadiene copolymer (75-85%) Ferric oxide (15-20%) Carbon black (<5%)

CAS No.

9003-55-8 1317-61-9 1333-86-4

Section II - Emergency and First Aid

Eyes: Flush with water. Skin: Wash with soap and water. Inhalation: Remove from exposure. Ingestion: Dilute stomach contents with several glasses of water.

Primary Route of Entry: Inhalation Symptoms of Overexposure: Minimal respiratory tract irritation may occur as with exposure to large amounts of any non-toxic dust. Medical Conditions Generally Aggravated by Exposure: None when used as described by product literature. Additional Information: None

Section III - Toxicology and Health Information

The toxicology of this toner has been evaluated by Xerox Corporation. Data presented in this section is based on the test results of the toner or similar reprographic toners.

Oral LD50: >5 g/kg (rats) Dermal LD50: >5 g/kg (rabbits) Inhalation LC50: >5 mg/l (rats, 4 hr exposure) >20 mg/l (calculated 1 hr exposure) Eye Irritation: Non-irritating (rabbits) Skin Irritation: Non-irritating (rabbits, human patch) Skin Sensitization: Non-sensitizing (guinea pigs; human patch) Mutagenicity: No mutagenicity detected in Ames, Pol A+/A-, CHO/CA, and CHO/HGPRT. Carcinogens: None known Aquatic LC50: >1000 mg/l (fathead minnows; rainbow trout) TLV: 10 mg/m3 (total dust) PEL: 15 mg/m3 (total dust) 5 mg/m3 (respirable dust) STEL: N.E. Ceiling: N.E. XEL1: 2.5 mg/m3 (total dust) 0.4 mg/m3 (respirable dust)

Additional Information: The results obtained from a Xerox sponsored Chronic Toner Inhalation Study, demonstrated no lung change in rats for the lowest (1mg/m3) exposure level (i.e. the level most relevant to potential human exposure). A very slight degree of fibrosis was noted in 25% of the animals at the middle (4mg/m3) exposure level, while a slight degree of fibrosis was noted in all the animals at the highest (16 mg/m3) exposure level. These findings are attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lungs for a prolonged period. This study was conducted using a special test toner to comply with EPA testing protocol. The test toner was ten times more respirable than commercially available Xerox toner, and would not be functionally suitable for Xerox equipment.

1XEL-Xerox Exposure Limit

N.A. - Not Applicable N.E. -None Established N.D. -Not Determined

**Section IV - Physical Data**

Appearance/Odor:	Black powder /slight	Softening Range:	110-140°F (43-60°C)
Boiling Point:	N.A.	Melting Point:	N.A.
Solubility in Water:	Insoluble	Specific Gravity (H ₂ O=1):	~1
Evaporation Rate:	N.A.	Vapor Pressure (mm Hg):	N.A.
Vapor Density (Air=1):	N.A.	pH:	N.A.
Volatile:	N.A. % (Wt.) N.A. % (Vol.)		

**Section V - Fire and Explosion Data**

Flash Point (Method Used): N.A.  
Flammable Limits: LEL: N.A., UEL: N.A.  
NFPA 704: Health - 0, Fire - 1, Reactivity - 0  
Extinguishing Media: Water, dry chemical, carbon dioxide or foam.  
Special Fire Fighting Procedures: Avoid inhalation of smoke. Wear protective clothing and self-contained breathing apparatus.  
Fire and Explosion Hazards: Toner is a combustible powder. Like most organic materials in powder form, it can form explosive mixtures when dispersed in air.

**Section VI - Reactivity Data**

Stability: Stable  
Hazardous Polymerization: Will Not Occur  
Hazardous Decomposition Products: Products of combustion may be toxic. Avoid breathing smoke.  
Incompatibility (Materials to Avoid): None known

**Section VII - Special Protection Information**

Respiratory Protection: None required when used as intended in Xerox equipment.  
Eye Protection: None required when used as intended in Xerox equipment.  
Protective Gloves: None required when used as intended in Xerox equipment.  
Other: For use other than normal customer - operating procedures (such as in bulk toner processing facilities), goggles and respirators may be required.

**Section VIII - Special Precautions**

Handling and Storage: None  
Conditions to Avoid: Avoid prolonged inhalation of excessive dust.

**Section IX- Spill, Leak, and Disposal Procedures**

For Spills or Leakage: Sweep up or vacuum spilled toner and carefully transfer into sealable waste container. Sweep slowly to minimize generation of dust during clean-up. If a vacuum is used, the motor must be rated as dust tight. A conductive hose bonded to the machine should be used to reduce static buildup (See Section V). Residue can be removed with soap and cold water. Garments may be washed or dry cleaned, after removal of loose toner.

Waste Disposal Method: This material is not a hazardous waste according to Federal Regulation 40 CFR 261 when disposed. State and Local waste disposal requirements however, may be more restrictive. Consult with the appropriate State and Local authorities for specific information. Incinerate only in a closed container.

**Section X - Transportation Information**

DOT Proper Shipping Name: N.A. (Not Regulated) ID Number: N.A.  
Hazard Classification: N.A. Packing Group: N.A.

600E54470

**XEROX**

**Material Safety Data Sheet**

**MSDS No:** B-0311  
**Date:** 2/16/99  
**Revision:** 12/15/99

**Manufacturer:** Xerox Corporation  
Rochester, NY 14644

**Telephone # (s):** *Safety Information: (800) 828-6571*  
*Health Emergency: (716) 422-2177*  
*Transportation Emergency (Chemtrec): (800) 424-9300*

**Section I - Product Identification**

**Trade Names/Synonyms:** DocuColor 12/Document Centre ColorSeries 50  
DocuColor 2045/ 2060 Black Developer

**Part No.:** WH: 5R616, 5R629  
XE: 5R90246

**Chemical Name:** None

**WHMIS Status:** This is not a WHMIS controlled product.

**Ingredients (% by wt.)**

**CAS No.**

Carrier (>93%)

Manganese/magnesium/strontium ferrite

65997-18-4

Toner (<7%)

Bisphenol A polyester resin (90 - 95%)

122970-65-4

Carbon black (3 - 6%)

1333-86-4

**Section II - Emergency and First Aid**

**Primary Route of Entry:**

Inhalation

**Eyes:**

Flush with water.

**Skin:**

Wash with soap and water.

**Inhalation:**

Remove from exposure.

**Ingestion:**

Dilute stomach contents with several glasses of water.

**Symptoms of Overexposure:**

Minimal respiratory tract irritation may occur as with exposure to large amounts of any non-toxic dust.

**Medical Conditions Generally Aggravated by Exposure:**

None when used as described by product literature.

**Additional Information:**

None

**Section III - Toxicology and Health Information**

*This material has been evaluated by Xerox Corporation. The following toxicity data is based on toner only.*

**Oral LD₅₀:** Practically non-toxic.

**Dermal LD₅₀:** Practically non-toxic.

**Inhalation LC₅₀:** Practically non-toxic.

**Eye Irritation:** Not an irritant.

**Skin Sensitization:** Not a sensitizer.

**Skin Irritation:** Not an irritant.

**Human Patch:** Non-irritating, non-sensitizing.

**Mutagenicity:** Ames negative

**Carcinogens:** None present

**Aquatic LC₅₀:** N.E.

**TLV:** 10 mg/m³ (total dust)

**PEL:** 15 mg/m³ (total dust)

5 mg/m³ (respirable dust)

**STEL:** N.E.

**Ceiling:** N.E.

**XEL¹:** 2.5 mg/m³ (total dust)

0.4 mg/m³ (respirable dust)

**Additional Information:**

The results obtained from a Xerox sponsored Chronic Toner Inhalation Study, demonstrated no lung change in rats for the lowest (1mg/m³) exposure level (i.e. the level most relevant to potential human exposure). A very slight degree of fibrosis was noted in 25% of the animals at the middle (4mg/m³) exposure level, while a slight degree of fibrosis was noted in all the animals at the highest (16mg/m³) exposure level. These findings are attributed to "lung overloading", a generic response to excessive amounts of any dust retained in the lungs for a prolonged period. This study was conducted using a special test toner to comply with EPA testing protocol. The test toner was ten times more respirable than commercially available Xerox toner, and would not be functionally suitable for Xerox equipment.

¹XEL-Xerox Exposure Limit

N.A. - Not Applicable N.E. -None Established N.D. -Not Determined

**Section IV - Physical Data**

<b>Appearance/Odor:</b>	Black granular / faint odor	<b>Softening Range:</b>	N.D.
<b>Boiling Point:</b>	N.A.	<b>Melting Point:</b>	N.D.
<b>Solubility in Water:</b>	Negligible	<b>Specific Gravity (H₂O=1):</b>	N.D.
<b>Evaporation Rate:</b>	N.A.	<b>Vapor Pressure (mm Hg):</b>	N.A.
<b>Vapor Density (Air=1):</b>	N.A.	<b>pH:</b>	N.A.
<b>Volatile:</b>	N.A. % (Wt.) N.A. % (Vol.)		

**Section V - Fire and Explosion Data**

<b>Flash Point (Method Used):</b>	N.A.
<b>Flammable Limits:</b>	LEL: N.A. UEL: N.A.
<b>NFPA 704:</b>	Health - 0, Fire - 1, Reactivity - 0
<b>Extinguishing Media:</b>	Water, foam, dry chemical.
<b>Special Fire Fighting Procedures:</b>	Avoid inhalation of smoke. Wear protective clothing and self-contained breathing apparatus.
<b>Fire and Explosion Hazards:</b>	None

**Section VI - Reactivity Data**

<b>Stability:</b>	Stable
<b>Hazardous Polymerization:</b>	Will Not Occur
<b>Hazardous Decomposition Products:</b>	Products of combustion may be toxic. Avoid breathing smoke.
<b>Incompatibility (Materials to Avoid):</b>	None

**Section VII - Special Protection Information**

<b>Respiratory Protection:</b>	None required when used as intended in Xerox equipment.
<b>Eye Protection:</b>	None required when used as intended in Xerox equipment.
<b>Protective Gloves:</b>	None required when used as intended in Xerox equipment.
<b>Other:</b>	For use other than normal customer - operating procedures (such as in bulk toner processing facilities), goggles and respirators may be required. For more information, contact Xerox.

**Section VIII - Special Precautions**


<b>Handling and Storage:</b>	None
<b>Conditions to Avoid:</b>	Avoid prolonged inhalation of excessive dust.

**Section IX - Spill, Leak, and Disposal Procedures**

<b>For Spills or Leakage:</b>	If spilled, sweep up or vacuum.
<b>Waste Disposal Method:</b>	This material is not a hazardous waste according to Federal Regulation 40 CFR 261 when disposed. State and Local waste disposal requirements may however, be more restrictive. Consult with the appropriate State and Local authorities for specific information.

**Section X - Transportation Information**

<b>DOT Proper Shipping Name:</b>	N.A. (Not Regulated)	<b>ID Number:</b>	N.A.
<b>Hazard Classification:</b>	N.A.	<b>Packing Group:</b>	N.A.

HMIS		MATERIAL SAFETY DATA SHEET		NFPA																							
Health-1 Flammability-2 Reactivity-0 Pers. Protection-B		Health-1 Flammability-2 Reactivity-0		Special Hazard-N/A																							
<b>SECTION I: GENERAL INFORMATION</b>																											
Manufacturer's Name, Address, Phone:  <b>NILODOR, INC.</b> 10966 Industrial Parkway Bolivar, Ohio 44612 800-443-4321 330-874-1017 24 hr Emergency Spill Information: 800-255-3924 Chem-Tel, Inc.			Chemical Family: Dilute aqueous solution of organic solvents and fragrances Trade Name Synonym: Cartridge Refill Proper Shipping Name: None required as packaged Hazard Class: Combustible liquid All materials appear on the EPA TSCA & CEPA DSL Lists. Primary Trade Name: <b>Dispenser Cartridge - Original Fragrance</b>																								
<b>SECTION II: INGREDIENTS</b>																											
* HAZARDOUS																											
<table border="1"> <thead> <tr> <th>Ingredients</th> <th>%weight</th> <th>T. L.V.</th> <th>CAS #</th> </tr> </thead> <tbody> <tr> <td>Solvent Mixture</td> <td>40-60</td> <td>Data Unavailable</td> <td>56539-86-3</td> </tr> <tr> <td>Water</td> <td>20-30</td> <td>N/A</td> <td>7732-18-5</td> </tr> <tr> <td>Nonionic Surfactant</td> <td>1-5</td> <td>Data Unavailable</td> <td>9036-19-5</td> </tr> </tbody> </table>		Ingredients	%weight	T. L.V.	CAS #	Solvent Mixture	40-60	Data Unavailable	56539-86-3	Water	20-30	N/A	7732-18-5	Nonionic Surfactant	1-5	Data Unavailable	9036-19-5	<table border="1"> <thead> <tr> <th>Ingredients</th> <th>%weight</th> <th>T. L.V.</th> <th>CAS #</th> </tr> </thead> <tbody> <tr> <td>Fragrance</td> <td>15-30</td> <td>Data Unavailable</td> <td>None</td> </tr> </tbody> </table>		Ingredients	%weight	T. L.V.	CAS #	Fragrance	15-30	Data Unavailable	None
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Fragrance	15-30	Data Unavailable	None																								
<b>SECTION III: PHYSICAL DATA</b>																											
Boiling Point: 214° F Vapor Pressure: mm Hg @20°C Vapor Density (Air=1): Undetermined Water Solubility: Soluble Appearance & Odor: Blue liquid with a fresh, spicy aroma			Sp. Gravity (Water=1): .0860 Percent Volatiles by Weight: < 35 % Evaporation Rate (____=1): Undetermined pH Range: 5.0-5.5																								
<b>SECTION IV: FIRE &amp; EXPLOSION HAZARD DATA</b>																											
Flash Point: 145 ° F Closed Cup Flammability Limits: Combustible Extinguishing Media: Carbon dioxide, foam, dry chemical Special Fire Fighting Procedures: None Unusual Fire & Explosion Procedures: None			Autoignition Temperature: Undetermined LEL: Undetermined UEL: Undetermined																								
<b>SECTION V: HEALTH HAZARD DATA</b>																											
OSHA Permissible Exposure Limit: Undetermined Carcinogen-NTP Program: None Established Primary Routes of Entry: Mouth and skin Medical Conditions Aggravated by Exposure: Allergies to aromatics Symptoms of Heavy Acute and/or Prolonged Exposure: Eye Irritant prolonged exposure can cause dryness of the skin.			ACGIH Threshold Limit Value: Undetermined Carcinogen-IARC Program: None Established																								
Emergency First Aid: If allergic reaction, remove to fresh air. If in eyes, flush with copious amounts of water and consult a physician. If on skin, wash with soap and water & consult a physician if a problem occurs. If ingested, induce vomiting and consult a physician, prompt gastric lavage.																											
<b>SECTION VI: REACTIVITY DATA</b>																											
Stability: Stable Incompatibility: None Known Hazardous Polymerization: Will not occur Hazardous Decomposition: None known			Conditions to Avoid: None Known Materials to Avoid: Materials that are hazardous with water Conditions to Avoid: None known																								
<b>SECTION VII: ENVIRONMENTAL PROTECTION PROCEDURES</b>																											
Spill Response: Soak with inert absorbant and sweep, mop up with soap and water, ventilate Waste Disposal Method: Dispose in accordance with local regulations																											
<b>SECTION VIII: SPECIAL PROTECTION INFORMATION</b>																											
Eye Protection: Protective goggles suggested Respiratory Protection: No anticipated requirement Ventilation Recommendation: Normal			Skin Protection: Normally unnecessary Other Protection: None required																								
<b>SECTION IX: SPECIAL PRECAUTIONS</b>																											
Practices in Handling and Storage: Ambient room temperature storage in original container recommended Precautions for Repair and Maintenance of Contaminated Equipment: Wash with soap and water. Other Precautions: Keep out of reach of children. Use only as directed.																											

While we believe that the data contained herein are factual and the opinions expressed are those of qualified experts regarding the results of tests conducted, the data are not to be taken as warranty or representation for which we assume legal responsibility. The information is offered solely for your consideration, investigation and verification. Any use of these data and information must be determined by the user to be in accordance with federal, state and local laws.

**D E FILTER POWDER**

**MATERIAL SAFETY DATA SHEET**

Date Prepared 04/10/86  
083

**LOCEY**  
**SWIM POOL CO.**  
6825 LOVERS LANE KALAMAZOO, MICHIGAN  
(616) 327-1553

**I. PRODUCT IDENTIFICATION**

Trade Name(s): Dicalite 375, 2500, 4200, 4500, 5000, 6000, 7000, 8000, CP-100, Speedex, Speedplus, Swimming Pool Grade

Generic Name: Flux-Calcined Diatomaceous Earth CAS #: 68855-54-9  
or Silica

Chemical Name: Silica Formula: Predominantly SiO2  
Manufacturer: GREFCO, INC. Emergency Telephone: (213)517-0700  
Address: 3435 W. LOMITA BLVD. (213)517-0765  
City: TORRANCE State: CA Zip: 90509

**II. PRODUCT INGREDIENTS**

INGREDIENT NAME	CAS NUMBER	%	PERMISSIBLE EXPOSURE LIMIT
Flux-Calcined Diatomaceous Earth	68855-54-9	100	0.075 mg/m ³ Respirable Mass
Crystalline Silica Quartz - 0.5 to 2.0%	14808-60-7		
Cristobalite 45 to 65%	14464-46-1		
PEL calculation based on up to 67% crystalline silica.			

**III. PHYSICAL DATA**

Appearance and Odor: White to off white powder; odorless.

Boiling Point: N/A	Evaporation Rate ( =_1): N/A
Vapor Pressure: N/A	Specific Gravity (water = 1): 2.35
Water Solubility (%): Slight	Melting Point: N/A
Vapor Density:(Air=1): N/A	% Volatile by Volume: N/A

**IV. FIRE AND EXPLOSION DATA**

Flash Point (Method): Non flammable NFPA Flammable/Combustible Liquid Classification  
Flammable Limits: N/A Auto-Ignition Temperature: N/A  
Extinguishing Media: N/A  
Unusual Fire or Explosion Hazards: No Hazard.  
Special Fire-Fighting Procedures: None



V. HEALTH HAZARDS A. Summary/Risks

Contains up to 67% crystalline silica (See section II.)

Summary: Inhalation of crystalline silica dust (Quartz) over long periods of time may cause pneumoconiosis. This product is not considered a carcinogen.

Medical conditions which may be aggravated: Pre-existing upper respiratory and lung disease, such as, but not limited to bronchitis, emphysema and asthma.

Target Organ(s): Lungs

Acute Health Effect: Transitory upper respiratory irritant.

Chronic Health Effects: Long term, unprotected exposure to dust levels in excess of the PEL may cause lung disease (silicosis). Follow the safe handling practices shown on the label.

Primary Entry Route(s): Inhalation.

V. HEALTH HAZARDS B. Signs/Symptoms of Overexposure

Inhalation: Congestion and irritation of throat, nasal passages and upper respiratory system.

Skin Contact: N/A

Skin Absorption: N/A

Ingestion: Not hazardous. Generally regarded as safe by the FDA.

Eyes: Temporary irritation and inflammation.

V. HEALTH HAZARDS C. First Aid/Emergency Procedures

Inhalation: Remove from dusty area. Drink water to clear throat and blow nose.

Skin Contact: N/A

Skin Absorption: N/A

Ingestion: N/A

Eyes: Flush with copious quantities of water for a minimum of 15 minutes.

VI. REACTIVITY DATA

Material is stable. Hazardous polymerization will not occur.

Chemical Incompatibilities: Hydrofluoric acid

Conditions to Avoid: None in designed use.

Hazardous Decomposition Products: Reacts with Hydrofluoric acid to form toxic silicon tetrafluoride gas.

When heated to calcining temperatures, crystalline silica (cristobalite) is formed.

VII. SPILL OR LEAK PROCEDURES

Procedures for Spill/Leak: Vacuum clean or wet sweep; avoid dusting; use a dust suppressant when sweeping.

Waste Management: Waste generated during application, demolition breakage or spillage are not hazardous wastes as defined by RCRA (40 CFR part 261). Place waste and spillage in closed containers. Dispose of in approved landfill. RQ-N/A

VIII. SPECIAL PROTECTION INFORMATION

Goggles: Not normally required.

Gloves: Not normally required.

Respirator: Use NIOSH approved respirators for protection against pneumoconiosis producing dusts.

Ventilation: Use adequate exhaust ventilation and/or dust collection.

Other: N/A

Special Considerations for repair/maintenance of contaminated equipment:

Insure proper respiratory protection.

IX. SPECIAL PRECAUTIONS

Storage Segregation Hazard Classes: N/A

*** ALWAYS SEGREGATE MATERIALS BY MAJOR HAZARD CLASS ***

Special Handling/Storage: Repair all broken bags immediately. Avoid creating dust. Maintain good housekeeping practice.

Special Workplace Engineering Controls: Not normally required.

Other: Comply with all Federal, State and local regulations.

Prepared/Revised by: E.R. Brannigan Title: MGR. TECHNICAL SERVICES

As of the date of preparation of this document, the foregoing information is believed to be accurate and is provided in good faith to comply with applicable federal and state law(s). However, no warranty or representation with respect to such information is intended or given.

## MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 2 Flammability = 0 Reactivity = 0  
 HMIS RATING: Health = 1/2 Flammability = 0 Reactivity = 0

## SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION

(0872A)

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: DEVASTATOR

Address: 302 North Fourth Street  
St. Joseph, MO 64501

Date Prepared: June 27, 1997

Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816) 233-1321 (Ext. 2303)

<http://www.hillyard.com>

## SECTION II -- INGREDIENTS/IDENTITY INFORMATION

## Components

(Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
2-Butyl cellosolve (2-Butoxyethanol)(1)*	111-76-2	25 ppm	25 ppm	N.A.	20-25
Ethanolamine (2)	141-43-5	3 ppm	3 ppm	N.A.	5-10
Water	7732-18-5	none	none	N.A.	---
Benzyl alcohol	100-51-6	not established	not established	N.A.	---
Sodium xylene sulfonate	1300-72-7	not established	not established	N.A.	---

(1) Regulated by OSHA, FL, IL, LA, MA, NJ, PA, RI.

(2) Regulated by OSHA, CT, FL, IL, LA, MA, NJ, PA, RI.

*This product contains the following chemicals subject to the reporting requirements of SARA Title III, Sec. 313, and 40 CFR Part 372: 2-Butoxyethanol.

VOC = 945 gm./l.; VOS = 2.84 lbs./gal.

## SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 210°F Specific Gravity (H₂O = 1): 25°C = 1.0 & 39°C = 1.0  
 Vapor Pressure (mm Hg.): 16.0 Percent Volatile by Volume (%): 98.17  
 Vapor Density (AIR = 1): 1.6 Evaporation Rate (ethyl ether = 1): slower than 1  
 Solubility in Water: appreciable Appearance and Odor: clear, colorless liquid, solvent odor  
 pH (concentrate) = 11.8

## SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: none (Tag Closed Cup) Flammable Limits: LEL = N/A UEL = N/A

Extinguishing Media: Carbon dioxide, dry chemical or foam (water spray to cool closed containers)

Special Fire Fighting Procedures: Self-contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals.

Unusual Fire and Explosion Hazards: None known to Hillyard.

## SECTION V -- PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: N/A

Incompatibility (Materials to Avoid): Keep away from strong oxidizers such as permanganate or strong oxides.

Hazardous Decomposition Products or Byproducts: As with any organic material, combustion will produce carbon dioxide and carbon monoxide.

Hazardous Polymerization: Will not occur Conditions to Avoid: N/A

## SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Ingestion? Yes

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. According to Primary Skin Irritation Test (FHSA), product concentrate is moderate irritant to skin at 24 hours. Eye Irritation Test (FHSA) = corrosive. When tested as specified this product was not considered to be a UN/DOT corrosive at 4 hours. Acute oral limit test showed the product was oral toxic at 5g./kg. It may be harmful or fatal if swallowed. Inhalation to fine fog mist can cause irritation to mucous membranes. Fine fog mist application is not recommended. 2. None known to manufacturer.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

**SECTION VI -- HEALTH HAZARD DATA continued**

**Signs and Symptoms of Exposure:** Butyl cellosolve is readily absorbed through the skin in toxic amounts. Inhalation of high concentrations of vapors results in respiratory and eye irritation, narcosis, headache, nausea, dizziness, hematuria and damage to liver and kidneys.

**Medical Conditions Generally Aggravated by Exposure:** Repeated overexposure may result in damage to the blood.

**Emergency and First Aid Procedures:** Inhalation: Remove person to fresh air. If breathing difficulty persists or occurs later, call physician. In case of contact, immediately flush eyes or skin with plenty of water for 15 minutes. Get prompt medical attention. Remove and wash all contaminated clothing before reuse. If swallowed, immediately give large amounts of water and IMMEDIATELY CALL A PHYSICIAN, hospital emergency room or poison control center.

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Absorb large spills with floor dry material (see disposal below).

Small spills: Flush with water and pick up with mop or wet vacuum.

**Waste Disposal Method:** Dispose of in accordance with state or local regulations. Do not dispose of in storm drains or streams; monoethanolamine is toxic to fish.

**Precautions To Be Taken In Handling And Storing:** Keep container closed when not in use. Since empty packages retain product residue, follow label warning even after package is empty. Do not store above 120°F. Spray mist may produce respiratory irritation or damage and increase susceptibility to respiratory illness. USE WITH ADEQUATE VENTILATION. Avoid breathing vapors or spray mist. Open windows and doors, use exhaust fans or other means to insure fresh air entry during application and drying. Refer to OSHA Standard 29 CFR 1910.94 for technical guidelines on keeping air contamination below acceptable exposure limits. Do not get on skin, in eyes or on clothing.

**SECTION VIII -- CONTROL MEASURES**

**Respiratory Protection (Specify Type):** Wear appropriate, properly fitted respirator (NIOSH or MSHA approved unless air monitoring demonstrates vapor or mist levels are below applicable limits.

**Ventilation:** at least 10 air changes per hour recommended

**Local Exhaust =** recommended    **Mechanical (General) =** recommended    **Special =** N/A    **Other =** N/A

**Protective Gloves:** impervious rubber gloves recommended    **Eye Protection:** chemical safety goggles

**Other Protective Clothing or Equipment:** protective clothing

**Work / Hygienic Practices:** Wash contaminated clothing before reuse (including shoes).

**SECTION IX - TRANSPORTATION INFORMATION**

**Applicable regulations:** DOT = No; IMCO = No; IATA = No

**Proper shipping name:** Cleaning compound

**UN No.:** not applicable    **Limited Qty.:** not applicable    **Hazard Class:** not applicable

**Labels required:** not required    **DOT Exception:** not applicable

**EPA Hazardous waste/number code:** not listed

**Hazardous waste characteristics:**

**Ignitability =** not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable

**DISCLAIMER OF WARRANTIES**

**NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.**

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

**THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.**

(125100)

1400 N. Fiesta Blvd.  
Bldg. 100  
Gilbert, AZ 85233-1000  
Toll Free 800-877-7771  
Tel. 480-497-8822  
Fax 480-497-0444

**ORANGE-SOL**  
INDUSTRIAL PRODUCTS, Inc.

Page: 1 of 4  
MSDS-7218S --3--10-99  
Date Prepared: 19 November 1991  
Date Revised: 7 May 1999

## MATERIAL SAFETY DATA SHEET

# De-Solv-it[®] Spot Remover

[®] A registered trademark of The Orange-Sol Group of Companies, Ltd.

### Section 1 PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** De-Solv-it[®] Spot Remover.

**Product Use:** To remove tar, asphalt, oil, grease, chewing gum, wax, adhesive residue, etc. from washable fabric, carpet and upholstery.

**PIN Number:** Not required.

**Distributor:** Orange-Sol Industrial Products, Inc.  
1400 Fiesta Blvd., Bldg. 100  
Gilbert, Arizona 85233-1000

**Emergency Phone Number:** 800/279-8822 (7AM-4PM, Mon-Fri MST)

**For Information:** 800/279-8822 (7AM-4PM, Mon-Fri MST)

*J. A. Gurney, Ph.D.*

**Prepared by:** J. A. Gurney, Ph.D. _____

**Preparation Date:** 19 August 1991.

### Section 2 COMPOSITION INFORMATION ON INGREDIENTS

- A. **Product Mixture:** No hazardous ingredients as per OSHA 29CFR 1910.1200.
- B. This section is confidential.

### Section 3 HAZARDS IDENTIFICATION

**Emergency Overview:** Acute and prolonged exposure may cause dermatitis in a sensitive individual.

**Primary Routes of Entry:** Skin and mouth.

**Physical Hazard:** Combustible mixture.

**Health Hazard:** No significant acute or chronic hazards known.

#### **Acute Hazards:**

**Eye:** Contact nonirritating. Contact may cause irritation in a sensitive individual.

**Skin:** Low primary skin irritation.

**Ingestion:** If swallowed, may cause a laxative effect.

**Inhalation:** No toxic manifestations.

#### **Chronic Exposure:**

**Skin:** Repeated or prolonged exposure may cause dermatitis in a sensitive individual.

**Carcinogenicity Listings:** NTP-None, IARC-None, OSHA-None, ACGIH-None.

**Irritancy of Product:** Low primary skin irritancy. No known significant eye or inhalation effects.

**Signs and Symptoms of Overexposure:** None known in normal individuals.

**Medical Conditions Aggravated by Exposure:** A preexisting dermatitis may become aggravated with contact.

#### Section 4 FIRST AID PROCEDURES

- Eye:** Remove any contact lens, then immediately flush with water for at least 15 minutes. If irritation persists, contact a physician.
- Skin:** Remove contaminated clothing. Wash skin thoroughly with soap and water. If irritation persists, contact a physician.
- Ingestion:** If swallowed, do not induce vomiting. Maybe harmful or fatal if liquid is aspirated into the lungs.
- Inhalation:** If aspirated into the lungs, get immediate medical help.

#### Section 5 FIRE AND EXPLOSION HAZARD

- Flammability:** Combustible liquid. OSHA Class IIA. WHMIS Class B3.
- Means of Extinction:** Water fog, carbon dioxide, dry chemical, foam.
- Flash Point and Method:** 162° F (72° C), Pensky-Martens Closed Tester. ASTM D-93.
- Flammability Limits in Air:** Not determined.
- Auto-Ignition Temperature:** Not determined.
- Combustion Products:** As with any organic material, combustion will produce carbon dioxide and/or carbon monoxide.
- Explosion Data:** A. Sensitivity to impact; none. B. Sensitivity to static charge; none.
- Special Firefighting Precautions:** Do not use streams of water. This may cause splattering and the spread of fire.
- Unusual Fire and Explosion Hazard:** May produce dense, black smoke. Stay upwind of a fire.
- Firefighting Equipment:** Use self-contained breathing apparatus (SCBA) gear in any enclosed space.

#### Section 6 ACCIDENTAL RELEASE MEASURES

- Procedures for Clean-Up:**
- For Small Spills:** Absorb with a suitable material. Dispose in an appropriate waste container.
  - For Large Spills:** Dike with soil, sand or other suitable materials avoiding the use of sawdust. Recover reusable material.
- Personal Precautions:** Review Sections 5 and 8 for precautions and recommendations. Remove all sources of ignition before proceeding.
- Environmental Precautions:** Prevent liquid from entering public waterways.

#### Section 7 HANDLING AND STORAGE

- Safe Handling and Hygienic Practices:** Reduce personal contact avoiding prolonged skin contact with contaminated clothing. Wash after using.
- Storage Requirements:** Keep in a tightly closed container away from open flame or other ignition source. Adequate ventilation according to good engineering practices. Keep away from children.

#### Section 8 EXPOSURE CONTROLS

- Engineering controls:** Adequate general ventilation. No special requirements under normal conditions.
- Personal Protection:**
- Ventilation:** Not required under normal conditions.
  - Respiratory:** No special requirements. Avoid breathing mists.
  - Eye Protection:** None required.
  - Gloves:** Nitrile or Kevlar gloves recommended for a sensitive individual.
  - Ingestion:** Do not ingest.
- Exposure Limit Guidelines:** No established exposure guidelines.

## Section 9 PHYSICAL AND CHEMICAL PROPERTIES

**Appearance and Odor:** A clear and colorless. Citrus odor.

**Physical State:** Liquid.

**Viscosity:** 1.7 cps. Estimate based on an analogous formulation and ASTM D-445.

**Vapor Pressure:** <0.2 mm of Hg @ 20° C, <0.002 psi @ 68° F. (Estimated). Based on Thermogravimetric Analysis (TGA) Method. Developed by Vender.

**Volatile Percent:** 99.9 Wt. %.

**Specific Gravity:** 0.797, 6.65 lbs./US Gallon. ASTM D-4052.

**Vapor Density:** (Air=1), 4.5. (Estimate).

**Evaporation Rate:** (Butyl Acetate=1), 0.06. ASTM D-3539. (Estimate).

**Boiling Point:** Data not available.

**Freezing Point:** This mixture of hydrocarbons has no true freezing point.

**Pour Point:** -51° C (-60° F). ASTM D-1093-81. (Estimate).

**pH of Concentrate:** Test not applicable.

**Coefficient of Water/Oil Distribution:** <0.1

**Solubility in Water:** Negligible

**Kauri Butanol Number:** 27 (Estimate). ASTM D-1133.

**Dielectric Constant:** >50,000 volts. ASTM D-877.

## Section 10 STABILITY AND REACTIVITY

**Stability:** Stable.

**Conditions to Avoid:** Avoid the generation of mist and aspiration into the lungs.

**Incompatibility:** Avoid contact with strong oxidizing agents.

**Hazardous Decomposition:** Not expected under normal conditions.

**Hazardous Polymerization:** Will not occur.

## Section 11 TOXICITY INFORMATION

Results from an analogous formulation. (Present product thought to be safer).

**LD₅₀ of the Product:** Acute oral (Rat). >12,700 mg/Kg (16 ml/Kg).

**Teratogenicity and Embryotoxicity:** Based on component testing, not considered teratogenic. High dose rates of one component caused decreased weights of animal dams and fetuses and abnormal bone development in the fetuses. Not considered significant to human health.

**Mutagenicity:** Based on component testing, this product considered non-mutagenic.

**Synergistic Materials:** Not known.

**Inhalation:** No toxic manifestations.

**Draize Eye Irritation:** Score 0.00 (None).

**Primary Skin Irritation:** Irritation index, 0.2 (Low).

**Muscle Tissue:** No deleterious effects.

**Sensitizing Capability of the Product:** Not expected in normal individuals.

**ALL TEST DATA AVAILABLE ON REQUEST**

## Section 12 ENVIRONMENTAL TESTS

(Results from an analogous formulation).

**Aqueous Testing:** Fundulus heteroclitus (Silverside fish): LC₅₀, 4 days, 2000 ppm. (Low toxicity).

**Saprophytic Bacteria (Cold Temperature Strain):** No minimum inhibiting product concentration. Product degraded extensively after 21 days.

### Section 13 DISPOSAL CONSIDERATIONS

**RCRA Classification:** This product has been evaluated for RCRA characteristics and does not meet the criteria for a hazardous waste, if discarded in its purchased form.

**Volatile Organic Compound (VOC) Content:** Under the C₁₂ Exemption, 36 Wt.%; Under Method 24, 796 g/Liter. (Values estimated). Contact local authority for appropriate compliance.

**Special Instructions:** The product is biodegradable based on activated sludge testing. Landfill or incinerate at authorized facilities.

### Section 14 TRANSPORTATION INFORMATION

**DOT Labeling:** Not required.

**Proper Shipping Name:**

**Hazard Class:**

**Identification Number:**

### Section 15 REGULATORY INFORMATION

**OSHA and WHMIS Compliance:** This MSDS prepared according to the 29 CFR 1910.1200 and ANSI Z400.1 Standards. These criteria meet the WHMIS Format Standard.

**TSCA:** Although components of this product find listing under the Toxic Substances Act (TSCA), this blended product requires no import or export declarations.

**CERCLA, State and Local Planning (Reportable Quantities):** Not required.

**SARA Title III Superfund:** The product in its purchased form is not regulated under the SARA "Hazard Categories" under Sections 311 and 312 of the Superfund Amendment and the Reauthorization Act of 1986 (SARA Title III).

**States Right-to-Know:** Not required.

### Section 16 OTHER INFORMATION

**Hazard Rating:** Based on the NFPA 704 Standard. Health=0, Flammability=2, Reactivity=0.  
Rating Scale. None=0, Slight=1, Moderate=2, Severe=3, Extreme=4.

**Revision Date:** 7 May 1999.

The information expressed herein are those of the experts for Orange-Sol Industrial Products, Inc. We believe that the information contained herein is accurate and current as of the date of this Material Safety Data Sheet. Since the application in use of the information contained herein, and the conditions of use of the product are not under the control of Industrial Products, Inc.; the user must evaluate and determine whether the conditions for use and the application of the product, including proper disposal thereof, are appropriate, safe and legal.



**MATERIAL SAFETY DATA SHEET**

NFPA RATING: Health = 0 Flammability = 0 Reactivity = 0

HMIS RATING: Health = 0 Flammability = 0 Reactivity = 0

**SECTION I – IDENTITY AND MANUFACTURER'S INFORMATION (456N-81E)**

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: DEFOAMER II

Address: 302 North Fourth Street

Date Prepared: January 19, 1996

St. Joseph, MO 64501

Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (816)233-1321(Ext. 303)

Other information calls: (816)233-1321(Ext. 2303)

**SECTION II – INGREDIENTS/IDENTITY INFORMATION****Components**

(Specific Chemical Identity:

Common Name(s)

Water

Anti-foaming agent

CAS#

7732-18-5

unknown to

Hillyard

OSHA

PEL

N/A

N/A

ACGIH

TLV

N/A

N/A

OTHER LIMITS

RECOMMENDED

N/A

N/A

%

%

**SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS**

Boiling Point: 201.2°F

Specific Gravity (H₂O = 1): 25°C = 0.99 & 39°C = 0.99

Vapor Pressure (mm Hg.): 17.5

Percent Volatile by Volume (%): 98.4

Vapor Density (AIR = 1): 0.6

Evaporation Rate (ethyl ether = 1): slower than 1

Solubility in Water: complete

Appearance and Odor: whitish emulsion; non-objectionable odor

pH (concentrate) = 5.79

**SECTION IV – FIRE AND EXPLOSION HAZARD DATA**

Flash point: none to 200°F

Flammable Limits: LEL = N/A UEL = N/A

Extinguishing Media: Not applicable.

Special Fire Fighting Procedures: Dry chemical, alcohol foam, water fog or carbon dioxide.

Unusual Fire and Explosion Hazards: Self contained breathing apparatus is recommended.

**SECTION V – PHYSICAL HAZARDS**

Stability: Stable

Conditions to Avoid: None known to manufacturer

Incompatibility (Materials to Avoid): Strong acids and strong alkalis

Hazardous Decomposition Products or Byproducts: Under combustion conditions will release carbon dioxide and/or carbon monoxide and oxides of silica.

Hazardous Polymerization: Will not occur

Conditions to Avoid: N/A

**SECTION VI – HEALTH HAZARD DATA**

Routes of entry: Inhalation? Yes Skin? No Ingestion? No

**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. Contact with concentrate may cause eye irritation; prolonged contact with concentrate may cause skin irritation

2. Prolonged or repeated contact may produce skin dermatitis or irritation.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

**SECTION VI - HEALTH HAZARD DATA cont.**

**Signs and Symptoms of Exposure:** Concentrate irritating to eye tissue if not removed promptly. Frequent or prolonged contact with skin may cause irritation or dermatitis.

**Medical Conditions Generally Aggravated by Exposure:** None known to manufacturer

**Emergency and First Aid Procedures:** In case of contact immediately flush eyes or skin with plenty of water for 15 minutes. For eyes, get medical attention; for skin get medical attention if irritation persists. Remove material from skin and clothing. Wash clothing before reuse.

**SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Pick up with mop or wet vac and wash away with water.

**Waste Disposal Method:** Washing down sanitary sewer with large quantity of water may be permissible. Liquid wastes are not permitted in landfills. Consult local, state and federal agencies for proper disposal method in your area. This product is not considered a hazardous waste under RCRA.

**Precautions To Be Taken In Handling And Storing:** Protect from freezing. Product shelf life is best retained by storage at 45-100 °F temperature. Spills of concentrate should be picked up with wet vac and rinsed thoroughly.

**Other Precautions:** This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR Part 372.

**SECTION VIII - CONTROL MEASURES:**

**Respiratory Protection (Specify Type):** Not required with normal methods of use

**Ventilation:**

**Local Exhaust =** Normally adequate    **Mechanical (General) =** Recommended    **Special =** N/A    **Other =** N/A

**Protective Gloves:** Impervious gloves recommended with concentrate    **Eye Protection:** Recommend use of splash goggles where splash of concentrate is a concern.

**Other Protective Clothing or Equipment:** Clothing to cover skin and shoes are recommended.

**Work / Hygienic Practices:** Wash contaminated clothing before reuse

**SECTION IX - TRANSPORTATION INFORMATION:**

**Applicable regulations:** 49 CFR = no; IMCO = no; IATA = no

**Proper shipping name:** Cleaning compound

**UN No.:** not applicable    **Limited Qty.:** not applicable    **Hazard Class =** not applicable

**Labels required:** not required    **DOT Exception:** not applicable

**EPA Hazardous waste number / code:** not listed

**Hazardous waste characteristics:**

**Ignitability =** not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable

**DISCLAIMER OF WARRANTIES**

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**MATERIAL SAFETY DATA SHEET**

NFPA RATING: Health = 1 Flammability = 0 Reactivity = 0

HMIS RATING: Health = 1 Flammability = 0 Reactivity = 0

**SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (0677F)**

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: DEEP ACTION

Address: 302 North Fourth Street  
St. Joseph, MO 64501

Date Prepared: May 10, 1994

Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816)233-1321(Ext. 303)

**SECTION II -- INGREDIENTS/IDENTITY INFORMATION**

Components (Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	none	none	N/A	---
Coco diethanolamide	91789-19-3	not established	not established	N/A	---
Sodium xylene sulfonate	1300-72-7	not established	not established	N/A	---
Linear primary alcohol ethoxylate	68439-46-3	not established	not established	N/A	---
Anti-foam agent	unknown to Hillyard	not established	not established	N/A	---
Sodium citrate	68-04-2	not established	not established	*	1-3

*OSHA, Particles not otherwise regulated: Total dust PEL = 15 mg/M³; respirable dust = 5 mg/M³; ACGIH = 10 mg/M³**SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS**

Boiling Point: 202°F

Specific Gravity (H₂O = 1): 25°C = 1.00 & 39°C = 1.00

Vapor Pressure (mm Hg): 17.6

Percent Volatile by Volume (%): 90.8

Vapor Density (AIR = 1): 0.6

Evaporation Rate (ethyl ether = 1): slower than 1

Solubility in Water: appreciable

Appearance and Odor: off-white, opaque, semi-viscous liquid; herbal odor

pH (concentrate) = 6.7

**SECTION IV -- FIRE AND EXPLOSION HAZARD DATA**

Flash point: None (T.C.C.)

Flammable Limits: LEL = N/A UEL = N/A

Extinguishing Media: Water fog, carbon dioxide, foam, dry chemical

Special Fire Fighting Procedures: Self-contained positive pressure breathing apparatus and protective clothing should be worn in fighting fires involving chemicals.

Unusual Fire and Explosion Hazards: Unknown to manufacturer

**SECTION V -- PHYSICAL HAZARDS**

Stability: Stable

Conditions to Avoid: N/A

Incompatibility (Materials to Avoid): Avoid strong oxidizing agents or strong mineral acids.

Hazardous Decomposition Products or Byproducts: Decomposition products under fire conditions: fumes of ammonia, carbon monoxide, carbon dioxide, oxides of nitrogen and various hydrocarbons.

Hazardous Polymerization: Will not occur

Conditions to Avoid: N/A

**SECTION VI -- HEALTH HAZARD DATA**

Routes of entry: Inhalation? No

Skin? No

Ingestion? No

**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. May cause eye irritation. Based on product testing, not a skin irritant per FHSA, CFR 16, Chapter IIc, paragraph 1500.41. Per acute oral toxicity testing on product, 0 mortality at 5 g/kg; acute inhalation (1 hr) toxicity limit test = 0 mortality at 13.7 mg/l.

2. None known by manufacturer.

**Chemical listed as Carcinogen or Potential Carcinogen:**

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater or equal to 0.1%.

**SECTION VI -- HEALTH HAZARD DATA cont.**

**Signs and Symptoms of Exposure:** Concentrate may be irritating to eyes if not removed promptly. Breathing of highly concentrated vapors or spray mists may cause irritation to the respiratory tract.

**Medical Conditions Generally Aggravated by Exposure:** Pre-existing skin and eye disorders may be aggravated by exposure to this product.

**Emergency and First Aid Procedures:** In case of contact, immediately flush eyes with plenty of water for 15 minutes; if irritation persists get medical attention. If inhaled, remove to fresh air. If irritation persists call a physician.

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Pick up with mop or wet vac and wash away with water.

Spills of concentrate should be picked up with wet vac and rinsed thoroughly.

**Waste Disposal Method:** Wash down sewer with large quantity of water. Container disposal: Triple rinse (or equivalent), then offer clean, dry container for recycling or reconditioning.

**Precautions To Be Taken In Handling And Storing:** Freezing of product may rupture container. Product shelf life is best retained by storage at 45-100 °F temperatures.

**Other Precautions:** This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR Part 372.

**SECTION VIII -- CONTROL MEASURES:**

**Respiratory Protection (Specify Type):** Not required

**Ventilation:**

**Local Exhaust =** Not required      **Mechanical (General) =** N/A      **Special =** N/A      **Other =** N/A

**Protective Gloves:** None required      **Eye Protection:** Safety goggles suggested where splashing of concentrate is a concern

**Other Protective Clothing or Equipment:** None required

**Work / Hygienic Practices:** Wash thoroughly after handling.

**SECTION IX - TRANSPORTATION INFORMATION:**

**Applicable Regulations:** DOT = No; IMCO = No; IATA = No.

**Proper shipping name:** Cleaning compound

**UN NO.:** not applicable      **Limited Qty.:** not applicable      **Hazard Class:** not applicable

**Labels required:** not required      **DOT Exception:** not applicable

**EPA Hazardous waste number/code:** not listed

**Hazardous waste characteristics:**

**Ignitability =** not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable

**DISCLAIMER OF WARRANTIES**

**NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.**

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

**THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.**

750251



# MATERIAL SAFETY DATA SHEET

## SECTION 1 - MANUFACTURER OR SUPPLIER DATA

MSDS NUMBER

102030

MANUFACTURER'S NAME & MAILING ADDRESS <b>U S Chemical Corporation</b> 316 Hart Street Watertown, Wisconsin 53094 USA	PREPARED BY <b>D. E. Kenas</b>	SIGNATURE <i>David E. Kenas</i>
EMERGENCY TELEPHONE NO. (24 HOUR SERVICE) <b>Medical Emergency ONLY: 1-800-851-7145 Ext. 075</b>	TITLE <b>Quality Assurance Manager</b>	DATE <b>1-4-02</b>
PRODUCT INFORMATION TELEPHONE NO. (8 AM TO 5 PM CST, MON - FRI) <b>Product Information: 1-800-558-9566</b>		SOLIDGP

## SECTION 2 - IDENTITY OF MATERIAL

PRODUCT NAME <b>DAYBREAK</b>			
PRODUCT DESCRIPTION <b>Solid Laundry Detergent</b>		FORMULA <b>Proprietary Blend</b>	CHEMICAL FAMILY <b>N.A.</b>
DDT PROPER SHIPPING NAME <b>Not Regulated by D.O.T.</b>			
REGULATED IDENTIFICATION	SHIPPING ID NUMBER <b>N.A.</b>	PACKING GROUP <b>N.A.</b>	HAZARD CLASS <b>N.A.</b>

## SECTION 3 - PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT <b>N.A.</b>	SPECIFIC GRAVITY (H ₂ O = 1) <b>1.040</b>	PHYSICAL FORM <b>Solid</b>	COLOR <b>Blue</b>
VAPOR PRESSURE (mm Hg) <b>N.A.</b>	MELTING POINT <b>120°F</b>	SOLUBILITY IN WATER <b>Complete</b>	SCENT <b>Lemon-Lime</b>
VAPOR DENSITY (AIR = 1) <b>N.A.</b>	EVAPORATION RATE (BUTYL ACETATE = 1) <b>N.A.</b>	pH 2500 ppm SOLUTION <b>9.5</b>	pH CONCENTRATE <b>11.5</b>
OTHER <b>N.A.</b>			

## SECTION 4 - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

HAZARDOUS COMPONENTS (CHEMICAL NAME; COMMON NAME)	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	PERCENT WT/WT
Triethanolamine: TEA	Not	5 mg/m3	Not	1.0-5.0
CAS Registry Number 102-71-6	Established	TWA	Established	
Tetrasodium Ethylenediaminetetracetate	Not	Not	Not	5.0-10.0
CAS Registry Number 64-02-8	Established	Established	Established	
Sodium Carbonate: Soda Ash	Not	Not	Not	3.0-7.0
CAS Registry Number 497-19-8	Established	Established	Established	

This product contains no other ingredient considered hazardous according to the criteria of 29 CFR 1910.1200, OSHA. However, this product contains chemicals which may be subject to reporting requirements according to the criteria of SARA Title III, 40 CFR, Part 370, Section 311 and Section 312.

### STATE RIGHT TO KNOW INFORMATION

THIS PRODUCT CONTAINS: PEG-150/25322-68-3, NONOXYNOL/9016-45-9, TETRASODIUM EDTA/64-02-8, SODIUM DODECYLBENZENESULFONATE/25155-30-0, SODIUM CARBONATE/497-19-8, TRIETHANOLAMINE/102-71-6

NFPA RATING: Health-2/Flammability-0/Reactivity-0    See Section 5 for Protective Equipment.  
 HMIS RATING: Health-2/Flammability-0/Reactivity-0    See Section 5 for Protective Equipment.

### CARCINOGENICITY:

This product does not contain any known carcinogens or anticipated carcinogens according to the criteria of the NTP Annual Report on Carcinogens, IARC Monographs, and OSHA 29 CFR 1910, Subpart Z.

(CONTINUED IN SECTIONS 5 TO 8)

## SECTION 5 - SAFE USAGE DATA

PROTECTIVE EQUIPMENT TYPES	EYES Safety glasses with side shields and an eye-wash station.	
	RESPIRATORY None required with normal use.	GLOVES Rubber or Neoprene.
	OTHER If major exposure is possible to eye/skin, wear/use appropriate protective equipment.	
VENTILATION	GENERAL MECHANICAL None required with normal use.	
	LOCAL EXHAUST None required with normal use.	
PRECAUTIONS	HANDLING & STORAGE Follow all label directions. Instruct personnel about proper use, hazards, precautions, and first-aid measures. Avoid ingestion and contact with eyes. Rotate stock regularly. Handle carefully to avoid damaging container. Keep container closed when not in use. Recommended storage temperature below 100°F. Keep out of children's reach.	

## SECTION 6 - HEALTH HAZARD DATA

EFFECTS OF EXPOSURE	INHALATION None Known.	
	INGESTION May cause discomfort, nausea, vomiting, and irritation to mouth, esophagus, stomach, and to other tissues with which contact is made. Severity depends upon degree of exposure.	
	SKIN & EYES SKIN: Prolonged exposure to concentrate may cause slight irritation to highly sensitive skin. EYES: Contact may cause tearing, and mild to severe irritation depending upon exposure.	
	ACUTE & CHRONIC ACUTE: Irritation to skin and eyes. Permanent eye damage may result without immediate first aid treatment. CHRONIC: None Known.	
ROUTES OF ENTRY	INGESTION-X SKIN ABSORPTION-X SKIN-X EYES-X INHALATION-	TARGET ORGANS Eyes, skin.

## SECTION 7 - PHYSICAL HAZARD DATA

FLAMMABILITY	LEL = N.A. UEL = N.A.	FLASH POINT = N.A.	METHOD USED = N.A.
STABILITY	STABLE	X	CONDITIONS TO AVOID Avoid contact of solid concentrate with other cleaning products. However, at use concentration, may be used with chlorinated or oxygen bleach.
	UNSTABLE		HAZARDOUS DECOMPOSITION PRODUCTS Warning! Mixing with incompatible materials may produce sulfur dioxide, hydrogen sulfide, nitrous oxides, and ammonia vapors.
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	N.A.
INCOMPATIBILITY	MATERIALS TO AVOID Strong oxidizing agents, strong acids and strong alkali such as caustic soda or caustic potash.		

## SECTION 8 - EMERGENCY RESPONSE DATA

FIRE	EXTINGUISHING MEDIA For fires in area, use appropriate media. For example: Water spray, dry chemical, carbon dioxide, or alcohol foam.
	SPECIAL PROCEDURES Evacuate area of unprotected and unnecessary personnel.
	UNUSUAL HAZARDS Not Applicable.
FIRST AID MEASURES	INGESTION: Do not induce vomiting. If patient is conscious and can swallow, administer milk or water. SKIN: Remove contaminated clothes, then flood with water. EYES: Flood with lukewarm (not hot) water poured from a large glass 2 or 3 inches from eyes. Remove contacts. Have patient blink as much as possible while flooding the eyes. Continue for 15 minutes. ADMINISTER FIRST AID TREATMENT AS STATED ABOVE, THEN CALL 1-800-851-7145 Ext. 075 OR CONTACT A PHYSICIAN FOR FURTHER MEDICAL INSTRUCTIONS.
SPILLS RQ - N.A.	STEPS TO BE TAKEN This material is a solid in a plastic canister which cannot be spilled or leak. However, during use the material is dissolved and this diluted solution should be treated as follows: Flush small spills with water to local sanitary sewer as permitted. Follow with normal clean-up procedures.
	WASTE DISPOSAL METHOD Comply with all federal, state, and local regulations. Consult state and local authorities for restrictions on disposal of chemical waste. If approved, may be diluted and drained to a municipal sewer or waste treatment plant. Rinse empty container thoroughly with water before discarding. Please recycle empty container whenever possible.

THE DATA IN THIS MATERIAL SAFETY DATA SHEET RELATES ONLY TO THE SPECIFIC MATERIAL DESIGNATED AND DOES NOT RELATE TO ITS USE IN COMBINATION WITH ANY OTHER MATERIAL OR PROCESS. THE DATA CONTAINED IS BELIEVED TO BE ACCURATE. HOWEVER, SINCE USE CONDITIONS VARY AND ARE OUTSIDE OUR CONTROL, THE MANUFACTURER MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, AND ASSUMES NO LIABILITY FOR FAILURE TO FOLLOW PRODUCT USE DIRECTIONS AND SAFETY PRECAUTIONS.



# Spartan Chemical Company, Inc.

## Material Safety Data Sheet

### SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label): **CR-2 CRAWLING INSECT KILLER (AEROSOL)** Product Division: **Janitorial**  
 Product Number: 6902

Manufacturers Name: <b>Spartan Chemical Company, Inc.</b>	
Emergency Phone No: <b>(800)537-8990</b>	
Address: <b>1110 Spartan Drive</b>	
City: <b>Maumee</b>	State: <b>OH</b>
Zip Code: <b>43537</b>	
Product/Technical Information: <b>1-(800)-537-8990</b>	
Medical Emergency: <b>1-(888)-314-6171 (24 hours)</b>	
Chemical Leak/Spill Emergency: <b>CHEMTREC 1-(800) 424-9300 (24 hours)</b>	
Shipping Description: <b>ORM-D, Consumer commodity, insecticides, aerosol, n.o.s.</b>	

NFPA Ratings:	HMIS Ratings:
<b>Health:</b> 1- Slight <b>Fire:</b> 0 - Minimal <b>Reactivity:</b> 1- Slight	<b>Health:</b> 1- Slight <b>Fire:</b> 0 - Minimal <b>Reactivity:</b> 1- Slight <b>Pers. Prot. Equip.:</b> B - Safety Glasses; gloves

### SECTION II: HAZARDOUS INGREDIENTS

All component chemicals are listed or exempted from listing on the "TSCA Inventory" of chemical substances maintained by the U.S. Environmental Protection Agency.

Chemical Name(s)	%W	CAS Registry No.	Table Z-1-A			Carcinogen
			TWA mg/m ³	STEL mg/m ³	CEILING mg/m ³	
*Butoxyethanol	6	111-76-2	120 [skin]	Not Established	Not Established	No
Isobutane	01-05	75-28-5	1900 (NIOSH)	Not Established	Not Established	No
Propane	01-05	74-98-6	1800	Not Established	Not Established	No
Mineral Spirits	01-05	8052-41-3	350 (NIOSH)	Not Established	1800 (NIOSH)	No

Comment: *This substance is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (SARA) and of 40 CFR 372.

### SECTION III: PHYSICAL DATA

Boiling Point: <b>N/A</b>	Vapor Pressure: <b>100 mm Hg @ 130°F</b>
Vapor Density (AIR = 1): <b>&gt;1</b>	Solubility in Water: <b>Forms an emulsion</b>
pH: <b>7.2-8.0</b>	Specific Gravity (H ₂ O=1): <b>0.95</b>
Evaporation Rate (but. ace.=1): <b>&lt;1</b>	Percent Solid by Weight: <b>3</b>
Physical State: <b>Liquid</b>	
Appearance & Odor: <b>Clear liquid, solvent odor</b>	

**SECTION IV: FIRE & EXPLOSIVE HAZARD DATA**

Flash Point: Propellant < 0°F	Method Used: ASTM-D56
Flammable Limits: N/A	Flame Extension: N/A
Extinguishing Media: Water fog	
Special Fire Fighting Procedures: Keep container cool, use equipment or shielding to protect personnel from bursting, rupturing or venting containers.	
Unusual Fire & Explosive Hazards: At elevated temperatures (over 54°C/130°F) containers may vent, rupture or burst.	

**SECTION V: HEALTH HAZARD DATA**

Threshold Limit Value: Not Established	Primary Routes of Entry: Inhalation, Skin Contact
Effects of Overexposure- Butoxyethanol is absorbed through the skin which may affect the liver, kidney, blood and lymph systems.	
Conditions to Avoid: Inhalation may affect central nervous system and cause respiratory irritation.	
Conditions Aggravated by Use: Unknown	

**Emergency & First Aid Procedures:**

Eyes:	In case of contact; immediately flush eyes with water for at least 15 minutes. Remove contact lenses.
Skin:	In case of skin contact; remove contaminated clothing and immediately wash skin with plenty of water.
Ingestion:	If swallowed; call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.
Inhalation:	If inhaled; remove person to fresh air and call a physician. NOTE TO PHYSICIAN: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. Atropine only by injection is an antidote.

**SECTION VI: REACTIVITY DATA**

Stability: Stable	Incompatible Materials: None
Hazardous Decomposition Products: None Known	Hazardous Polymerization: Will Not Occur

**SECTION VII: SPILL OR LEAK PROCEDURES**

Steps to be Taken in Case Material is Released or Spilled:	Avoid breathing vapors, remove ignition sources, pick up with scoop or absorbent material.
Waste Disposal Method:	Do not incinerate or puncture aerosol container. Dispose of in accordance with state, local or Federal regulations.

**SECTION VIII: SPECIAL PROTECTION INFORMATION**

Respiratory Protection:	None required
Ventilation:	Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.
Protective Gloves(Specify Type):	Rubber Gloves
Eye Protection(Specify Type):	Goggles
Other Protective Equipment:	Not necessary

**SECTION IX: SPECIAL PRECAUTIONS**

Precautions; Handling & Storing:	Contents under pressure. Do not use near fire; sparks or flame. Do not store where temperatures could exceed 130°F.
Other Precautions:	None

© SCC 09/21/1999      Name: Ronald T. Cook      Title: Manager, Regulatory Affairs  
CR-2 CRAWLING INSECT KILLER      Effective Date: 09/21/1999      Supercedes: 02/06/1998  
(AEROSOL)  
Ref: 29 CRF 1910.1200 (OSHA)      Changes: Update Section II, Address and Format

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## Section I - Identity and Manufacturer's Information

Distributed by: **AFFLAB**  
 (A division on Affiliated Paper Company)  
**P.O. Box 020997**  
**Tuscaloosa, AL 35402**

**Country Fresh Disinfectant**

Emergency Telephone Number  
 800-535-5053 (24 HRS)

**PRODUCT HAZARD RATINGS:** Health =1, Fire =4, Reactivity =0, Protective Equipment = *A (NFPA)  
 (Rating Legend: 4 = Extreme, 3 = Serious, 2 = Moderate, 1 = Slight, 0 = Minimal)

## Section II - Hazardous Ingredients/ Identity Information

Chemical Names	Exposure Limits (LD50-Oral Rat)	SARA Title III SEC 313	ACGIH TLV/TWA	OSHA PEL	% By Wt.
Orthophenylphenol (CAS #90-43-7)	2000mg/kg	YES	NE	NE	0.1-0.5
Para-tertiary Amylphenol (CAS #80-46-6)	1830 mg/kg	-	NE	NE	0.0-0.1
SDA 3A Denatured Alcohol (mixture: Water, Ethyl & Methyl Alcohol)					50-60
A. Methyl Alcohol (CAS #67-56-1)	5.6g/kg	YES	200ppm	200ppm	-
B. Ethyl Alcohol (CAS #64-17-5)	13.7g/kg	-	1000	1000	-
Sodium Nitrite (CAS #7632-00-0)	85 mg/kg	-	NE	NE	0.1-0.5
Ammonium Hydroxide (CAS #1336-21-6)	350mg/kg		25 (ammonia)	50	0.0-0.5
Liquefied Petroleum Gas (CAS #68476-85-7)	NE		1000	1000	25-30

Unidentified ingredients are not considered hazardous under the Federal Hazard Communication Standard.

Components Listed As A Suspected Carcinogen: None

## Section III - Physical Characteristics

Boiling Point: NA                      Vapor Pressure (psig): 125@130F                      Specific Gravity (H2O=1): <1.0  
 Solubility/Water: Appreciable                      Vapor Density (AIR=1): >1                      Evaporation Rate (Ether = 1): <1  
 Appearance and Odor: Wet misty spray, floral odor.

## Section IV - Fire and Explosion Hazard Data

**Aerosol Flammability:** This product is considered to be Flammable as Described in 16CFR 1500.45.

**Flammable Limits - % Volume in Air (Propellant):**                      LEL: 1.8                      UEL: 9.2

**Extinguishing Media:** Carbon dioxide, foam and/or dry chemical may be used.

**Special Fire Fighting Procedures:** Containers should be cooled with water to prevent vapor pressure build up.

Use equipment or shielding, as required, to protect personnel from bursting, rupturing or venting containers.

**Unusual Fire and Explosion Hazards:** At elevated temperatures (over 54C-130F) Containers may vent or burst.

## Section V - Reactivity Data

**Stability:** Stable

**Hazardous Polymerization:** NA

**Incompatibility (Materials to Avoid):** Strong oxidizers, heat and flame.

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide and additional toxic chemicals may be formed in small amounts.

**Conditions to Avoid:** Do not store above 54C-130F. Keep away from heat, direct sunlight, open flames or sparks. Dropping of containers may cause bursting.

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**Section VI - Health Hazard Data**

Route(s) of Entry -                      Inhalation: X                      Eyes: X                      Skin: X                      Ingestion: X

Signs and Symptoms of Exposure: Respiratory irritation. High concentrations may lead to drying, irritation.

Medical Conditions Generally Aggravated by Exposure: Preexisting skin or eye disorders may be aggravated by exposure to this product.

Emergency and First Aid Procedures: Eye Contact: Flush eyes with plenty of water for 15 minutes while holding eyelids open. Get medical attention if irritation persists. Skin Contact: Remove contaminated clothing. Flush skin with water, follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. Inhalation: Remove victim to fresh air and provide oxygen if breathing is difficult. Five artificial respiration if not breathing. Get medical attention. Ingestion: Get medical attention.

---

**Section VII - Precautions for Safe Handling and Use**

Releases or Spills: Remove all sources of ignition and ventilate area. Soak up spill with an inert absorbent and place into a designated disposal container. Consult local regulatory agency for proper disposition of material.

Waste Disposal Method: Do not puncture or incinerate containers. When contents are depleted continue to depress button until all gas is expelled. Dispose of container in accordance with local, state, and federal regulations.

Handling And Storing: Avoid breathing vapor. Keep away from heat and flame. Use with adequate ventilation. Do not puncture or incinerate containers. Do not expose to direct sunlight or store at temperatures above 130F (54C). Store as Level 2 Aerosol (NFPA 30B).

Other Precautions: Please read and follow the directions on the product label; they are your best guide to using this product in the most effective way, and give the necessary safety precautions to protect your health.

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**Section VIII - Employee Protection**

Respiratory Protection (Type): None required if good ventilation is maintained. If exposure exceeds occupational exposure limits (Sec. II), use a NIOSH approved respirator to prevent overexposure.

Ventilation: local exhaust is adequate under normal conditions, mechanical ventilation is optional.

Protective Gloves: Optional: Chemical resistant gloves*.

Eye Protection: Chemical safety glasses are recommended*.

Other Protective Clothing or Equipment: Wear impervious clothing to prevent skin contact.

Work/Hygienic Practices: Ensure strict sanitary conditions are conformed to when working around chemicals.

Protective clothing and equipment should be in accordance with 29 CFR 1910.132 and CFR 1910.133.

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**Section IX - Other Regulatory Controls**

Governmental Listings: Ingredients of this product are listed on the EPA/TSCA Inventory of Chemical Substances.

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**Section X - Transportation/Storage Classifications (D.O.T./NFPA)**

Shipping Name: consumer Commodity

Hazard Class: ORM-D

NG - Negligible

NA - Not Applicable

NE - Not Established

UN - Unavailable

ND - Not Determined

While the information set forth herein is believed to be accurate as of the date hereof, AFFLAB makes no warranty or guarantee, express or implied, and disclaims all liability arising out of the use of this information.

SPARTAN CHEMICAL COMPANY, INC. - MATERIAL SAFETY DATA SHEET

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label)  
CONSUME

Manufacturer's Name - Spartan Chemical Company, Inc.  
Emergency Telephone No. - 800/537-8990  
Address - 110 N. Westwood Ave., Toledo, OH 43607

NFPA RATINGS: Health-1 Fire-0 React-0  
HMIS RATINGS: Health-1 Fire-0 React-0 Pers. Prot.-B

SECTION II: HAZARDOUS INGREDIENTS

No Hazardous Ingredients at 1% or Greater Concentration

SECTION III: PHYSICAL DATA

Boiling Point - 210 F  
Specific Gravity (H₂O = 1) - 1.00  
Percent Solid by Weight - 4-8  
Vapor Pressure - 18 mm Hg @ 75 F  
Evaporation Rate (But. Ace. = 1) - <1  
Vapor Density (Air = 1) - Unknown  
Solubility in Water - Complete  
Appearance and Odor - Translucent green, pleasant fragrance  
Material Is - Liquid  
pH - 8.0-9.0

SECTION IV: FIRE & EXPLOSION HAZARD DATA

Flash Point - None  
Method Used - ASTM - D56  
Flammable Limits - N/A  
Extinguishing Media - N/A  
Special Fire Fighting Procedures - None  
Unusual Fire and Explosion Hazards - None

SECTION V: HEALTH HAZARD DATA

Effects of Overexposure - Conditions to Avoid:

Avoid contact with skin, eyes and mouth. Avoid contact with open wounds.

Repeated or prolonged skin contact may cause drying or dermatitis.  
May

cause eye irritation. Ingestion will lead to nausea or diarrhea.

Organisms are non-pathogenic but can cause infection when in contact with

open wounds. These organisms are susceptible to many commonly used antibiotics.

Threshold Limit Value - Not Established

Conditions Aggravated by Use - Unknown

Primary Routes of Entry: Skin Contact

☐ Emergency and First Aid Procedures -

Eyes: Remove contact lenses. In case of contact, flush eyes with water

for at least 15 minutes. Call a physician.

Skin: Remove contaminated clothing. Wash skin with plenty of soap

and

water. Wash clothing before reuse.

Ingestion: Drink water or milk to dilute. Do not induce vomiting unless

advised by physician or poison control center. Call a physician.

#### SECTION VI: REACTIVITY DATA

Stability: Stable X

Incompatibility (Materials to Avoid) - Strong oxidizers, strong acids or alkali compounds may inactivate biological cultures.

Hazardous Decomposition Products - CO, CO₂

Hazardous Polymerization: Will Not Occur X

#### SECTION VII: SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled -

Flush down drain to waste treatment sewer.

Waste Disposal Method - Consult local, state and federal regulations.

#### SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type) - None

Ventilation - Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

Protective Gloves (Specify Type) - Impervious gloves

Eye Protection (Specify Type) - Safety glasses or face shield

Other Protective Equipment - None

#### SECTION IX: SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storing - Avoid contact with eyes,

skin and clothing. Store in cool, dry location. Keep container tightly

sealed when not in use.

Other Precautions - Wash thoroughly after handling.

Spartan Chemical Company, Inc. - CONSUME

Ref: 29 CFR 1910:1200 (OSHA)

NAME: Thomas J. Mitchell

TITLE: Director of Research

DATE: July 18, 1996

SUPERCEDES: September 19, 1994

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# Spartan Chemical Company, Inc.

## Material Safety Data Sheet

### SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label):  
**CONSUME ECO-LYZER**  
 Product Number: 3297

Product Division:  
 Janitorial

Spartan Chemical Company, Inc.  
 1110 Spartan Drive  
 Maumee OH 43537

Product/Technical Information: 1-(800)-537-8990  
 Medical Emergency: 1-(888)-314-6171 (24 hours)  
 Chemical Leak/Spill Emergency: CHEMTREC 1-(800) 424-9300 (24 hours)

Shipping Description: Cleaning compounds, liquid, n.o.s.

NFPA Ratings:	HMIS Ratings:
Health: 3 - Serious Fire: 0 - Minimal Reactivity: 0 - Minimal	Health: 3 - Serious Fire: 0 - Minimal Reactivity: 0 - Minimal Pers. Prot. Equip.: See Section VIII

### SECTION II: HAZARDOUS INGREDIENTS

(Listed when present at 1% or greater, carcinogens at 0.1% or greater) All component chemicals are listed or exempted from listing on the "TSCA Inventory" of chemical substances maintained by the U.S. Environmental Protection Agency.

Chemical Name(s)	%Wt	CAS Registry No.	Table Z-1-A			Carcinogen
			TWA mg/m ³	STEL mg/m ³	CEILING mg/m ³	
Dialkyl dimethyl ammonium chloride	NA	68424-95-3	Not Established	Not Established	Not Established	No
Alkyl dimethyl benzyl ammonium chloride	NA	68424-85-1	Not Established	Not Established	Not Established	No
Alcohol ethoxylate	NA	34398-01-1	Not Established	Not Established	Not Established	No
Ethyl alcohol	NA	64-17-5	1900 (ACGIH)	Not Established	Not Established	No
Viable bacterial cultures	NA	NA	Not Established	Not Established	Not Established	No

### SECTION III: PHYSICAL DATA

Boiling Point: 212 °F	Vapor Pressure: Unknown
Vapor Density (AIR = 1): Unknown	Solubility in Water: Complete
pH: 6-7	Specific Gravity (H ₂ O=1): 0.99 (8.27 lbs/gal.)
Evaporation Rate (but.ace.=1): <1	Percent Solid by Weight: 5-10
Physical State: Liquid	
Appearance & Odor: Teal Color, Floral-Powder Fragrance	

### SECTION IV: FIRE & EXPLOSIVE HAZARD DATA

Flash Point: >200 °F	Method Used: ASTM-D56
Flammable Limits: Not Established	Flame Extension: N/A
Extinguishing Media: Carbon dioxide, dry chemical, synthetic foam or water.	
Special Fire Fighting Procedures: Use self-contained breathing apparatus for maximum respiratory protection. Water may be used to cool containers if not ruptured or leaking.	
Unusual Fire & Explosive Hazards: NA	

**SECTION V: HEALTH HAZARD DATA**

Threshold Limit Value: Not established

Primary Routes of Entry: Inhalation, Skin Contact, Eyes; Oral

Effects of Overexposure- Corrosive. Causes irreversible eye damage and skin burns. Harmful if absorbed through the skin. May be fatal if inhaled. May be harmful if swallowed. Do not get in eyes, on skin, or on clothing. Do not breathe vapor or spray mist. Do not swallow. The bacterial cultures in this product may cause infection if they come in contact with open wounds; broken skin or mucous membranes.

Conditions to Avoid: be fatal if inhaled. May be harmful if swallowed. Do not get in eyes, on skin, or on clothing. Do not breathe vapor or spray mist. Do not swallow. The bacterial cultures in this product may cause infection if they come in contact with open wounds; broken skin or mucous membranes.

Conditions Aggravated by Use: Preexisting skin; eye and respiratory conditions. May affect people with asthma. Individuals with impaired immune systems or function may be especially susceptible to infection by microorganisms including the bacteria used in this product.

**Emergency & First Aid Procedures:**

Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses if present after the first five minutes; then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Apply topical antiseptic agent to open wounds or broken skin. Wash contaminated clothing before reuse.

Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Inhalation: Move person to fresh air. If person is not breathing; call 911 or an ambulance then give artificial respiration; preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage.

**SECTION VI: REACTIVITY DATA**

Stability: Stable

Incompatible Materials: Strong oxidizers

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide

Hazardous Polymerization: Will Not Occur

**SECTION VII: SPILL OR LEAK PROCEDURES**

Steps to be Taken in Case Material is Released or Spilled: Small quantities may be flushed into sanitary sewer. Larger quantities should be picked up with absorbent material and disposed of in accordance with state and local regulations.

Waste Disposal Method: Same as above.

**SECTION VIII: SPECIAL PROTECTION INFORMATION**

Respiratory Protection: Wear a dust/mist filtering respirator (MSHA/NIOSH approval prefix TC-21C) or a NIOSH approved respirator with any N, R, P or HE filter when handling the concentrated product. Use of a respirator is not required when using product which has been diluted according to the directions for use.

Ventilation: Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.

Protective Gloves(Specify Type): Rubber or other waterproof gloves

Eye Protection(Specify Type): Goggles

Other Protective Equipment: Protective clothing such as an impervious apron may be useful to prevent skin contact when handling the concentrated product.

**SECTION IX: SPECIAL PRECAUTIONS**

Precautions; Handling & Storing: Keep from freezing. Wash thoroughly with soap and water after handling. Keep out of reach of children.

Other Precautions: Note: Do not use this product on food contact surfaces in preparation or storage areas. Do not use this product on food utensils; dishes or glasses. Do not use this product in patient healthcare areas or in areas frequented by individuals with impaired immune systems or function.

© SCC 10/08/2001

Name: Ronald T. Cook

Title: Manager, Regulatory Affairs

CONSUME ECO-LYZER

Effective Date: 10/08/2001

Supercedes: 07/05/2001

Ref: 29 CFR 1910.1200 (OSHA)

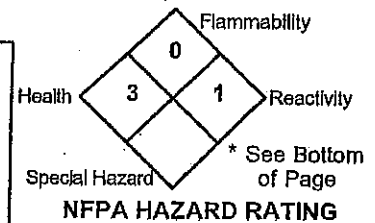
Changes: Update Sections V &amp; IX

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# MATERIAL SAFETY DATA SHEET



Manufactured by:  
**ANDERSON Chemical Company**  
 Litchfield, Minnesota 55355-1041  
 (320) 693-2477



Product Name: **CONQUER**

24-HOUR EMERGENCY PHONE #: 1-800-424-9300 (CHEMTREC)

Revised: 1/8/2007 imt  
 Supersedes: 2/28/2003

## I. IDENTIFICATION

**Chemical Name And Synonyms:**

Not applicable

**DOT Shipping Name**

Compounds, Cleaning Liquid  
 (Sodium Hydroxide/Sodium Hypochlorite)

**Chemical Family:**

Alkali

**DOT Hazard Class & I.D. Number**

Corrosive Material NA1760

# PG  
 8 II

## II. HAZARDOUS INGREDIENTS

Component	CAS NO.	%	TLV	PEL	Toxic	Hazard
Sodium Hydroxide	1310-73-2	16	2 mg/M3	2 mg/M3	NA	Corrosive to skin and eyes
Sodium hypochlorite	7681-52-9	3	NE	NE	NA	Severe irritation/burns to skin, eyes and mucous membranes.
Trade Secret	TSRN 1800		NE	NE	NA	

**Toxic chemical subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR §372).

NA: Not applicable

## III. PHYSICAL DATA

**Boiling Point:** Not established  
**Specific Gravity:** 1.252  
**Appearance:** Clear, pale yellow liquid

**Form:** Liquid  
**Solubility in Water:** Complete  
**Odor:** None

**pH, 1% Soln.:** 12.6

## IV. FIRE AND EXPLOSION HAZARD DATA

**Flashpoint:** Not Applicable

**Extinguishing Media:** Use media appropriate to surrounding fire.

**Special Fire**

**Fighting Procedures:** Although this product is not combustible, if a fire occurs in the near vicinity, good firefighting practice dictates the use of self-contained breathing apparatus and other protective gear. Cool fire-exposed containers with water.

**Unusual Fire And**

**Explosion Hazards:** If the stock solution container breaks, the solution should be handled with care as it is corrosive. Direct contact with water can cause an exothermic reaction.

## V. HEALTH HAZARD DATA

**Carcinogenic:** The raw materials used in this product are not considered to be a carcinogen by NTP, IARC, and OSHA

**Effects Of Over-exposure:** Corrosive. Causes irritation (possibly severe), burns to the eyes. May cause permanent eye damage. Causes irritation (possibly severe), burns to the skin. Causes irritation (possibly severe), burns, nausea, vomiting to the gastrointestinal tract. The severity of effects depend on concentration and how soon after exposure the area is washed.

**Emergency And First**

**Aid Procedures:** EYES: Flush with water for 15 minutes, raise eyelids for complete rinsing. Get immediate medical attention.  
 SKIN: Immediately flush with water for 15 minutes. Remove contaminated clothing and wash before reuse. Get immediate medical attention. Discard contaminated leather goods.  
 INGESTION: Do not induce vomiting. Give large quantities of water. Get immediate medical attention. Never give anything by mouth to an unconscious or convulsing person.

* NFPA Degree or Hazard: 4 = Extreme; 3 = High; 2 = Moderate; 1 = Slight; 0 = Insignificant.

Continued On Back

## VI. REACTIVITY DATA

Stability - Unstable:                      Stable: X

**Conditions To Avoid:** Mixing with water, acid or incompatible materials may cause splattering and release of large amounts of heat. Will react with some metals forming flammable hydrogen gas.

**Incompatibility:** Acids, halogenated compounds, prolonged contact with aluminum, brass, bronze, copper, lead, tin, zinc or other alkali sensitive metals or alloys. Avoid contact with leather, wool, organic nitro compounds. Reacts with strong acids and will yield chlorine gas.

**Hazardous**

**Decomposition Products:** Not applicable.

## VII. SPILL OR LEAK PROCEDURES

### Steps To Be Taken In Case Material Is Released Or Spilled:

Small spills can be diluted with a large amount of water and flushed to sanitary sewer. For large spills, wear appropriate personal protection equipment. Completely contain spilled material with dikes or sandbags, etc., and prevent run-off into ground or surface waters or sewers. Recover as much material as possible into containers for disposal or reuse. Remaining material may be diluted with water; neutralize chlorine by adding sodium sulfite, sodium bisulfite or sodium thiosulfate; then neutralize alkalinity by adding a dilute acid. Flush spill area with water followed by a liberal covering of sodium bicarbonate. Neutralization products, both solid and liquid, must be recovered for disposal.

**Waste Disposal Method:** Dispose of in accordance with federal, state or local disposal authorities.

## VIII. SPECIAL PROTECTION INFORMATION

**Respiratory Protection:** Respiratory protection is not required for normal use. If mist level is high, wear NIOSH approved respirator.

**Ventilation:** Should be adequate to keep mist level below the TLV.

**Protective Gloves:** Rubber or chemical resistant.

**Eye Protection:** Safety glasses with side shields. Chemical goggles, face shield if appropriate.

**Protective Clothing:** In situations where contact with can be anticipated, protective clothing should be worn.

## IX. SPECIAL PRECAUTIONS

### Precautions To Be Taken In Handling And Storing:

Do not get in eyes, on skin, or clothing. Wash thoroughly after handling. Wear appropriate protective clothing/equipment. Do not breathe vapors or mists. Use with adequate ventilation. Keep containers tightly closed and properly labeled. Safety shower and eyewash stations should be provided in the areas where this product is handled. Containers that have been emptied will retain product residue and should be handled as if they were full.

**Other Precautions:** Not applicable.

## X. REVISED INFORMATION

**MSDS Status:** Supplier update



## 1. PRODUCT AND COMPANY IDENTIFICATION

**NAME: CONCENTRATED JEWEL POT & PAN DETERGENT**

**USE:** MANUAL DISHWASH

**LABEL:** ARRAY

**MSDS # 100452P GFS REORDER # 329436, 421782**

US CHEMICAL, 316 HART STREET, WATERTOWN WI 53094 USA

MEDICAL EMERGENCY #: 1-800-851-7145 EXT. 075 USA

SPILL EMERGENCY #: 1-800-424-9300 USA

PRODUCT INFORMATION #: 1-800-558-9566 (8 A.M. TO 5 P.M. CST MONDAY TO FRIDAY)

INTERNET ADDRESS: [WWW.USCHEMICAL.COM](http://WWW.USCHEMICAL.COM)

REVIEWED 4-13-06 REVISED 4-13-06 SECTION REVISED: 1

## 2. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** CAUTION! MAY BE MILDLY IRRITATING TO THE EYES.

**PRINCIPLE ROUTES OF EXPOSURE:** EYES, INGESTION

**POTENTIAL ACUTE HEALTH EFFECTS**

**EYES:** MAY BE MILDLY IRRITATING TO EYES.

**SKIN:** PROLONGED EXPOSURE TO CONCENTRATE MAY CAUSE MILD IRRITATION TO HIGHLY SENSITIVE SKIN.

**INHALATION:** NONE KNOWN.

**INGESTION:** MAY CAUSE ABDOMINAL DISCOMFORT, NAUSEA, VOMITING AND DIARRHEA.

**MEDICAL CONDITIONS AGGRAVATED:** PERSONS WITH PRE-EXISTING SKIN DISORDERS MAY BE MORE SUSCEPTABLE TO IRRITATING EFFECTS.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENT	CAS #	% BY WT	LC50/LD50
ETHYL ALCOHOL	64-17-5	BELOW 1.5	N.A.V.

STATE RIGHT TO KNOW: THIS PRODUCT CONTAINS:  
 WATER/7732-18-5, SODIUM DODECYLBENZENESULFONATE/25155-30-0,  
 COCAMIDE DEA/68603-42-9, SODIUM LAURETH SULFATE/9004-82-4

**4. FIRST AID MEASURES**

Page 2 of 4

**EYES:** FLUSH IMMEDIATELY WITH PLENTY OF WATER. IF IRRITATION DEVELOPS, GET MEDICAL ATTENTION.

**SKIN:** FLUSH IMMEDIATELY WITH PLENTY OF WATER. IF IRRITATION DEVELOPS, GET MEDICAL ATTENTION.

**INHALATION:** NO SPECIFIC FIRST AID MEASURES ARE REQUIRED.

**INGESTION:** DO NOT INDUCE VOMITING. IF PATIENT IS CONSCIOUS AND CAN SWALLOW, ADMINISTER MILK OR WATER.

**ADMINISTER FIRST AID TREATMENT AS STATED ABOVE, THEN CALL 1-800-851-7145 EXT. 075 OR CONTACT PHYSICIAN FOR FURTHER MEDICAL INSTRUCTIONS.**

**NOTE TO PHYSICIAN:** CALL 1-800-851-7145 EXT. 075 FOR ASSISTANCE WITH THE MANAGEMENT OF EXPOSURES.

**5. FIRE-FIGHTING MEASURES**

**FLAMMABILITY:** NO HAZARD.

**FLASH POINT:** N.A.P.

**PRODUCTS OF COMBUSTION:** SEE SECTION 10.

**SUITABLE EXTINGUISHING MEDIA:** FOR FIRES IN AREA, USE APPROPRIATE MEDIA. FOR EXAMPLE: WATER SPRAY, DRY CHEMICAL, CARBON DIOXIDE, OR ALCOHOL FOAM.

**SPECIFIC HAZARDS:** N.A.P.

**SPECIFIC METHODS:** NORMAL FIRE FIGHTING PROCEDURES MAY BE USED.

**6. ACCIDENTAL RELEASE MEASURES**

**PERSONAL PRECAUTIONS:** SEE SECTION 8.

**SPILL RESPONSE:** EVACUATE UNPROTECTED PERSONNEL FROM AREA. WEAR PROPER PROTECTIVE EQUIPMENT INCLUDING RUBBER BOOTS. VENTILATE AREA IF NEEDED. STOP LEAK IF YOU CAN DO SO WITHOUT RISK. DIKE OR DAM LARGE SPILLS. AVOID DIRECT DISCHARGE TO SEWER AND SURFACE WATERS. PUMP TO CONTAINER OR SOAK UP WITH NON-COMBUSTIBLE INERT ABSORBENT MATERIALS. AFTER SPILL COLLECTION, FLUSH AREA WITH WATER AND FOLLOW WITH NORMAL CLEAN-UP PROCEDURES. BE CAREFUL AS SPILLS ARE SLIPPERY.

**7. HANDLING AND STORAGE**

**HANDLING:** FOLLOW ALL LABEL DIRECTIONS. INSTRUCT PERSONNEL ABOUT PROPER USE, HAZARDS, PRECAUTIONS, AND FIRST AID MEASURES.

AVOID INGESTION AND CONTACT WITH EYES. DO NOT TASTE OR SWALLOW.

PRODUCT RESIDUE MAY REMAIN ON OR IN EMPTY CONTAINERS.

HANDLE CAREFULLY TO AVOID DAMAGING CONTAINER.

**STORAGE:** ROTATE STOCK REGULARLY. KEEP CONTAINER CLOSED WHEN NOT IN USE.

AVOID TEMPERATURES BELOW 35°F OR ABOVE 120°F. PROTECT FROM FREEZING.

STORAGE AT AMBIENT TEMPERATURES IN A DRY AREA OUT OF DIRECT SUNLIGHT IS

RECOMMENDED. KEEP AWAY FROM FOOD AND DRINK. KEEP OUT OF CHILDREN'S REACH.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

Page 3 of 4

**EXPOSURE LIMITS:** ETHYL ALCOHOL - 1000 PPM TWA OSHA PEL / ACGIH TLV

**ENGINEERING CONTROLS:** NONE REQUIRED. GENERAL ROOM VENTILATION IS ADEQUATE.

**PERSONAL PROTECTION**

**EYES:** NONE REQUIRED WITH NORMAL USE.

**HANDS:** FOR PROLONGED OR REPEATED CONTACT WITH SKIN: RUBBER GLOVES.

**RESPIRATORY:** N.AP.

**FEET:** N.AP.

**BODY:** N.AP.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**COLOR:** PINK

**ODOR :** FLORAL

**pH CONCENTRATE:** 8.4

**pH @ 2500 PPM SOLUTION:** N.AP.

**pH @ USE DILUTION:** N.AP.

**PHYSICAL STATE:** LIQUID

**SPECIFIC GRAVITY:** 1.020

**VISCOSITY:** HIGH

**BOILING POINT:** N.AP.

**MELTING POINT:** N.AP.

**FLASH POINT:** N.AP.

**UEL:** N.AP.

**LEL:** N.AP.

**EVAPORATION RATE:** N.AP.

**ODOR THRESHOLD:** N.AP

**VAPOR PRESSURE:** N.AP

**VAPOR DENSITY:** N. AP.

**COEFF. OIL/WATER:** N.AP.

**WATER SOLUBILITY:** COMPLETE

**OTHER:** N.AP.

**10. STABILITY AND REACTIVITY**

**STABLE:** YES

**CONDITIONS TO AVOID:** AVOID TEMPERATURES BELOW 35°F OR ABOVE 120°F.

**MATERIALS TO AVOID:** AVOID MIXING DIRECTLY WITH ANY OTHER CLEANING PRODUCT. AVOID OXIDIZING AGENTS. MIX ONLY WITH WATER.

**DECOMPOSITION PRODUCTS:** FIRE OR MIXING WITH INCOMPATIBLE MATERIALS MAY PRODUCE OXIDES OF SULFUR AND OTHER TOXIC OR IRRITATING FUMES.

**POSSIBILITY OF HAZARDOUS REACTIONS:** N.AP.

**11. TOXICOLOGICAL INFORMATION**

**ACUTE EFFECTS:** SEE SECTION 2.

**CHRONIC EFFECTS:** NONE KNOWN. NO REPORTABLE CARCINOGENS, MUTAGENS, SENSITIZERS, SYNERGISTIC MATERIALS, TERATOGENS, OR REPRODUCTIVE TOXINS.

**LC50/LD50:** N.AV.

**TARGET ORGANS:** NONE KNOWN.

**OTHER TOXIC EFFECTS:** NONE KNOWN.

**12. ECOLOGICAL INFORMATION**

Page 4 of 4

NOT AVAILABLE.

**13. DISPOSAL CONSIDERATIONS**

**DISPOSAL METHOD:** COMPLY WITH ALL FEDERAL, STATE, PROVINCIAL AND LOCAL LAWS AND REGULATIONS. CONSULT STATE AND LOCAL AUTHORITIES FOR RESTRICTIONS ON DISPOSAL OF CHEMICAL WASTE. MANAGE CHEMICAL WASTES THROUGH AN APPROVED WASTE TREATMENT FACILITY. DO NOT REUSE EMPTY CONTAINER. RINSE EMPTY CONTAINER THOROUGHLY WITH WATER BEFORE DISCARDING CONTAINER IN ACCORDANCE WITH CURRENT LOCAL COMMUNITY CODES. PLEASE RECYCLE EMPTY CONTAINER WHENEVER POSSIBLE.

**14. TRANSPORT INFORMATION**

DOT/TDG: NOT REGULATED  
DOT RQ: N.AP.  
DOT ERG #: N.AP.

**15. REGULATORY INFORMATION**

EPA CERCLA RQ: N.AP.  
EPA REGISTERED: NO  
EPA %VOC: 0.30  
EPA VOC RULE: PRODUCT COMPLIES WITH THE EPA VOC EMISSIONS STANDARD.  
KOSHER (CRC): YES  
OSHA HAZARDOUS: YES  
PHOSPHORUS CONTENT: 0.00%  
PROPOSITION 65: N.AP.  
SARA 311/312 HAZARDS: ACUTE  
SARA 313 CHEMICALS: N.AP.  
STATE RIGHT TO KNOW: SEE SECTION 3 FOR STATE RTK CHEMICAL NAMES.  
TSCA INVENTORY STATUS: ALL COMPONENTS ARE LISTED ON THE INVENTORY.  
WHMIS CLASS: D-2B

**16. OTHER INFORMATION**

NFPA RATING: HEALTH-1/FLAMMABILITY-0/REACTIVITY-0/SPECIAL HAZARD-N.AP.  
HMIS RATING: HEALTH-1/FLAMMABILITY-0/REACTIVITY-0/PERSONAL PROTECTION-SEE 8.0

N.AV. = NOT AVAILABLE    N.AP. = NOT APPLICABLE

PREPARED BY: HEALTH AND SAFETY

**NOTICE TO READER**

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MATERIAL SAFETY DATA 7775 27 1 4

NEPA.....704

CLEARADVANTAGE TM SHOCK TREATMENT  
FMC POOL SHOCK

RATINGS:  
FIRE - 0  
HEALTH - 1  
REACTIVITY - 1  
SPECIFIC HAZARD -

EMERGENCY TELEPHONE NOS:

MEDICAL (303) 595-9048 CALL COLLECT  
OTHER (716) 876-8300 CALL COLLECT

-----  
REVISION: EFFECTIVE: 04/02/90 PRINTED: 01/30/91  
-----

PREPARED FOR USE BY..... DOWNERS GROVE

===== IDENTIFICATION =====

INFORMATION PROVIDED BY...: PEROXYGEN CHEMICALS DIVISION  
FMC CORPORATION  
2000 MARKET STREET  
PHILADELPHIA, PA. 19103  
(215) 299-6000

===== CONTENTS =====

LATEST REVISIONS NOTED IN BOLD PRINT FOR 30  
DAYS FROM DATE OF REVISION,  
ADDITIONAL TECHNICAL DATA AT END OF MSDS.

===== PRODUCT INFORMATION =====

SYNONYMS.....: SODIUM PERSULFATE MIXTURE  
SHIPPING NAME - DOT.....: NOT REGULATED  
IATA.....: NOT REGULATED  
IMCO.....: NOT REGULATED  
FORMULA.....: SODIUM PERSULFATE MIXTURE  
CHEMICAL FAMILY.....: PEROXYGEN  
PRODUCT USES.....: FMC POOL SHOCK IS USED FOR SHOCK  
TREATMENT OF SWIMMING POOL AND SPA WATER.

===== PRECAUTIONARY INFORMATION =====

PRECAUTIONARY STATEMENT...: HEALTH: AIRBORNE DUST MAY BE IRRITATING TO EYES,  
(PLEASE USE THIS STATEMENT TO NOSE, THROAT AND SKIN UPON CONTACT. CONTINUOUS  
SATISFY THE IN-PLANT CONTACT MAY PRODUCE SKIN DERMATITIS. INHALATION  
LABELING REQUIREMENTS OF THE OSHA HAZARD SHORTNESS OF BREATH IN ALLERGIC PERSONS.  
COMMUNICATIONS STANDARD PHYSICAL: DECOMPOSES IN STORAGE UNDER CONDITIONS  
29CFR 1910.1200) OF EXCESSIVE HEAT AND OR MOISTURE (WATER, WATER  
VAPOR) CAUSING RELEASES OF OXIDES OF SULPHUR,  
DENSE MIST OF SULPHURIC ACID AND OXYGEN WHICH  
SUPPORTS COMBUSTION, REACTS WITH ACIDS, ALKALIS,  
HALIDES, COMBUSTIBLES AND HEAVY METALS TO

MATERIAL SAFETY DATA 7775 27 1 4

NFPA.....704

CLEARADVANTAGE TM SHOCK TREATMENT  
FMC POOL SHOCK

RATINGS:  
FIRE - 0  
HEALTH - 1  
REACTIVITY - 1  
SPECIFIC HAZARD -

EMERGENCY TELEPHONE NOS:

MEDICAL (303) 595-9048 CALL COLLECT  
OTHER (716) 876-8300 CALL COLLECT

-----  
REVISION: EFFECTIVE: 04/02/90 PRINTED: 01/30/91  
-----

===== PRECAUTIONARY INFORMATION =====

RELEASE OXYGEN.

===== INGREDIENTS =====

CAS# AND COMPONENT.....: MATERIAL/COMPONENT: DISODIUM PEROXYDISULFATE  
(SODIUM PERSULFATE)  
CAS #.....: 7775-27-1  
INERT INGREDIENT...: NOT HAZARDOUS BY OSHA  
DEFINITION

CANADIAN PRODUCT  
IDENTIFICATION NUMBER....: NONE

===== PHYSICAL DATA =====

MELTING/FREEZING POINT...: DECOMPOSES  
BOILING POINT.....: NOT APPLICABLE  
VAPOR PRESSURE.....: NONE  
VAPOR DENSITY (AIR = 1)...: NOT APPLICABLE  
ROOM TEMPERATURE  
APPEARANCE AND STATE: WHITE CRYSTALS  
ODOR.....: NONE  
SPECIFIC GRAVITY (H2O =1): 2.72  
SOLUBILITY IN H2O % BY WT: 32% AT 20*C / 40% AT 25*C / 44% AT 35*C  
% VOLATILES BY VOLUME....: NOT APPLICABLE  
EVAPORATION RATE  
(BUTYL ACETATE = 1)...: NOT APPLICABLE  
PH (AS IS).....: NOT APPLICABLE  
PH (1% SOLUTION).....: TYPICALLY 8.5 - 9.5  
ODOR THRESHOLD.....: NOT APPLICABLE  
DENSITY (GMS/ML).....: NOT AVAILABLE  
COEFF. WATER/OIL DIST....: NOT AVAILABLE

CLEARADVANTAGE TM SHOCK TREATMENT  
EMC POOL SHOCK

RATINGS:  
FIRE - 0  
HEALTH - 1  
REACTIVITY - 1  
SPECIFIC HAZARD -

EMERGENCY TELEPHONE NOS:

MEDICAL (303) 595-9048 CALL COLLECT  
OTHER (716) 876-8300 CALL COLLECT

REVISION: EFFECTIVE: 04/02/90 PRINTED: 01/30/91

===== FIRE, EXPLOSION AND REACTIVITY DATA =====

FLASH POINT.....: NONCOMBUSTIBLE  
AUTOIGNITION TEMPERATURE.: NONCOMBUSTIBLE  
FLAMMABLE LIMITS UPPER...: NOT APPLICABLE  
(AIR) LOWER...: NOT APPLICABLE  
EXTINGUISHING MEDIA.....: DELUGE WITH WATER.  
SPECIAL FIREFIGHTING.....: NONCOMBUSTIBLE-THE ACTIVE INGREDIENT, SODIUM PER-  
PROCEDURES SULFATE, IS A STRONG OXIDIZER & MAY DECOMPOSE  
UNDER CONDITIONS OF EXTREME HEAT TO PRODUCE AN  
ACID MIST. DO NOT USE CARBON DIOXIDE OR OTHER  
GAS-FILLED EXTINGUISHERS, THEY WILL HAVE NO  
EFFECT ON DECOMPOSING SODIUM PERSULFATE. IN CASE  
OF FIRE OR DECOMPOSITION CONDITIONS, USE A SCBA  
WITH FULL FACE PIECE, ACID RESISTANT CLOTHING, &  
DELUGE WITH WATER.  
DECOMPOSITION OF FIRE AND .....: DECOMPOSES WHEN HEATED WITH LIBERATION OF  
EXPLOSION HAZARD OXYGEN WHICH MAY INTENSIFY FIRE IN COMBUSTIBLE  
SURROUNDINGS.  
STABILITY.....: UNSTABLE; DECOMPOSES WITH EXOTHERMIC REACTION  
HAZARDOUS POLYMERIZATION.: WILL NOT OCCUR  
CONDITIONS TO AVOID.....: HEAT, MOISTURE, REDUCING AGENTS, HEAVY METALS,  
ORGANIC COMPOUNDS  
MAJOR CONTAMINANTS THAT...: HEAVY METALS, REDUCING AGENTS, MOISTURE.  
CONTRIBUTE TO INSTABILITY  
INCOMPATIBILITY.....: ACIDS, ALKALIS, HALIDES (FLUORIDES, CHLORIDES,  
BROMIDES), COMBUSTABLE MATERIALS, HEAVY METALS,  
OXIDIZABLE MATERIALS, ORGANIC COMPOUNDS  
HAZARDOUS DECOMPOSITION...: FUMES OF SULFURIC ACID MIST, OXYGEN WHICH  
PRODUCTS SUPPORTS COMBUSTION AND TOXIC FUMES OF THE  
OXIDES OF SULFUR AND NITROGEN  
SENSITIVITY TO MECH.....: NOT AVAILABLE  
IMPACT  
SENSITIVITY TO STATIC....: NOT AVAILABLE  
DISCHARGE

===== ROUTES OF EXPOSURE =====

EYE CONTACT.....: MILDLY IRRITATING (RABBIT) EMC STUDY  
190-1111

CLEARADVANTAGE TM SHOCK TREATMENT  
FMC POOL SHOCK

NEPA.....704

RATINGS:

FIRE - 0  
HEALTH - 1  
REACTIVITY - 1  
SPECIFIC HAZARD -

EMERGENCY TELEPHONE NOS:

MEDICAL (303) 595-9048 CALL COLLECT  
OTHER (716) 876-8300 CALL COLLECT

REVISION:

EFFECTIVE: 04/02/90

PRINTED: 01/30/91

===== ROUTES OF EXPOSURE =====

SKIN CONTACT.....: NON-IRRITATING (RABBIT)

NON-SENSITIZING (GUINEA PIG)

FMC STUDY

I90-1112

FMC STUDY

I90-1113

FMC STUDY

I90-1114

SKIN ABSORPTION.....: LD50 > 2000 MG/KG (RAT)

INHALATION.....: NO DATA AVAILABLE FOR THE MIXTURE.

INGESTION.....: MODERATELY TOXIC

LD50 (RAT) = 679 MG/KG (MALE);  
487 MG/KG (FEMALE); 575 MG/KG  
(COMBINED)

FMC STUDY

I90-1110

===== EXPOSURE LIMITS =====

PROPOSED TLV 5 MG/M3 AS  
8208 FOR 8 HRS.

SOURCE  
ACGIH

DATE  
1985-86

NOTE: IN 1986-87 ACGIH LISTED PERSULFATES IN  
APPENDIX F (CHEMICAL SUBSTANCES AND OTHER  
ISSUES UNDER STUDY) AND DID NOT RECOMMEND  
A TLV.

===== EFFECTS OF OVEREXPOSURE =====

ACUTE EXPOSURE.....: LOW TOXICITY BY THE DERMAL AND INHALATION ROUTES  
OF EXPOSURE; MODERATELY TOXIC BY THE ORAL ROUTE.  
EXPOSURE MAY CAUSE SLIGHT IRRITATION OF THE  
UPPER RESPIRATORY TRACT, SKIN, EYES OR MUCOUS  
MEMBRANES.



**MATERIAL SAFETY DATA SHEET**

NFPA RATING: Health = 1 Flammability = 0 Reactivity = 0

HMIS RATING: Health = 1 Flammability = 0 Reactivity = 0

**SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (0678C)****Manufacturer's Name:** HILLYARD INDUSTRIES**Product Name:** CLEAN ACTION**Address:** 302 North Fourth Street**Date Prepared:** May 4, 1994

St. Joseph, MO 64501

**Prepared by:** Regulatory Affairs Department**Emergency Telephone No.:** (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)**Other information calls:** (816)233-1321(Ext. 303)**SECTION II -- INGREDIENTS/IDENTITY INFORMATION****Components****(Specific Chemical Identity:****CAS#****OSHA PEL****ACGIH  
TLV****OTHER LIMITS  
RECOMMENDED****%****Common Name(s)**

Water	7732-18-5	none	none	N/A	---
Sodium citrate	68-04-2	not established	not established	*	2-6
Akyl imino acid, sodium salt	64972-19-6	none	none	N/A	---
Linear primary alcohol ethoxylate	68439-46-3	not established	not established	N/A	---
Sodium xylene sulfonate	1300-72-7	not established	not established	N/A	---

* OSHA, Particles not otherwise regulated: Total dust PEL = 15 mg/M³; respirable dust = 5 mg/M³; ACGIH = 10 mg/M³.**SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS****Boiling Point:** 216°F**Specific Gravity (H₂O = 1):** 25°C = 1.04 & 39°C = 1.04**Vapor Pressure (mm Hg.):** 17.7**Percent Volatile by Volume (%):** 89**Vapor Density (AIR = 1):** 0.6**Evaporation Rate (ethyl ether = 1):** slower than 1**Solubility in Water:** appreciable**Appearance and Odor:** clear liquid; herbal odor**pH (concentrate) =** 6-8**SECTION IV -- FIRE AND EXPLOSION HAZARD DATA****Flash point:** none (T.C.C.)**Flammable Limits:** LEL = N/A UEL = N/A**Extinguishing Media:** Water fog, carbon dioxide, foam, dry chemical**Special Fire Fighting Procedures:** Self-contained positive pressure breathing apparatus and protective clothing should be worn in fighting fires involving chemicals.**Unusual Fire and Explosion Hazards:** N/A**SECTION V -- PHYSICAL HAZARDS****Stability:** Stable**Conditions to Avoid:** N/A**Incompatibility (Materials to Avoid):** Avoid strong oxidizing agents or strong mineral acids.**Hazardous Decomposition Products or Byproducts:** Decomposition products under fire conditions: fumes of ammonia, carbon monoxide, carbon dioxide, oxides of nitrogen and various hydrocarbons**Hazardous Polymerization:** Will not occur**Conditions to Avoid:** N/A**SECTION VI -- HEALTH HAZARD DATA****Routes of entry:** Inhalation? No Skin? No Ingestion? No**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. May cause eye irritation. Based on product testing, not a skin irritant per FHSA, CFR 15, Chapter IIc, paragraph 1500.41. Per acute oral toxicity testing on product, 0 mortality at 5 g/kg; acute inhalation (1 hr.) toxicity limit test = 0 mortality.

2. None known by the manufacturer.

**SECTION VI -- HEALTH HAZARD DATA cont.**

**Chemical listed as Carcinogen or Potential Carcinogen:**

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater or equal to 0.1%.

**Signs and Symptoms of Exposure:** Concentrate may be irritating to eyes if not removed promptly. Breathing of highly concentrated vapors or spray mists may cause irritation to the respiratory tract.

**Medical Conditions Generally Aggravated by Exposure:** N/A

**Emergency and First Aid Procedures:** In case of contact, immediately flush eyes with plenty of water for 15 minutes; get medical attention. If inhaled, remove to fresh air. If breathing is difficult, get medical attention.

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Pick up with mop or wet vac and wash away with water.

Spills of concentrate should be picked up with wet vac and rinsed thoroughly.

**Waste Disposal Method:** Wash down sewer with large quantity of water. Container disposal: Triple rinse (or equivalent), then offer clean, dry container for recycling or reconditioning.

**Precautions To Be Taken In Handling And Storing:** Freezing of product may rupture container. Product shelf life is best retained by storage at 45-100 °F temperature.

**Other Precautions:** This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Sec. 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR Part 372.

**SECTION VIII -- CONTROL MEASURES:**

**Respiratory Protection (Specify Type):** Not required

**Ventilation:**

**Local Exhaust =** Not required      **Mechanical (General) =** N/A      **Special =** N/A      **Other =** N/A

**Protective Gloves:** None required      **Eye Protection:** Safety goggles suggested where splash of concentrate is a concern

**Other Protective Clothing or Equipment:** None required

**Work / Hygienic Practices:** Wash thoroughly after handling

**SECTION IX - TRANSPORTATION INFORMATION:**

**Applicable regulations:** 49 CFR = no; IMCO = no; IATA = no

**Proper shipping name:** Cleaning compound

**UN No.:** not applicable      **Limited Qty.:** not applicable      **Hazard Class =** not applicable

**Labels required:** not required      **DOT Exception:** not applicable

**EPA Hazardous waste number / code:** not listed

**Hazardous waste characteristics:**

**Ignitability =** not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable

**DISCLAIMER OF WARRANTIES**

**NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.**

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

**THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.**

(169300)

#902

**MATERIAL SAFETY DATA SHEET**

NFPA RATING: Health = 1 Flammability = 0 Reactivity = 0  
HMIS RATING: Health = /1 Flammability = 0 Reactivity = 0

**SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (#898A)**

Manufacturer's Name: HILLYARD INDUSTRIES Product Name: CLEAN ACTION II  
Address: 302 North Fourth Street Date Prepared: August 17, 1998  
St. Joseph, MO 64501 Prepared by: Regulatory Affairs Department  
Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.) Other information calls: (816) 233-1321 (Ext. 2303)  
<http://www.hillyard.com>

**SECTION II -- INGREDIENTS/IDENTITY INFORMATION**

**Components**

(Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	none	none	N/A	---
Propylene Glycol N-Propyl Ether	1569-01-3	not established	not established	N/A	---
Sodium Lauryl Sulfate	151-21-3	not established	not established	N/A	---
Octylphenoxypolyethoxy Ethanol	9036-19-5	not established	not established	N/A	---

VOS = 0.45 lbs./gal. with water; or when diluted 4 oz./gallon = less than 1 %

**SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS**

Boiling Point: 216°F Specific Gravity (H₂O = 1): 25°C = 1.00 & 39°C = 1.00  
Vapor Pressure (mm Hg.): 17.4 Percent Volatile by Volume (%): 96.4%  
Vapor Density (AIR = 1): 0.8 Evaporation Rate (ethyl ether = 1): slower than 1  
Solubility in Water: complete Appearance and Odor: white liquid, fresh floral fragrance  
pH (concentrate) = 9-9.8

**SECTION IV -- FIRE AND EXPLOSION HAZARD DATA**

Flash point: None (T.C.C.) Flammable Limits: LEL = N/A UEL = N/A  
Extinguishing Media: N/A  
Special Fire Fighting Procedures: None  
Unusual Fire and Explosion Hazards: None

**SECTION V -- PHYSICAL HAZARDS**

Stability: Stable Conditions to Avoid: N/A  
Incompatibility (Materials to Avoid): None known  
Hazardous Decomposition Products or Byproducts: None known  
Hazardous Polymerization: Will not occur Conditions to Avoid: N/A

**SECTION VI -- HEALTH HAZARD DATA**

Routes of entry: Inhalation? No Skin? No Ingestion? No

**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. Not a primary skin irritant per Federal Hazardous Substance Act. Prolonged contact with skin may cause slight irritation. A Primary eye irritant per the Federal Hazardous Substance Act. Concentrate not acutely toxic orally at 5 g/kg. Prolonged overexposure to dry residue may cause nose and throat irritation. A single brief (minutes) inhalation exposure is not likely to cause adverse effects. Not acutely toxic at 46.7 mg./L. (actual concentration = 46.7 mg./L.) Prolonged overexposure by inhalation may have anesthetic or narcotic effects. Notice: Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. 2. None known by Hillyard Industries.

**SECTION VI -- HEALTH HAZARD DATA continued.**

**Chemical listed as Carcinogen or Potential Carcinogen:**

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

**Signs and Symptoms of Exposure:** Overexposure may cause drowsiness, headache and uncoordination.

**Medical Conditions Generally Aggravated by Exposure:** Respiratory tract irritations may be aggravated by nuisance dust from excess dried solids.

**Emergency and First Aid Procedures:** If swallowed, get medical attention. In case of contact, immediately flush eyes or skin with plenty of water for 15 minutes. If skin irritation persists, get medical attention. Inhalation - If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Large spill: Absorb with an inert material such as sand, earth or vermiculite. Small spill: Pick up with wet vac or mop.

**Waste Disposal Method:** Dispose of waste in accordance with state and local regulations. Container disposal: Triple rinse (or equivalent), then offer clean, dry container for recycling or reconditioning.

**Precautions To Be Taken In Handling And Storing:** Prevent product from entering drinking water supplies or streams.

**Other Precautions:** This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR Part 372.

**SECTION VIII -- CONTROL MEASURES**

**Respiratory Protection (Specify Type):** None required when used per label directions.

**Ventilation:**

**Local Exhaust =** Not necessary **Mechanical (General) =** Recommended **Special =** N/A **Other =** N/A

**Protective Gloves:** Not necessary **Eye Protection:** Not necessary

**Other Protective Clothing or Equipment:** Wear trousers and long sleeved shirt.

**Work / Hygienic Practices:** Wash thoroughly after handling.

**SECTION IX - TRANSPORTATION INFORMATION**

**Applicable regulations:** 49 CFR = no; IMCO = no; IATA = no.

**Proper shipping name:** Cleaning compound

**UN No.:** not applicable **Limited Qty.:** not applicable **Hazard Class =** not applicable

**Labels required:** not required **DOT Exception:** not applicable

**EPA Hazardous waste number / code:** not listed

**Hazardous waste characteristics:**

**Ignitability =** not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable

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**MATERIAL SAFETY DATA SHEET**

COMPLIES WITH OSHA'S HAZARD COMMUNICATION STANDARD (29CFR 1910.1200)

**SECTION I - PRODUCT IDENTIFICATION**

Product Name: CITRA SHINE  
Product Number: 458  
Product Type: AEROSOL  
Supplier's Name: One Way Products  
Supplier's Address: 433 E. Ransom St., Kalamazoo, MI 49007  
D.O.T. Hazard Class: CONSUMER COMMODITY - ORM-D

Formula: Proprietary  
Date Prepared: 11/24/97  
Emergency Phone: (800) 228-5635  
Information Phone: (616) 343-3772  
Date printed: 5/13/99

HMIS Rating (Based on Aerosol Conc.):  
0-Minimal 1- Slight 2- Moderate  
3- Serious 4- Extreme  
HEALTH: 0 FIRE: 1 REACTIVITY: 0  
Personal Protection: A

**SECTION II - INGREDIENTS**

CHEMICAL NAME	CAS #	%WT	313/Chem	Skin	Carcinogen	PEL	TWA/TLV
Food Grade Mineral Oil	8042-47-5	10-20	NO	NO	NO	N/E	N/E
Citrus Terpene	5989-27-5	01-05	NO	NO	NO	400ppm	400ppm
Liquified Petroleum Gas	68476-85-7	10-20	NO	NO	NO	1000ppm	1000ppm

**SECTION III - PHYSICAL DATA**

Data Below Based On Aerosol Concentrate Only:

Boiling Point: ~158 °F

pH: 11.0

Solubility In Water: Complete

Appearance/Odor: White Jel Liquid with Citrus Scent

Data Below Based On Total Contents:

Vapor Pressure of can (psig @70°F): 60

Total VOC %: ~18%

Vapor Density(Air=1): >1

Specific Gravity (H₂O=1)@75°F: 0.960

**SECTION IV - FIRE AND EXPLOSION DATA**

Flash Point (of Concentrate Only): None to Boiling (158° F)

Flammability (as per USA Flame Projection Test): Flammable Spray

Extinguishing Media: Foam, CO₂, Dry Media

Special Fire Fighting Procedures: Wear self-contained breathing apparatus and protective clothing. Cool fire exposed containers to prevent rupturing.

Unusual Fire and Explosion Hazards: Exposure to temperature above 120° F may cause bursting.

**SECTION V - REACTIVITY DATA**

Stability: Material Stable.

Hazardous Polymerization: Will not Occur.

Incompatibility: Avoid contact with strong oxidizing agents.

Hazardous Decomposition Products: Carbon Dioxide, Carbon Monoxide.

**SECTION VI - STORAGE AND HANDLING**

KEEP OUT OF REACH OF CHILDREN.

For Industrial and Institutional use only.

Store in a cool, dry area away from heat or open flame.

Do not store at temperatures above 120° F.

NFPA Code 30B Rating: Level 2 Aerosol.

**SECTION VII - HEALTH AND FIRST AID**

PRIMARY ROUTES OF ENTRY & EFFECTS OF OVER EXPOSURE:

Eyes: May cause slight irritation but does not injure eye tissue.

Skin: Frequent or prolonged skin contact may cause irritation.

Inhalation: Inhalation of mist can cause irritation of nasal and respiratory passages. Abusive or excessive inhalation may cause irritation to the upper respiratory tract, dizziness, nausea and other central nervous system effects.

Ingestion: Can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Aspiration of material into the lungs can cause chemical pneumonitis. Minimal toxicity.

FIRST AID PROCEDURES:

Eyes: Flush with large amounts of cool running water for at least 15 minutes while holding upper and lower lids open. If irritation persists get medical attention immediately.

Skin: Wash with soap and water. If irritation persists seek medical attention.

Inhalation: Remove to fresh air. Seek medical attention immediately. If breathing stops give artificial respiration.

Ingestion: Do not induce vomiting. Seek medical attention immediately.

**SECTION VIII - SPECIAL PROTECTION DATA**

Respiratory Protection: None needed for proper use in accordance with label directions.

Ventilation: Provide local exhaust to keep TLV of Section II ingredients below acceptable limits.

Protective Gloves: None needed for proper use in accordance with label directions. Use chemical resistant gloves if hand contact will be made.

Eye Protection: None needed unless it is anticipated that a splash or spray back will occur, then wear safety glasses or chemical proof goggles.

**SECTION IX - SPILL OR LEAK PROTECTION**

STEPS TO BE TAKEN IN CASE OF SPILL OR LEAK: Allow propellant to evaporate. Maintain local exhaust and adequate ventilation. No smoking. Keep sparks, heat sources and open flame far away from spill or leak. Cover with absorbent material and sweep up. Wash area to prevent slipping. Dispose of soaked absorbent material in accordance with Federal, State and local laws.

WASTE DISPOSAL METHOD: Aerosol cans, when emptied and depressurized through normal use, pose no disposal hazard and should be recycled. Consult Federal, State and local authorities for approved procedures.

N/A= NOT APPLICABLE · N/E=NOT ESTABLISHED · N/D=NOT DETERMINED · <=LESS THAN · >=MORE THAN

NOTICE: The information contained on this Material Safety Data Sheet is considered accurate as of the date of publication. It is not necessarily all inclusive nor fully adequate in every circumstance. The suggestions should not be confused with, nor followed in violation of applicable laws, regulations, rules or insurance requirements. No warranty, express or implied, of merchantability, fitness, accuracy of data, or the results to be obtained from the use thereof is made. The vendor assumes no responsibility for injury or damages resulting from the inappropriate use of this product.

CA 802 P.1

Page 1 MATERIAL SAFETY DATA SHEET (MSDS)

MSDS802 802 802

ITEM NUMBER: 802 - CHEWING GUM REMOVER 7 OZ
VERSION 2 EFFECTIVE DATE: 07/17/00 SUPERCEDES DATE: 05/13/98 ORIGINAL PREPARER: Amanda M. Wlodarczyk
IDENTITY (As Used On Label and List): CHEWING GUM REMOVER 7 OZ

EMERGENCY MEDICAL Telephone# 1-800-228-5635 X 009 (24 Hrs) Outside of the U.S.A. Call 651-632-9275

PRODUCT HAZARD RATINGS (NFPA): Health = 1, Fire = 4, Reactivity = 1, Protective Equipment = A
(Rating Legend: 4 = Extreme, 3 = Serious, 2 = Moderate, 1 = Slight, 0 = Minimal)

SECTION I

CLAIRE MANUFACTURING COMPANY
500 VISTA
ADDISON

TELEPHONE NUMBER FOR INFORMATION: 630-543-7600

DATE PRINTED: 10/16/00 NAME OF PREPARER: Ron Cepa

IL 60101

SECTION II - HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Table with 6 columns: Chemical Names, Exposure Limits (LD50-Oral Rat), SARA Title III SEC 313, ACGIH TLV/TWA, OSHA PEL, % By Wt. Rows include Dymel A*, Isobutane, Propane, and 1,1,1,2-Tetrafluoroethane.

*Registered Trademark

Unidentified ingredients are not considered hazardous under the Federal Hazard Communication Standard.

Components Listed As A Suspected Carcinogen: None

SECTION III - PHYSICAL CHARACTERISTICS

Boiling Point: NA Vapor Pressure (psig): 170 @130F Specific Gravity (H2O=1): <1
Solubility/Water: Vapor Density (AIR=1): >1 Evaporation Rate (Ether=1): <1
Appearance and Odor: Clear, colorless, ethereal odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Aerosol Flammability: This product is considered to be flammable as described in 16CFR 1500.45.
Flammable Limits - % Volume In Air (Propellant): (approx)LEL: 1.8 UEL: 18.0
Extinguishing Media: Carbon dioxide, foam and/or dry chemical may be used.
Special Fire Fighting Procedures: Containers should be cooled with water to prevent vapor pressure build up.
Use equipment or shielding, as required, to protect personnel from bursting, rupturing or venting containers.
Unusual Fire and Explosion Hazards: At elevated temperatures (over 54C-130F) containers exposed to direct flame or heat contact should be cooled with water to prevent weakening of container structure.

SECTION V - REACTIVITY DATA

Stability: Stable Hazardous Polymerization: NA
Incompatibility (Materials to Avoid): Oxidizing agents Hazardous Decomposition Products:
Hydroflouric acid, carbonyl flouride, oxides of carbon and additional toxic chemicals may be formed in small amounts.
Conditions to Avoid: Do not store above 54C-130F. Keep away from heat, direct sunlight, open flames or sparks. Dropping of containers may cause bursting.

***** SECTION VI - HEALTH HAZARD DATA *****

Route(s) of Entry: Inhalation: X Eyes: X Skin: X Ingestion: X  
 Signs and Symptoms of Exposure: Inhalation of high concentrations of vapor is harmful and may cause heart irregularities, unconsciousness, or death. Eye or skin contact with liquid may cause freezing or frost bite. Ingestion is not considered a potential route of exposure.  
 Medical Conditions Generally Aggravated by Exposure: Preexisting diseases of the central nervous system may be aggravated by exposure to this product.  
 Emergency and First Aid Procedures: Eye Contact: Flush eyes with large amounts of water and allow to evaporate. Get medical attention if irritation persists. Inhalation: If unconscious, remove victim to fresh air and call a physician.

***** SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE *****

Releases or Spilled: Remove all sources of ignition and provide good ventilation.  
 Waste Disposal Method: Do not puncture or incinerate containers. When contents are depleted continue to depress button until all gas is expelled. Dispose of container in accordance with local, state, and federal regulations.  
 Handling And Storing: Avoid breathing vapor. Keep away from heat and flame. Use with adequate ventilation. Do not puncture or incinerate containers. Do not expose to direct sunlight or store at temperatures above 130F (54C). Store as Level 3 Aerosol (NFPA 30B).  
 Other Precautions: Please read and follow the directions on the product label; they are your best guide to using this product in the most effective way, and give the necessary safety precautions to protect your health.

***** SECTION VIII - EMPLOYEE PROTECTION *****

Respiratory Protection (Type): None required if good ventilation is maintained. If exposure exceeds occupational exposure limits (Sec. II), use a NIOSH approved respirator to prevent overexposure.  
 Ventilation: Local exhaust is adequate under normal conditions, mechanical ventilation is optional.  
 Protective Gloves: Optional: Chemical resistant gloves.  
 Eye Protection: Chemical safety glasses are recommended.  
 Other Protective Clothing or Equipment: Wear impervious clothing to prevent skin contact.  
 Work/Hygienic Practices: Ensure strict sanitary conditions are conformed to when working around chemicals. Protective clothing and equipment should be in accordance with 29 CFR 1910.132 and CFR 1910.133.

***** SECTION IX - OTHER REGULATORY CONTROLS *****

Governmental Listings: Ingredients of this product are listed on the EPA/TSCA Inventory of Chemical Substances.

***** SECTION X - TRANSPORTATION REQUIREMENTS (D.O.T. CLASSIFICATION) *****

Shipping Name: Consumer Commodity Hazard Class: ORM-D

NG-- Negligible NA-- Not Applicable NE-- Not Established UN-- Unavailable ND-- Not Determined

While the information set forth herein is believed to be accurate as of the date hereof, the Company makes no warranty or guarantee, express or implied, and disclaims all liability arising out of the use of this information.  
 EFFECTIVE DATE: 07/17/00 SUPERCEDES DATE: 05/13/98 ORIGINAL PREPARER: Amanda M. Włodarczyk

HEALTH - 1  
 FLAMMABILITY - 0  
 REACTIVITY - 0  
 PERSONAL PROTECTION - B

**Material Safety Data Sheet**  
 May be used to comply with  
 OSHA's Hazard Communication Standard,  
 29 CFR 1910.1200. Standard must be  
 consulted for specific requirements.

**U.S. Department of Labor**  
 Occupational Safety and Health Administration  
 (Non-Mandatory Form)  
 Form Approved  
 OMB No. 1218-0072



**IDENTITY (As Pict on Label and List)**  
 CHAMPADCO PADDING COMPOUND

*Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.*

**Section I**

<b>Manufacturer's Name</b> HAR ADHESIVES & COATINGS	<b>Emergency Telephone Number</b> CHEM TREC - 1-800-424-9300
<b>Address (Number, Street, City, State, and ZIP Code)</b> 4300 Payne Avenue	<b>Telephone Number for Information</b> 216/391-1255
<b>City, State, and ZIP Code</b> Cleveland, OH 44103	<b>Date Prepared</b> 1/20/99 <b>supersedes MSDS dated 7/27/94</b>
	<b>Signature of Preparer (optional)</b>

**Section II -- Hazardous Ingredients/Identity Information**

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
ETHYLENE GLYCOL - CAS 107-21-1	50ppm	50ppm		<2
	(vapors-ceiling)			
DIBUTYL PHTHALATE - CAS 84-74-2				<6

VOLATILE (WATER) 55%

**Section III -- Physical/Chemical Characteristics**

<b>Boiling Point</b>	212°F	<b>Specific Gravity (H₂O = 1)</b>	1.09
<b>Vapor Pressure (mm Hg)</b>	NA	<b>Melting Point</b>	NA
<b>Vapor Density (AIR = 1)</b>	NA	<b>Evaporation Rate (Butyl Acetate = 1)</b>	NA

**Solubility in Water**  
Miscible

**Appearance and Odor**  
Creamy white or colored liquid with slight latex odor.

**Section IV -- Fire and Explosion Hazard Data**

<b>Flash Point (Method Used)</b> Non-flammable	<b>Flammable Limits</b>	<b>LEL</b>	<b>UEL</b>
---------------------------------------------------	-------------------------	------------	------------

**Extinguishing Media**  
Use extinguishing media appropriate for surrounding fire.

**Special Fire Fighting Procedures**  
None

**Unusual Fire and Explosion Hazards**  
None



**Section V -- Reactivity Data**

Stability	Unstable		Conditions to Avoid
	Stable	X	

Incompatibility (Materials to Avoid)  
NONE KNOWN

Hazardous Decomposition or Byproducts  
NONE

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

**Section VI -- Health Hazard Data**

Route(s) of Entry:                      Inhalation?                      YES                      Skin?                      YES                      Ingestion?                      YES

Health Hazards (Acute and Chronic)  
MAY IRRITATE EYES, SKIN AND MUCOUS MEMBRANES.

Carcinogenicity:                      IIR?                      NO                      IARC Monographs?                      NO                      OSHA Regulated?                      NO

Signs and Symptoms of Exposure  
IRRITATION OF AREA AFTER PROLONGED CONTACT.

Medical Conditions  
Generally Aggravated by Exposure

NONE KNOWN

Emergency and First Aid Procedures  
EYES - FLUSH WITH WATER.                      INGESTION - DO NOT induce vomiting. GET MEDICAL ATTENTION  
SKIN - WASH WITH SOAP AND WATER.

**Section VII -- Precautions for Safe Handling and Use**

Steps to Be Taken in Case Material is Released or Spilled  
CONTAIN SPILL. COLLECT WITH ABSORBENT MATERIAL AND PLACE IN CONTAINER FOR DISPOSAL.

Waste Disposal Method  
FOLLOW FEDERAL, STATE AND LOCAL DISPOSAL REGULATIONS.

Precautions to Be Taken in Handling and Storing  
CLOSE CONTAINER WHEN NOT IN USE. STORE IN A COOL, DRY AREA.

Other Precautions  
AVOID INHALING MISTS OF THIS MATERIAL.

**Section VIII -- Control Measures**

Respiratory Protection (Specify Type)  
NONE REQUIRED

Ventilation	Local Exhaust	Special
	SHOULD BE SUFFICIENT	
	Mechanical (General)	Other

Protective Gloves                      IMPERVIOUS                      Eye Protection                      SAFETY GLASSES

Other Protective Clothing or Equipment

Work Hygiene Practices  
WASH THOROUGHLY AFTER HANDLING.

## MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 3 Flammability = 1 Reactivity = 0

HMIS RATING: Health = 3 Flammability = 1 Reactivity = 0

## SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (0720B)

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: CARPET SANITIZER

Address: 302 North Fourth Street

Date Prepared: May 4, 1994

St. Joseph, MO 64501

Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816)233-1321(Ext. 303)

## SECTION II -- INGREDIENTS/IDENTITY INFORMATION

## Components

(Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Sodium metasilicate	6834-92-0	not established	not established	2 mg/M ³ *	1-5
Di-n-alkyl (C ₈ /C ₁₀ -50%, C ₁₀ /C ₁₀ -30%, C ₈ /C ₈ -20%) dimethylammonium chloride	68424-95-3	not established	not established	N/A	1.2
Alkyl (C ₁₄ -50%, C ₁₂ -40%, C ₁₆ -10%) dimethylbenzyl ammonium chloride	68424-85-1	not established	not established	N/A	0.8
Water	7732-18-5	none	none	N/A	---
Urea	57-13-6	not established	not established	N/A	---
Nonylphenol ethoxylate	9016-45-9	not established	not established	N/A	---
Tetrapotassium pyrophosphate	7320-34-5	not established	not established	N/A	---
Sodium carbonate	497-19-0	not established	not established	N/A	---

* Exposure may be evaluated as ceiling for Sodium hydroxide per OSHA: PEL = 2 mg/M³, or TLV = 2 mg/M³.

## SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 211°F

Specific Gravity (H₂O = 1): 25°C = 1.06 & 39°C = 1.06

Vapor Pressure (mm Hg.): 17.6

Percent Volatile by Volume (%): 85%

Vapor Density (AIR = 1): 1.0

Evaporation Rate (ethyl ether = 1): slower than 1

Solubility in Water: complete

Appearance and Odor: clear, colorless liquid; nonobjectionable odor

pH (concentrate) = 12.3 - 13.3

## SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: None to 201°F

Flammable Limits: LEL = N/A UEL = N/A

Extinguishing Media: Water, carbon dioxide, dry chemical or foam.

Special Fire Fighting Procedures: Must wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.

Unusual Fire and Explosion Hazards: Products of combustion are toxic.

## SECTION V -- PHYSICAL HAZARDS

Stability: Stable

Conditions to Avoid: N/A

Incompatibility (Materials to Avoid): None known to Hillyard.

Hazardous Decomposition Products or Byproducts: When exposed to fire, produces oxides of carbon, nitrogen, sodium and potassium.

Hazardous Polymerization: Will not occur

Conditions to Avoid: None known to Hillyard

## SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Ingestion? Yes

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Direct contact with concentrate in eyes or on skin may produce severe irritation and damage.

2. Inhalation of fine fog mist can cause irritation of mucous membranes. Use large droplet sprayer and adequate ventilation when spraying or use proper respiratory protection.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater or equal to 0.1%.

**SECTION VI -- HEALTH HAZARD DATA cont.**

**Signs and Symptoms of Exposure:** Direct eye contact with skin and eyes will result in skin and eye damage and/or severe irritation. Ingestion of concentrate may cause burning pain in mouth, throat, abdomen.

**Medical Conditions Generally Aggravated by Exposure:** No effects indicated.

**Emergency and First Aid Procedures:** In case of contact immediately flush eyes or skin with plenty of water for at least 15 minutes; hold eyelids apart to ensure rinsing of entire surface of eye and lids. Get immediate medical attention. Remove contaminated clothing and shoes. Wash clothing and decontaminate shoes before reuse. If swallowed drink promptly a large quantity of milk, egg whites, gelatin solution; or if these are not available drink large quantities of water. Avoid alcohol. Do not induce vomiting. If vomiting occurs, give fluids again. Have physician determine if patient's condition allows for induction of vomiting or evacuation of the stomach. Do not give anything by mouth to a convulsing or unconscious person. Get immediate medical attention. Inhalation: Remove from area to fresh air. Seek medical attention if respiratory irritation develops or breathing becomes difficult.

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Corrosive material. Floors may become slippery with standing liquid. Wear appropriate protective gear and respiratory protection where mist or vapors of unknown concentrations may be generated (self-contained breathing apparatus preferred). Dike and contain spill with inert material (sand, earth, etc.) and transfer liquid and solid separately to containers for recovery or disposal. Keep spill out of sewers and open bodies of water.

**Waste Disposal Method:** Observe all applicable federal, state and local requirements regarding disposal. Waste from normal product use may be sewer to a public owned treatment works (POTW) in compliance with applicable federal, state and local pretreatment requirements. Container disposal: Triple rinse (or equivalent) then offer clean, dry container for recycling or reconditioning or puncture and dispose of in a sanitary landfill, or incineration (if allowed by state and local authorities). If burned stay out of smoke.

**Precautions To Be Taken In Handling And Storing:** Keep container closed when not in use. Do not contaminate drinking water, food or feed by storage or disposal. Store at temperatures below 140°F (60°C).

**Other Precautions:** This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and 40 CFR Part 372.

**SECTION VIII -- CONTROL MEASURES:**

**Respiratory Protection (Specify Type):** Where mist or vapors are generated by the process, a NIOSH/MSHA jointly approved respirator is advised in the absence of proper environmental controls.

**Ventilation:**

**Local Exhaust =** Recommended    **Mechanical (General) =** Recommended    **Special =** N/A    **Other =** N/A

**Protective Gloves:** Rubber or neoprene    **Eye Protection:** Chemical splash goggles where there is potential for eye contact

**Other Protective Clothing or Equipment:** Use long sleeves, coveralls or other as appropriate to prevent skin contact.

**Work / Hygienic Practices:** Wash thoroughly after handling.

**SECTION IX - TRANSPORTATION INFORMATION:**

**Applicable regulations:** DOT = No; IMCO = No; IATA = No

**Proper shipping name:** Cleaning compound

**UN No.:** not applicable    **Limited Qty.:** not applicable    **Hazard Class:** not applicable

**Labels required:** not required    **DOT Exception:** not applicable

**EPA Hazardous waste/number code:** not listed

**Hazardous waste characteristics:**

**Ignitability =** not applicable; **Corrosivity =** yes; **Reactivity =** not applicable

**DISCLAIMER OF WARRANTIES**

**NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.**

The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.

**THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.**

131390

# MATERIAL SAFETY DATA SHEET

## SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME Bleach (Regular, Fresh, Lemon, Floral)

PRODUCT Brand HOME HARVEST

ISSUE DATE June 11, 1998

### EMERGENCY TELEPHONE NUMBERS

MANUFACTURER James Austin Company  
STREET ADDRESS 115 Downsville Road  
CITY, STATE, ZIP Mars, PA 15046

Transportation: (800) 424-9300 *

* For spill, leak, fire or transport accident emergencies.

Product Information: (724) 625-1535

## SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENT	CAS No.	% by wt.	EXPOSURE LIMITS		
			OSHA PEL	ACGIH TLV	NIOSH REL
Sodium hypochlorite	7681-52-9	5.25 - 5.50	None	None	None
Sodium hydroxide	1310-73-2	0.10 - 0.30	2 mg/m ³ ceiling	2 mg/m ³ ceiling	2 mg/m ³ ; 15 min TWA ceiling

## SECTION 3 - HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW** IRRITANT; may cause severe skin and eye irritation or chemical burns to broken skin. Vapors extremely irritating to eyes and respiratory tract. Harmful and potentially fatal if swallowed. If mixed with other prohibited chemicals or materials, chlorine gas will be released which is also irritating to eyes, lungs, mucous membranes and in some cases can be fatal. (see Section 10 for more information)

### POTENTIAL HEALTH EFFECTS

INGESTION .....	Can cause corrosion of mucous membranes, severe esophageal burns and perforation of esophagus or stomach.
INHALATION .....	Inhalation of vapors can cause bronchial irritation, coughing, difficulty in breathing, nausea and pulmonary edema.
EYE CONTACT .....	Irritating to the eyes; may cause severe and permanent damage.
SKIN CONTACT .....	Severe irritant; contact can produce blistering and eczema.

**SECTION 4 - FIRST AID MEASURES**

INGESTION	If swallowed, DO NOT induce vomiting. Immediately drink a large quantity of water or milk. Do not give liquids if victim is unconscious. Do not use acidic antidotes or sodium bicarbonate (baking soda). Do not administer alcohol. Call a physician or poison control center immediately.
INHALATION	If exposed to excessive vapor levels, remove to fresh air and seek medical attention if cough or other symptoms develop.
EYE CONTACT	Immediately flush eye with plenty of cool, running water. Remove contact lenses if applicable, and continue flushing for at least 15 minutes. Get medical attention immediately.
SKIN CONTACT	Flush affected skin area with copious amounts of water and wash with soap and water. If irritation develops or persists, get medical attention. Remove clothing and wash before reuse.
NOTE TO PHYSICIAN	Information pertaining to ingestion toxicology, therapy, symptomatology and treatment can be found in <u>Clinical Toxicology of Commercial Products</u> , authored by Gosselin, Smith and Hodge and published by Williams & Wilkins, Baltimore, Maryland. See listing for Hypochlorite in Therapeutics Index, Section III.

**SECTION 5 - FIRE FIGHTING MEASURES**

FLASH POINT / METHOD	None / N.A.	FLAMMABLE LIMITS	Not flammable or combustible
EXTINGUISHING MEDIA	If involved in a fire, alcohol foam, carbon dioxide, dry chemical or water fog. Use extinguishing media that is appropriate for surrounding fire.		
SPECIAL FIRE FIGHTING PROCEDURES	Avoid fumes from spilled or exposed liquid. Firefighters should wear full protective clothing and OSHA/NIOSH self-contained breathing apparatus. Cool fire-exposed containers with water spray from a safe distance.		
FIRE AND EXPLOSION HAZARDS	Sodium hypochlorite bleach is a strong oxidizing agent and decomposes when heated. Decomposition products may cause containers to explode. Vigorous reactions may occur with organic materials or oxidizable materials, causing fires.		

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

RESPONSE TO SPILLS	Small spills: Dilute product by flooding area with large quantity of water and flush to sanitary sewer. Large spills: Contain run-off by diking with suitable material. Soak up liquid on inert absorbent and transfer to approved container. Prevent spill from entering sewers or waterways.
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**SECTION 7 - HANDLING AND STORAGE**

HANDLING PRECAUTIONS	Wash after handling and before eating. Use personal protective equipment and wear suitable chemical-resistant clothing. Keep container tightly closed when not in use. Follow label directions closely.
STORAGE PRECAUTIONS	Store upright in a cool (below 85 F), dry, well-ventilated area. Keep away from heat or direct sunlight. Separate from incompatible materials, such as acids, ammonia, soap-based products or organic materials. Protect containers from physical damage. Keep away from children.

**SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION**

HYGIENIC PRACTICES	Avoid breathing vapors. Do not store near food stuffs, water or feed. Protect eyes, skin and clothing from contact with this product.
ENGINEERING CONTROLS	Use local ventilation to remove vapors at the source. Facilities using this product must be equipped with an eyewash station.

**PERSONAL PROTECTIVE EQUIPMENT**

X	RESPIRATOR	Not normally necessary; use NIOSH approved respirator for concentrated vapors
X	GOGGLES / FACE SHIELD	Required; goggles should be chemical splash type. Face shield is best choice
X	APRON	Recommended to avoid skin contact and protect clothing from damage
X	GLOVES	Required; use impervious PVC or Neoprene with long gauntlet
X	BOOTS	Recommended to protect shoes and feet when using product for floor cleaning

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE	Clear pale yellow liquid	BOILING POINT	212 deg F
ODOR	Chlorine	FREEZING POINT	28 deg F
pH	11.5 - 12.5	VAPOR PRESSURE	17.5 mm Hg @ 20 C
SPECIFIC GRAVITY	1.080	VAPOR DENSITY	Not applicable
SOLUBILITY IN WATER	Complete	EVAPORATION RATE	Not applicable

**SECTION 10 - STABILITY AND REACTIVITY**

CHEMICAL STABILITY	STABLE	X	UNSTABLE
CONDITIONS TO AVOID.	Heat or direct sunlight; temperatures above 85 F. NEVER mix with solutions containing ammonia.		
INCOMPATIBILITY	Acids, ammonia, ether, urea, oxidizable materials, soaps, oils, greases, phenolic disinfectants and metals (including nickel, copper, tin, aluminum and iron).		
HAZARDOUS PRODUCTS OF DECOMPOSITION	Chlorine gas -- from contact with highly acidic materials. Chloramines -- from contact with ammonia. Polychlorinated phenols -- from contact with phenolic disinfectants.		
POLYMERIZATION	WILL NOT OCCUR	X	MAY OCCUR
CONDITIONS TO AVOID	Not applicable		

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**CARCINOGENICITY**

	THIS PRODUCT CONTAINS A KNOWN OR SUSPECTED CARCINOGEN
X	THIS PRODUCT DOES NOT CONTAIN ANY KNOWN OR ANTICIPATED CARCINOGENS ACCORDING TO THE CRITERIA OF THE NTP ANNUAL REPORT ON CARCINOGENS AND OSHA 29 CFR 1910, Z

**OTHER EFFECTS**

ACUTE	Toxicity arises from corrosive activity; stems from oxidizing potency, a function of concentration
CHRONIC	Not determined

**SECTION 12 - ECOLOGICAL INFORMATION**

BIODEGRADABILITY	CONSIDERED BIODEGRADABLE	<input checked="" type="checkbox"/>	NOT BIODEGRADABLE	<input type="checkbox"/>
BOD / COD VALUE	Not established			
ECOTOXICITY	No data available			

**SECTION 13 - DISPOSAL CONSIDERATIONS**

WASTE DISPOSAL METHOD	If in accordance with an NPDES permit or approved by local sewage treatment plant authority, small amounts may be flushed to a sanitary sewer with plenty of water. Large amounts of unused product must be disposed of as hazardous waste at an approved hazardous waste management facility.			
RCRA CLASSIFICATION	Hazardous, corrosive D002 (if pH is equal to or greater than 12.5)			
RECYCLE CONTAINER	YES	<input checked="" type="checkbox"/>	CODE	2-HDPE
				NO

**SECTION 14 - TRANSPORT INFORMATION**

DOT CLASSIFICATION	HAZARDOUS	<input checked="" type="checkbox"/>	NOT HAZARDOUS	<input type="checkbox"/>
DOT Proper Shipping Name	Hypochlorite Solutions			
Hazard Class	8			
Identification Number	UN 1791			
Packing Group	III			
Label/Placard	Corrosive			
$\rho$	Sodium Hypochlorite 100 lbs. (45.4Kg)			
EXCEPTIONS	Consumer Commodity, ORM-D. Exempted by DOT for containers of 1 gallon or less			

**SECTION 15 - REGULATORY INFORMATION**

**REGULATORY STATUS**

EPA REGISTERED (UNDER FIFRA)	No
FDA REGULATED	No
KOSHER	No
SARA TITLE III MATERIAL	No
USDA AUTHORIZED	No

**SECTION 16 - OTHER INFORMATION**

**NFPA CLASSIFICATION**

1	BLUE	HEALTH HAZARD
0	RED	FLAMMABILITY
0	YELLOW	REACTIVITY
0	WHITE	SPECIAL HAZARD

**Approved Specifications**

Federal Specification O-S-502E  
Commercial Item Description A-1427C

Information contained in this MSDS refers only to the specific material designated and does not relate to any process or use involving other materials. This information is based on data believed to be reliable, and the Product is intended to be used in a manner that is customary and reasonably foreseeable. Since actual use and handling are beyond our control, no warranty, express or implied, is made and no liability is assumed by James Austin Company in connection with the use of this information.

0113881863

MATERIAL SAFETY DATA SHEET (MSDS)

48844

This MSDS should be attached or kept with the respective product with which it is associated.

*****  
MATERIAL SAFETY DATA SHEET - 78173

Associated Grainger Items  
48844

48844

BLAST-A-COIL  
MATERIAL SAFETY DATA SHEET

SECTION I - COMPANY IDENTIFICATION

PRODUCT: BLAST-A-COIL

MANUFACTURED BY:  
VIRGINIA KMP CORPORATION  
4100 PLATINUM WAY  
DALLAS, TEXAS 75237

CAT. NO.: BAC20I

TELEPHONE NUMBERS:  
OFFICE: 1-(214) 330-7731  
EMERGENCY ONLY: 1-(800) 424-9300

SECTION II - HAZARDOUS INGREDIENTS

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

EXPOSURE LIMITS: 8 HR. TWA  
OSHA PEL ACGIH TLV

TRICHLOROETHYLENE (CAS # 79-01-6) 50 PPM 50 PPM

SECTION III - HAZARDS IDENTIFICATIONS

EMERGENCY OVERVIEW: DANGER! VAPOR HARMFUL. HARMFUL OR FATAL IF SWALLOWED.  
AEROSOL, CONTENTS UNDER PRESSURE. IRRITATING TO EYES, SKIN, MUCOUS MEMBRANES AND RESPIRATORY TRACT.

POTENTIAL HEALTH EFFECTS:  
INHALATION: EXCESSIVE INHALATION OF VAPORS CAN BE HARMFUL AND MAY CAUSE HEADACHE, DIZZINESS, ASPHYXIA, ANESTHETIC EFFECTS AND POSSIBLE UNCONSCIOUSNESS.

EYE CONTACT: VAPORS AND LIQUIDS IRRITATING TO EYES.  
SKIN CONTACT: IRRITANT TO SKIN.  
INGESTION: POSSIBLE CHEMICAL PNEUMONITIS IF ASPIRATED INTO LUNGS. NAUSEA.

CHRONIC EFFECTS: (EFFECTS DUE TO EXCESSIVE EXPOSURE TO THE RAW MATERIALS OF THIS MIXTURE) - MAY CAUSE LIVER ABNORMALITIES, KIDNEY, SPLEEN, LUNG OR BRAIN DAMAGE, CARDIAC ABNORMALITIES.

CARCINOGENICITY: LISTED IN NTP? YES IARC? YES OSHA REGULATED?  
YES 1910.1000 TABLE 2-2

SECTION IV - FIRST AID MEASURES

INHALATION: REMOVE TO FRESH AIR. IF NOT BREATHING, APPLY ARTIFICIAL RESPIRATION. KEEP VICTIM WARM. SEEK MEDICAL ADVICE.

EYE CONTACT: FLOSH WITH LARGE AMOUNTS OF RUNNING WATER FOR 15 MINUTES OCCASIONALLY LIFTING LOWER AND UPPER EYELIDS. SEEK MEDICAL ADVICE.

SKIN CONTACT: WASH EXPOSED AREA WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. SEEK MEDICAL ADVICE IF SYMPTOMS DEVELOP.

INGESTION: GIVE WATER. DO NOT INDUCE VOMITING. ASPIRATION INTO LUNGS MAY CAUSE CHEMICAL PNEUMONIA. SEEK IMMEDIATE MEDICAL ATTENTION. DO NOT GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. IF SPONTANEOUS VOMITING OCCURS, KEEP HEAD BELOW HIPS.

SECTION V - FIRE FIGHTING MEASURES

FLAMMABILITY: (PER THE USA FLAME PROJECTION TEST (AEROSOLS): NON-FLAMMABLE  
FLASHPOINT (TEST METHOD): NOT APPLICABLE  
FLAMMABLE LIMITS: LOWER: NOT APPLICABLE UPPER: NOT APPLICABLE  
AUTOIGNITION TEMPERATURE (NON-AEROSOL I.E., BASE STOCK): NOT APPLICABLE

GENERAL HAZARD: WARNING! PRODUCT UNDER PRESSURE, MAY EXPLODE FROM EXCESSIVE HEAT. WATER MAY BE INEFFECTIVE TO FIGHT FIRE. TOXIC GASES MAY BE PRODUCED IN FIRE.

FIRE FIGHTING INSTRUCTIONS: DO NOT ENTER WITHOUT FULL BUNKER OF EQUIPMENT INCLUDING SELF CONTAINED BREATHING APPARATUS. STAY UPWIND, KEEP ALL PERSONNE AWAY. COOL FIRE EXPOSED CONTAINERS WITH WATER.

EXTINGUISHING MEDIA: USE CARBON DIOXIDE, ALCOHOL FOAM, DRY CHEMICAL.

HAZARDOUS COMBUSTION PRODUCTS: SMOKES, FUMES, OXIDES OF CARBON, AND SMALL AMOUNTS OF FUMES OF PHOSGENE AND CHLORIDES.

SECTION VI - ACCIDENTAL RELEASE MEASURES

ISOLATE HAZARD AREA. KEEP UNNECESSARY AND UNPROTECTED PERSONNEL AWAY. CLEAN UP SPILLS AND LEAKS IMMEDIATELY TO PREVENT SOIL AND WATER CONTAMINATION.

LAND SPILL: ABSORB SPILL WITH INERT, NON-COMBUSTIBLE MATERIAL, THEN PLACE IN A CHEMICAL WASTE CONTAINER.

WATER SPILL: CONTAIN MATERIAL. COLLECT AND STORE IN A CHEMICAL WASTE CONTAINER.

SECTION VII - HANDLING AND STORAGE

HANDLING: USE WITH ADEQUATE VENTILATION. AVOID SKIN/EYE CONTACT AND BREATHING VAPORS. DO NOT CUT, WELD, BRAZE, SOLDER, DRILL OR EXPOSE TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY.

STORAGE: STORE IN A COOL, DRY PLACE AWAY FROM HEAT (<120F), IGNITION SOURCES OXIDIZERS AND STRONG ACIDS.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: ADEQUATE VENTILATION TO CONTROL VAPOR ACCUMULATION.

PERSONAL PROTECTION: IF TLV EXCEEDED, NIOSH APPROVED RESPIRATOR FOR ORGANIC VAPORS. WEAR CHEMICAL GOGGLES OR FULL FACE SHIELD AND CHEMICAL IMPERVIOUS



APRON TO PROTECT FROM SPLASHING. WEAR CHEMICAL IMPERVIOUS GLOVES. WASH CLOTHING BEFORE REUSE.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

VAPOR PRESSURE: PSIG @ 70F (AEROSOLS): 85-100  
VAPOR DENSITY (AIR=1): NOT APPLICABLE  
SPECIFIC GRAVITY: CONCENTRATE ONLY: 1.45  
EVAPORATION RATE (N-BUTYL ACETATE=1): 2.6 CONCENTRATE ONLY  
SOLUBILITY IN WATER: INSOLUBLE  
PH: NA  
FREEZING POINT: NOT APPLICABLE  
BOILING POINT: NOT APPLICABLE  
APPEARANCE & ODOR: CLEAR, COLORLESS SPRAY WITH LEMON CHLORINATED SOLVENT ODOR.

SECTION X - STABILITY AND REACTIVITY

STABILITY: STABLE.  
CONDITIONS TO AVOID: AVOID EXCESSIVE HEAT, IGNITION SOURCES AND FLAMES.  
ISOLATE FROM OXIDIZERS AND STRONG ACIDS.  
MATERIALS TO AVOID: REACTIVE METALS, ALUMINUM, MAGNESIUM AND STRONG OXIDIZING AGENTS.  
HAZARDOUS DECOMPOSITION PRODUCTS: CARBON MONOXIDE, CARBON DIOXIDE, HYDROCHLORIC ACID, SMALL AMOUNTS OF PHOSGENE AND CHLORINE FUMES.  
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

SECTION XI - TOXICOLOGICAL INFORMATION

TRICHLOROETHYLENE (CAS # 79-01-6) LD50: 4.92 ML/KG (ORAL-RAT)  
LC (4 HRS): 8000 PPM (RATS)

SECTION XII - ECOLOGICAL INFORMATION

NO DATA AVAILABLE.

SECTION XIII - DISPOSAL CONSIDERATIONS

CLASSIFICATION OF WASTE REQUIRED BEFORE DISPOSAL. FOLLOW ALL LOCAL, STATE, AND FEDERAL REGULATIONS. AEROSOL CANS WHEN VENTED TO ATMOSPHERE PRESSURE THROUGH NORMAL USE, POSE NO DISPOSAL HAZARD.

SECTION XIV - TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: CONSUMER COMMODITY, ORM-D

HAZARD CLASS: NOT APPLICABLE  
IDENTIFICATION NUMBER: NOT APPLICABLE  
DOT EMERGENCY GUIDE #: NOT APPLICABLE  
REPORTABLE QUANTITY (RQ): NOT APPLICABLE  
INTERNATIONAL: AEROSOL DISPENSERS, 9 UN1950, IMDG 9022

SECTION XV - REGULATORY INFORMATION

TSCA (TOXIC SUBSTANCE CONTROL ACT): COMPONENTS OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY.  
CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT) RQ 100 POUNDS FOR TRICHLOROETHYLENE (CAS # 79-01-6). WE RECOMMEND YOU CONTACT LOCAL AUTHORITIES FOR OTHER REPORTING REQUIREMENTS.

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):  
TRICHLOROETHYLENE (CAS # 79-01-6)

311/312 HAZARD CATEGORIES: ACUTE, PRESSURE

313 REPORTABLE INGREDIENTS: TRICHLOROETHYLENE (CAS # 79-01-6)

CALIFORNIA PROPOSITION 65: THIS PRODUCT CONTAINS CHEMICALS WHICH ARE KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER OR REPRODUCTIVE TOXICITY.

SECTION XVI - OTHER INFORMATION

STATE RIGHT-TO-KNOW PROGRAMS: MASSACHUSETTS, PENNSYLVANIA, NEW JERSEY

NFPA RATINGS

HEALTH: 2

FLAMMABILITY: 0

REACTIVITY: 0

HMS PROTECTIVE EQUIPMENT: X SEE YOUR SUPERVISOR

PREPARED BY: VIRGINIA KMP CORPORATION

REVISED: 05/15/96

THIS INFORMATION IS FURNISHED WITHOUT WARRANTY, EXPRESSED OR IMPLIED, EXCEPT THAT IT IS ACCURATE TO THE BEST KNOWLEDGE OF VIRGINIA KMP. THE DATA ON THIS SHEET RELATED ONLY TO SPECIFIC MATERIAL DESIGNATED HEREIN. VIRGINIA KMP ASSUMES NO LEGAL RESPONSIBILITY FOR USE OR RELIANCE UPON THESE DATA.

CA 859  
Pg 1

ITEM NUMBER: 859 - BASEBOARD STRIPPER 19 OZ.  
VERSION 2 EFFECTIVE DATE: 04/12/01 SUPERCEDES: 05/07/98 PREPARED BY: Ron Cepa  
Section(s) Revised: HMIS, II, IV, VI, VIII  
IDENTITY (As Used On Label and List): BASEBOARD STRIPPER 19 OZ.

EMERGENCY MEDICAL Telephone# 1-800-228-5635 X 009 (24 Hrs) Outside of the U.S.A. Call 651-632-9275

PRODUCT HAZARD RATINGS (HMIS): - Health = 1, Fire = 2, Reactivity = 0, Protective Equipment = 8  
(Rating Legend: - 4 = Extreme, 3 = Serious, 2 = Moderate, 1 = Slight, 0 = Minimal, * = Chronic Hazard)

***** SECTION I

CLAIRE MANUFACTURING COMPANY  
500 VISTA  
ADDISON

TELEPHONE NUMBER FOR INFORMATION : 630-543-7600

DATE PRINTED : 4/24/02 NAME OF PREPARER : Ron Cepa

IL 60101

***** SECTION II - HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Chemical Names	CAS #	SARA Title III SEC 313	ACGIH TLV/TWA	OSHA PEL	% By Wt.
2-Butoxyethanol	111-76-2	Yes	20 ppm*	25 ppm*	20-30
Tetrasodium EDTA	64-02-8	No	NA	NA	1-5
Organic phosphate ester	68412-53-3	Yes	1mg/m ³	1mg/m ³	1-5
Liquified petroleum gas mixture	See below	No	--	--	10-20
Propane	74-98-6	--	1000 ppm	NE	-
n-Butane	106-97-8	--	600 ppm	NE	-

* Skin  
Balance of ingredients are non-hazardous or below reportable levels.

***** SECTION III - PHYSICAL CHARACTERISTICS

Boiling Point: NA Vapor Pressure (psig): 115+/-5@130F Specific Gravity (H2O=1): <1  
Solubility/Water: Slight Vapor Density (AIR=1): >1 Evaporation Rate (Ether=1): <1  
Appearance and Odor: Semi-stable, foaming spray, pine solvent odor.

***** SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Aerosol Flammability: Product is not required to be labeled as flammable as described in 16 CFR 1500.3 and 1500.45.  
Flashpoint: <0F (Propellant); 100F (Concentrate)  
Flammable Limits - % Volume In Air (Propellant): LEL: 1.9 UEL: 9.5  
Extinguishing Media: Carbon dioxide, foam and/or dry chemical may be used.  
Special Fire Fighting Procedures: Containers should be cooled with water to prevent vapor pressure build up.  
Use equipment or shielding, as required, to protect personnel from bursting, rupturing or venting containers.  
Unusual Fire and Explosion Hazards: At elevated temperatures (over 54C-130F) containers exposed to direct flame or heat contact should be cooled with water to prevent weakening of container structure.

***** SECTION V - REACTIVITY DATA

Stability: Stable Hazardous Polymerization: NA  
Incompatibility (Materials to Avoid): Strong oxidizing materials, reactive metals, heat and open flame.  
Hazardous Decomposition Products: Carbon dioxide, carbon monoxide and additional toxic chemicals may be formed in small amounts. Conditions to Avoid: Do not store above 54C-130F. Keep away from heat, direct sunlight, open flames or sparks. Dropping of containers may cause bursting.

***** SECTION VI - HEALTH HAZARD DATA *****

Route(s) of Entry - Inhalation: X Eyes: X Skin: X Ingestion:  
Signs and Symptoms of Exposure: Respiratory irritation. High concentrations may produce headache, dizziness and nausea. Prolonged or repeated skin contact may lead to drying, irritation and dermatitis. Possible skin absorption. Eye contact may cause burning and irritation. This product contains 2-Butoxyethanol, which if ingested in significant quantities may result in red blood cell hemolysis.

Medical Conditions Generally Aggravated by Exposure: Preexisting skin or eye disorders may be aggravated by exposure to this product.

Emergency and First Aid Procedures: Eye Contact: Flush eyes with plenty of water for 15 minutes while holding eyelids open. Get medical attention if irritation persists. Skin Contact: Remove contaminated clothing. Flush skin with water, follow by washing with soap and water. If irritation occurs, get medical attention. Do not reuse clothing until cleaned. Inhalation: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention. Ingestion: Get medical attention.

NOTE TO PHYSICIAN: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition.

CARCINOGENICITY:

No regulated ingredients.

TOXICITY INFORMATION:

2-Butoxyethanol:

2-butoxyethanol may affect the liver and kidneys and may increase red blood cell hemolysis.

Tetrasodium EDTA:

LD50 Oral (Rat): 3030 mg/kg

Organic phosphate ester:

LD50 Oral (Rat): 3630 mg/kg

***** SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE *****

Releases or Spilled: Remove all sources of ignition and ventilate area. Soak up spill with an inert absorbent and place into a designated disposal container. Consult local regulatory agency for proper disposition of material.

Waste Disposal Method: Do not puncture or incinerate containers. When contents are depleted continue to depress button until all gas is expelled. Dispose of container in accordance with local, state, and federal regulations.

Handling And Storing: Avoid breathing vapor. Keep away from heat and flame. Use with adequate ventilation. Do not puncture or incinerate containers. Do not expose to direct sunlight or store at temperatures above 130F (54C). Store as Level 1 Aerosol (NFPA 30B).

Other Precautions: Please read and follow the directions on the product label; they are your best guide to using this product in the most effective way, and give the necessary safety precautions to protect your health.

***** SECTION VIII - EMPLOYEE PROTECTION *****

Respiratory Protection (Type): None required if good ventilation is maintained. If exposure exceeds occupational exposure limits (Sec. II), use a NIOSH approved respirator to prevent overexposure.

Ventilation: General ventilation is adequate under normal conditions, mechanical ventilation is optional.

Protective Gloves: Chemical resistant gloves are recommended - consult glove manufacturer to determine the proper type for a specific operation.

Eye Protection: Chemical safety glasses are recommended.

Other Protective Clothing or Equipment: Wear impervious clothing to prevent skin contact.

Work/Hygienic Practices: Ensure strict sanitary conditions are conformed to when working around chemicals. Protective clothing and equipment should be in accordance with 29 CFR 1910.132 and CFR 1910.133.

***** Section IX-Other Regulatory Controls *****

Governmental Listings: Ingredients of this product are listed on the EPA/TSCA Inventory of Chemical Substances.

***** Section X-Transportation (D.O.T. Classification) *****

NG - Negligible NA-- Not Applicable NE-- Not Established UN-- Unavailable ND-- Not Determined

While the information set forth herein is believed to be accurate as of the date hereof, the Company makes no warranty or guarantee, express or implied, and disclaims all liability arising out of the use of this information.

**MATERIAL SAFETY DATA SHEET**

**NFPA RATING:** Health = 1 Flammability = 0 Reactivity = 0

**HMS RATING:** Health = 1 Flammability = 0 Reactivity = 0

**SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (0744A)**

**Manufacturer's Name:** HILLYARD INDUSTRIES

**Product Name:** ASSURANCE

**Address:** 302 North Fourth Street

**Date Prepared:** June 16, 1995

St. Joseph, MO 64501

**Prepared by:** Regulatory Affairs Department

**Emergency Telephone No.:** (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

**Other information calls:** (816)233-1321(Ext. 303)

**SECTION II -- INGREDIENTS/IDENTITY INFORMATION**

Components (Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Sodium Metasilicate (1)	6834-92-0	not established	not established	2 mg/m ³	3-8
Water	7732-18-5	none	none	N/A	---
Sodium Carbonate	497-19-8	not established	not established	N/A	---
Akyl imino acid, sodium salt	64972-19-6	not established	not established	N/A	---
Polyoxyethylene Thioether	9004-83-5	not established	not established	N/A	---

(1) Exposure may be evaluated as ceiling for Sodium hydroxide per OSHA: PEL = 2 mg/m³ or TLV = 2 mg/m³.

**SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS**

**Boiling Point:** 215°F

**Specific Gravity (H₂O = 1):** 25°C = 1.08 & 39°C = 1.08

**Vapor Pressure (mm Hg.):** 17.6

**Percent Volatile by Volume (%):** 88 %

**Vapor Density (AIR = 1):** 0.6

**Evaporation Rate (ethyl ether = 1):** slower than 1

**Solubility in Water :** complete

**Appearance and Odor:** Clear, orange liquid; lemon odor

**pH (concentrate) =** 13.0

**SECTION IV -- FIRE AND EXPLOSION HAZARD DATA**

**Flash point:** None to boiling (Tag Closed Cup) **Flammable Limits:** LEL = N/A UEL = N/A

**Extinguishing Media:** Foam, dry chemical, carbon dioxide, water spray

**Special Fire Fighting Procedures:** None known to manufacturer

**Unusual Fire and Explosion Hazards:** None known to manufacturer

**SECTION V -- PHYSICAL HAZARDS**

**Stability:** Stable

**Conditions to Avoid:** None known to manufacturer

**Incompatibility (Materials to Avoid):** Avoid strong oxidizing agents. Do not use with aluminum equipment at temperatures above 120 °F.

**Hazardous Decomposition Products or Byproducts:** None known to manufacturer

**Hazardous Polymerization:** Will not occur

**Conditions to Avoid:** N/A

**SECTION VI -- HEALTH HAZARD DATA**

**Routes of entry:** Inhalation? Yes Skin? Yes Ingestion? Yes

**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. According to Primary Skin Irritation Test (FHSA), product concentrate is not a primary skin irritant. Product concentrate may induce moderate skin irritation on prolonged exposure; Eye Irritation Test (FHSA) = eye irritant. Product concentrate may induce eye corrosion on prolonged exposure. When tested as specified this product was not considered to be a UN/DOT corrosive at 4 hours. Harmful if swallowed.

2. Inhalation of fine fog mist can cause irritation of mucous membranes. Fine fog mist application is not recommended.

**Chemical listed as Carcinogen or Potential Carcinogen:**

**National Toxicology Program =** No **I.A.R.C. Monographs =** No **OSHA =** No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater or equal to 0.1%.

**SECTION VI -- HEALTH HAZARD DATA continued**

**Signs and Symptoms of Exposure:** Direct eye contact can cause irritation; prolonged skin contact may cause moderate irritation. Ingestion may cause irritation to mouth, throat and stomach. May cause gastric tract disorder.

**Medical Conditions Generally Aggravated by Exposure:** Skin problems such as dermatitis may be aggravated by exposure to concentrated product.

**Emergency and First Aid Procedures:** If swallowed, immediately give large amounts of water and call a physician. In case of contact, immediately flush eyes or skin with plenty of water for 15 minutes. For eyes, GET PROMPT MEDICAL ATTENTION IMMEDIATELY. If skin irritation persists, get medical attention.

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Small spills: Flush with water and pick-up with mop or wet vac. Large spills may be absorbed with floor dry material.

**Waste Disposal Method:** Dispose of in accordance with all federal, state and local requirements.

**Precautions To Be Taken In Handling And Storing:** Keep away from children. Container disposal: Triple rinse (or equivalent) then offer clean, dry container for recycling or reconditioning. Waste from normal use may be sewerred to a public-owned treatment works in compliance with applicable federal, state and local requirements.

**Other Precautions:** Avoid breathing of vapors or fine fog mist. Use with adequate ventilation. Open windows and doors, use exhaust fans or other means to insure fresh air entry during application and drying. Refer to OSHA STANDARD 29 CFR 1910.94 for technical guidelines on keeping air contamination below applicable exposure limits. Wash thoroughly after handling. Keep container closed when not in use. Do not get in eyes, on skin or on clothing. Do not take internally. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning & Community Right to Know Act of 1986 and 40 CFR Part 372.

**SECTION VIII -- CONTROL MEASURES:**

**Respiratory Protection (Specify Type):** None normally required. Ventilate to keep air below TLV on metasilicate.

**Ventilation:** At least 10 air exchanges per hour suggested in public areas with good ventilation.

**Local Exhaust =** Recommended    **Mechanical (General) =** Recommended    **Special =** N/A    **Other =** N/A

**Protective Gloves:** None required    **Eye Protection:** Chemical goggles where splashing of concentrate is a concern

**Other Protective Clothing or Equipment:** Not usually necessary

**Work / Hygienic Practices:** Wash thoroughly after handling

**SECTION IX - TRANSPORTATION INFORMATION:**

**Applicable regulations:** 49 CFR = no; IMCO = no; IATA = no

**Proper shipping name:** Cleaning Compound

**UN No.:** not applicable    **Limited Qty.:** not applicable    **Hazard Class:** not applicable

**Labels required:** not required    **DOT Exception:** not applicable

**EPA Hazardous waste number / code:** not listed

**Hazardous waste characteristics:**

**Ignitability =** not applicable;    **Corrosivity =** applicable;    **Reactivity =** not applicable

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## MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 2 Flammability = 0 Reactivity = 0  
 HMIS RATING: Health = 2 Flammability = 0 Reactivity = 0

## SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (0718A)

Manufacturer's Name: HILLYARD INDUSTRIES Product Name: ASSAULT  
 Address: 302 North Fourth Street Date Prepared: May 4, 1994  
 St. Joseph, MO 64501 Prepared by: Regulatory Affairs Department  
 Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or  
 accident involving chemicals.) Other information calls: (816) 233-1321(Ext. 303)

## SECTION II -- INGREDIENTS/IDENTITY INFORMATION

Components (Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Ethanolamine (1)	141-43-5	3ppm	3ppm	N/A	3-5
Sodium metasilicate (2)	6834-92-0	not established	not established	2 mg/M ³	1-3
Water	7732-18-5	none	none	N/A	—
Sodium xylene sulfonate	1300-72-7	not established	not established	N/A	—
Ethylene glycol monophenyl ether	122-99-6	not established	not established	N/A	—
1-Butoxy-2-propanol	5131-66-8	not established	not established	N/A	—

(1) Regulated by OSHA and the following states: CT, FL, IL, LA, MA, NJ, PA, RI.

(2) Exposure may be elevated as ceiling for Sodium hydroxide per OSHA: PEL = 2 mg/M³ or TLV = 2 mg/M³.

## SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 208°F Specific Gravity (H₂O = 1): 25°C = 1.02 & 39°C = 1.02  
 Vapor Pressure (mm Hg.): 17.0 Percent Volatile by Volume (%): 95%  
 Vapor Density (AIR = 1): 1.0 Evaporation Rate (ethyl ether = 1): slower than 1  
 Solubility in Water: complete Appearance and Odor: Clear, light amber liquid; mild solvent odor  
 pH (concentrate) = 12-13

## SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: None to 200°F Flammable Limits: LEL = N/A UEL = N/A  
 Extinguishing Media: Water, carbon dioxide, dry chemical or foam  
 Special Fire Fighting Procedures: Normal fire fighting procedures may be used. Cool and cautiously approach or  
 handle fire-exposed containers.  
 Unusual Fire and Explosion Hazards: N/A

## SECTION V -- PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: N/A  
 Incompatibility (Materials to Avoid): Oxidizing materials and strong acids  
 Hazardous Decomposition Products or Byproducts: When exposed to fire, produces normal products of  
 combustion.  
 Hazardous Polymerization: Will not occur Conditions to Avoid: None known to Hillyard

## SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Ingestion? Yes

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Direct contact with concentrate in eyes can cause severe irritation and damage.
2. Prolonged and repeated exposure to the skin may product irritation.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater or equal to 0.1%.

**SECTION VI – HEALTH HAZARD DATA cont.**

**Signs and Symptoms of Exposure:** Concentrated product may produce eye burns or moderate skin irritation. Ingestion may produce burns of the mouth, throat, esophagus and stomach.

**Medical Conditions Generally Aggravated by Exposure:** Skin problems such as industrial dermatitis

**Emergency and First Aid Procedures:** In case of contact immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. If swallowed, do not induce vomiting; immediately give large amounts of water and CALL A PHYSICIAN, hospital emergency room or poison control center. Inhalation - Remove victim to fresh air; if respiratory tract remains irritated, CALL A PHYSICIAN.

**SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Absorb with floor dry or similar inert material. Sweep or scrape up and put in appropriate container. Rinse spill area thoroughly with water. Use appropriate protective equipment.

**Waste Disposal Method:** Disposal of concentrate regulated by Federal Resource Conservation and Recovery Act as a corrosive waste (40 CFR 261.22). Disposal or regulated quantities should be neutralized at a permitted facility in accordance with federal/state/local regulations (corrosive waste-pH concentrate = 12-13). Waste from normal product use may be sewered to public-owned treatment works in compliance with applicable federal, state and local pretreatment requirements.

**Precautions To Be Taken In Handling And Storing:** Keep container closed when not in use. Container disposal: Triple rinse (or equivalent), then offer clean, dry container for recycling or reconditioning.

**Other Precautions:** Do not use with fog mist or fine droplet sprayer without respiratory protection. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and 40 CFR Part 372.

**SECTION VIII – CONTROL MEASURES:**

**Respiratory Protection (Specify Type):** Ventilate to keep air concentration below TLV on monoethanolamine and sodium metasilicate.

**Ventilation:**

**Local Exhaust =** Recommended    **Mechanical (General) =** Recommended    **Special =** N/A    **Other =** N/A

**Protective Gloves:** Impervious gloves when working with concentrate    **Eye Protection:** Chemical safety goggles when working with concentrate

**Other Protective Clothing or Equipment:** Impervious to water and alkaline liquid where concentrate is a concern.

**Work / Hygienic Practices:** Wash thoroughly after handling.

**SECTION IX - TRANSPORTATION INFORMATION:**

**Applicable regulations:** DOT = No; IMCO = No; IATA = No

**Proper shipping name:** Cleaning compound

**UN No.:** not applicable    **Limited Qty.:** not applicable    **Hazard Class:** not applicable

**Labels required:** not required    **DOT Exception:** not applicable

**EPA Hazardous waste/number code:** not listed

**Hazardous waste characteristics:**

**Ignitability =** not applicable; **Corrosivity =** yes; **Reactivity =** not applicable

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## MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 1 Flammability = 2 Reactivity = 0

HMIS RATING: Health = / 1 Flammability = 2 Reactivity = 0

## SECTION I - IDENTITY AND MANUFACTURER'S INFORMATION (464N-92A)

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: ARSENAL WINDO CLEAN+CONCENTRATE

Address: 302 North Fourth Street

Date Prepared: August 23, 1996

St. Joseph, MO 64501

Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816)233-1321(Ext. 2303)

## SECTION II - INGREDIENTS/IDENTITY INFORMATION

Components (Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Butyl cellosolve (2-Butoxyethanol) * (1)	111-76-2	25 ppm	25 ppm	N/A	12-17
Isopropyl alcohol (2)	67-63-0	400 ppm	400 ppm	N/A	4-9
Propylene Glycol Monomethyl Ether(3)	107-98-2	100 ppm	100 ppm	STEL=150 ppm	4-9
Water	7732-18-5	none	none	N/A	—
Sulfated Ethoxylated Alcohol	27731-61-9	none	none	N/A	—

*This product contains the following chemical subject to the reporting requirements of SARA Title III, Sec. 313, and 40 CFR Part 372: 2-Butoxyethanol.

(1), (2) and (3) Regulated by OSHA and the following states: CA, FL, IL, OH, TX.

VOS = 2.48 lbs./gal. for concentrate; Diluted VOS = 1.5%

## SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 195°F

Specific Gravity (H₂O = 1): 25°C = 0.98 & 39°C = 0.98

Vapor Pressure (mm Hg.): 17.4

Percent Volatile by Volume (%): 97.3

Vapor Density (AIR = 1): 1.5

Evaporation Rate (ethyl ether = 1): slower than 1

Solubility in Water: complete

Appearance and Odor: clear, lavender liquid; solvent odor

pH (concentrate) = 6.4

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash point: 105°F (T.C.C.) minimum

Flammable Limits: LEL = 1.1% UEL = N/A (mixture)

Extinguishing Media: Alcohol foam, dry chemical, carbon dioxide

Special Fire Fighting Procedures: Water spray may be ineffective, but may be used to cool closed containers.

Unusual Fire and Explosion Hazards: None known to manufacturer

## SECTION V - PHYSICAL HAZARDS

Stability: Stable

Conditions to Avoid: Heat, sparks and open flame

Incompatibility (Materials to Avoid): Strong oxidizing materials

Hazardous Decomposition Products or Byproducts: As with any organic material, combustion will produce carbon dioxide and probably carbon monoxide.

Hazardous Polymerization: Will not occur

Conditions to Avoid: None known

## SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Ingestion? Yes

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. When tested according to Federal Hazardous Substance Act product was not a primary skin irritant but concentrate produced slight skin irritation on prolonged exposure. When tested, the concentrate was found to be an eye irritant. Also test on the concentrate showed that acute oral LD₅₀ was not acutely toxic at 8.0 g/kg. Inhalation testing showed that the LC₅₀ nominal concentration to be 15.5 mg/l. (actual concentration 12.5 mg/l.). Prolonged breathing of high concentrations of butyl cellosolve vapor may result in respiratory and eye irritation, narcosis, hematuria and damage to liver and kidneys. 2. None known to Hillyard Industries.



## SECTION VI – HEALTH HAZARD DATA continued

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

**Signs and Symptoms of Exposure:** Overexposure may cause drowsiness, headache and uncoordination.

**Medical Conditions Generally Aggravated by Exposure:** None known by manufacturer.

**Emergency and First Aid Procedures:** If swallowed, get medical attention immediately. In case of contact, immediately flush eyes or skin with plenty of water for 15 minutes. If irritation persists, get medical attention. Inhalation - If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

## SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

**Steps To Be Taken In Case Material Is Released Or Spilled:** Absorb large spills with floor dry material. Small spills: Flush with water and pick up with mop.

**Waste Disposal Method:** Dispose of contaminated absorbent, container, and unused contents in accordance with state and local regulations. Do not dispose of in storm drains or streams.

**Precautions To Be Taken In Handling And Storing:** Keep away from heat, sparks and flames. Since empty packages retain product residue, follow label warnings even after packages is empty.

**Other Precautions:** Keep away from heat and flame. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. USE ONLY WITH ADEQUATE VENTILATION. Do not breathe vapors or spray mist.

**Ensure fresh air entry during application and drying.** If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor / mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use. Close container after each use. Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Do not take internally. Contains Butyl Cellosolve which may cause blood damage based on animal data.

## SECTION VIII – CONTROL MEASURES:

**Respiratory Protection (Specify Type):** Ventilate to keep air below TLV. A NIOSH approved respirator for organic vapor should be worn if needed to keep level below TLV.

**Ventilation:** Recommend at least 5 CFM

**Local Exhaust =** N/A      **Mechanical (General) =** Recommended      **Special =** N/A      **Other =** N/A

**Protective Gloves:** none required with normal use      **Eye Protection:** Splash goggles where splashing is a concern.

**Other Protective Clothing or Equipment:** use uniforms or coveralls.

**Work / Hygienic Practices:** Wash thoroughly after handling

## SECTION IX - TRANSPORTATION INFORMATION:

**Applicable regulations:** no 49 CFR; yes, IMCO; yes, IATA.

**Proper shipping name for air and foreign water:** Flammable Liquid, N.O.S. (Isopropyl alcohol), 3.3, UN 1993, III

**Proper shipping name for U.S. highway:** Cleaning Compound

**UN No.:** not applicable for highway      **Limited Qty.:** not applicable      **Hazard Class =** not applicable

**Labels required:** not required for highway      **DOT Exception:** not applicable

**EPA Hazardous waste characteristics:**

**Ignitability =** yes; **Corrosivity =** not applicable; **Reactivity =** not applicable.

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## MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 0 Flammability = 0 Reactivity = 0  
 HMIS RATING: Health = 1/0 Flammability = 0 Reactivity = 0

## SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (Ready To Use)

Manufacturer's Name: HILLYARD INDUSTRIES Product Name: WINDO-CLEAN+  
 Address: 302 North Fourth Street Date Prepared: September 6, 1996  
 St. Joseph, MO 64501 Prepared by: Regulatory Affairs Department  
 Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire,  
 exposure or accident involving chemicals.) Other information calls: (816) 233-1321 (Ext. 2303)  
<http://www.hillyard.com>

## SECTION II -- INGREDIENTS/IDENTITY INFORMATION

## Components

(Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	none	none	N/A	—
Sulfated ethoxylated alcohol	27731-61-9	not established	not established	N/A	---

## SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 209°F Specific Gravity (H₂O = 1): 25°C = 0.998 & 39°C = 1.00  
 Vapor Pressure (mm Hg.): 17.5 Percent Volatile by Volume (%): 99.8  
 Vapor Density (AIR = 1): 0.6 Evaporation Rate (ethyl ether = 1): slower than 1  
 Solubility in Water: complete Appearance and Odor: clear, violet liquid; mild solvent odor  
 pH (1:20 dilution with D.I. water) = 7.6

## SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: none to 200°F (T.C.C.) Flammable Limits: LEL = N/A UEL = N/A (mixture)  
 Extinguishing Media: Alcohol foam, dry chemical, carbon dioxide  
 Special Fire Fighting Procedures: Water spray may be ineffective, but may be used to cool closed containers.  
 Unusual Fire and Explosion Hazards: None known to manufacturer

## SECTION V -- PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: Heat, sparks and open flame  
 Incompatibility (Materials to Avoid): Strong oxidizing materials  
 Hazardous Decomposition Products or Byproducts: As with any organic material, combustion will produce  
 carbon dioxide and probably carbon monoxide.  
 Hazardous Polymerization: Will not occur Conditions to Avoid: None known

## SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? no Skin? no Ingestion? no

## HEALTH HAZARDS (1. Acute and 2. Chronic)

- When tested according to Federal Hazardous Substance Act product was not a primary skin or eye irritant. Also test on the concentrate showed that acute oral LD50 was not acutely toxic at 8.0 g./kg. Inhalation testing showed that the LC50 nominal concentration to be 15.5 mg./l. (actual concentration 12.5 mg./l.). Inhalation of fine fog mist can cause irritation of mucous membranes. Fine fog mist application is not recommended.
- None known to concentrate manufacturer.

## Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater or equal to 0.1%.

**SECTION VI -- HEALTH HAZARD DATA continued**

**Signs and Symptoms of Exposure:** None known.

**Medical Conditions Generally Aggravated by Exposure:** None known by manufacturer on 1:20 diluted material.

**Emergency and First Aid Procedures:** In case of contact, flush eyes or skin with plenty of water for 15 minutes.

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Absorb large spills with floor dry material. Small spills: Flush with water and pick up with mop.

**Waste Disposal Method:** Dispose of contaminated absorbent, container, and unused contents in accordance with state and local regulations. Do not dispose of in storm drains or streams.

**Precautions To Be Taken In Handling And Storing:** Keep lid on containers.

**Other Precautions:** Avoid breathing of vapors or fine fog mist. Use with adequate ventilation. Do not get in eyes, on skin or on clothing. Do not take internally. This diluted product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning & Community Right to Know Act of 1986 and 40 CFR Part 372.

**SECTION VIII -- CONTROL MEASURES**

**Respiratory Protection (Specify Type):** None normally required for 1:20 diluted product.

**Ventilation:** No special air handling needed with 1:20 diluted material in normal use.

**Local Exhaust =** N/A      **Mechanical (General) =** Recommended      **Special =** N/A      **Other =** N/A

**Protective Gloves:** none required with normal use      **Eye Protection:** none required with normal use

**Other Protective Clothing or Equipment:** Not usually necessary.

**Work / Hygienic Practices:** Wash thoroughly after handling

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## MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 2 Flammability = 1 Reactivity = 0  
 HMIS RATING: Health = /2 Flammability = 1 Reactivity = 1

## SECTION I - IDENTITY AND MANUFACTURER'S INFORMATION (1054B)

Manufacturer's Name: HILLYARD INDUSTRIES Product Name: ARSENAL SUPROX  
 Address: 302 North Fourth Street Date Prepared: September 26, 2006  
 St. Joseph, MO 64501 Prepared by: Regulatory Affairs Department  
 Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.) Other information calls: (816) 233-1321 (Ext. 8285)  
<http://www.hillyard.com>

## SECTION II - INGREDIENTS/IDENTITY INFORMATION

## Components

(Specific Chemical Identity:

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Hydrogen Peroxide	7722-84-1	1.4 mg/m ³	1.4 mg/m ³	N.A.	5 - 8%
Water	7732-18-5	none	none	N.A.	---
Complex Surfactant Blend	68991-48-0 & 68439-46-3	not established	not established	N.A.	---

VOC (Concentrate) = 0.40%; VOC (min. dilution 1:10) = 0.04%

## SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 217°F Specific Gravity (H₂O = 1): 25°C = 1.02 & 39°C = 1.02  
 Vapor Pressure (mm Hg): 17.6 Percent Volatile by Volume (%): 94.6%  
 Vapor Density (AIR = 1): 0.65 Evaporation Rate (ethyl ether = 1): Slower than 1  
 Solubility in Water: complete Appearance and Odor: Clear, colorless liquid, Citrus odor  
 pH (concentrate) = 4-5

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash point: >145°F corrected (T.C.C.) Flammable Limits: LEL = Not determined UEL = Not determined  
 Extinguishing Media: Do NOT use CO₂ extinguisher on this material; use only water spray or appropriate foam. Do not use organic compounds on this material.

Special Fire Fighting Procedures: As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear. Containers can build up pressure if exposed to heat (fire). Cool with water spray.

Unusual Fire and Explosion Hazards: Release of oxygen may support combustion. Contact with incompatible materials (e.g. metals, alkalis, and strong reducing agents) may cause hazardous decomposition resulting in the release of heat, steam, and oxygen. Exposure to heat may cause hazardous decomposition. Hydrogen peroxide may spontaneously decompose above 150°C. Do not mix with kerosene or gasoline.

## SECTION V - PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: Heat and flame.  
 Incompatibility (Materials to Avoid): Metals, Reducing agents, Alkalis, Combustible materials, Organic materials, Salt of heavy metals, Impurities.  
 Hazardous Decomposition Products or Byproducts: Oxygen, oxides of carbon and steam.  
 Hazardous Polymerization: Will not occur Conditions to Avoid: None known to Manufacturer

## SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? yes Skin? yes Ingestion? LD50 greater than 5 g/kg

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Contact with concentrate may cause eye burns and prolonged skin contact with concentrate may cause slight skin irritation. Ingestion can cause nausea, vomiting and gastrointestinal irritation. Prolonged inhalation may cause respiratory irritation. Acute oral toxicity of concentrate per EPA method = >5000 mg./kg. Acute dermal irritation = Non-irritating. Toxicity Category IV per EPA Method. Tests show the product is not a skin sensitizer. Acute inhalation toxicity = LC50 > 2.13 mg./Liter.

2. None known to Hillyard Industries when used according to label directions.

## SECTION VI - HEALTH HAZARD DATA continued

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

**Signs and Symptoms of Exposure:** Eye symptoms may occur with delay such as conjunctiva and burns; reaction may be delayed. Prolonged skin contact with concentrate may cause irritation. Inhalation of fine mist or aerosols can lead to irritation and inflammation of the respiratory tract and cause pulmonary edema. Symptoms may occur with delay. Swallowing can lead to irritation of the mucous membranes in the mouth, esophagus and stomach.

**Medical Conditions Generally Aggravated by Exposure:** Open cuts and sores may be irritated by contact.

**Emergency and First Aid Procedures:** Eye and Skin Contact - Flush eyes and skin with plenty of water for 15 minutes; apply water gently and do not rub area. For eyes seek medical attention immediately. For skin, if irritation persists, get medical attention. If swallowed, do not induce vomiting. Seek immediate medical attention. If excess inhaled, remove to fresh air; if breathing is difficult, seek medical attention.

## SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

**Steps To Be Taken In Case Material Is Released Or Spilled:** Small spills should be flushed with water and picked up with mop. Hydrogen peroxide quickly decomposes to oxygen and water.

**Waste Disposal Method:** Dispose of in accordance with state or local regulations.

**Precautions To Be Taken In Handling And Storing:** Keep container closed when not in use. Since empty packages retain product residue, follow label warnings even after package is empty.

**Other Precautions:** Do not dispose of in storm drains or streams. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and 40 CFR Part 372.

## SECTION VIII - CONTROL MEASURES

**Respiratory Protection (Specify Type):** Not normally required with adequate ventilation.

**Ventilation:**

**Local Exhaust =** Normally adequate **Mechanical (General) =** Recommended **Special =** N/A **Other =** N/A

**Protective Gloves:** Impervious gloves (neoprene or rubber) with concentrate. **Eye Protection:** Splash goggles with concentrate.

**Other Protective Clothing or Equipment:** Avoid prolonged contact. Wear clothing to prevent contact with concentrate if necessary. Eye wash, safety shower to be available when working with concentrate.

**Work / Hygienic Practices:** Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling; wash clothing before reuse. Completely submerge contaminated clothing or other materials in water prior to drying.

## SECTION IX - TRANSPORTATION INFORMATION

**Applicable regulations:** 49 CFR = no; IMCO = no; IATA = no

**Proper shipping name:** Cleaning compound

**UN NO.:** not applicable **Limited Qty.:** not applicable **Hazard Class =** not applicable

**Labels required:** not required **DOT Exception:** not applicable

**EPA Hazardous waste number / code:** not listed

**Hazardous waste characteristics:** **Ignitability:** not applicable; **Corrosivity:** not applicable; **Reactivity:** not applicable

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**MATERIAL SAFETY DATA SHEET**

NFPA RATING: Health = 1 Flammability = 0 Reactivity = 0

HMIS RATING: Health = /1 Flammability = 0 Reactivity = 0

**SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (#0771)**

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: ARSENAL SUPER SHINE-ALL  
CONCENTRATEAddress: 302 North Fourth Street  
St. Joseph, MO 64501

Date Prepared: October 3, 1997

Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816)233-1321(Ext. 2303)

**SECTION II -- INGREDIENTS/IDENTITY INFORMATION**

Components (Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	none	none	N.A.	---
Tall oil soap, potassium	61790-44-1	not established	not established	N.A.	---
Ammonium parath sulfate	67762-19-0	not established	not established	N.A.	---
Triethanolamine(1)	102-71-6	not established	5 mg/m ³	N.A.	---

(1) Regulated in FL., MA., PA., RI.

**SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS**

Boiling Point: 743mmHg 205°F

Specific Gravity (H₂O = 1): 25°C = 1.00 & 39°C = 1.00

Vapor Pressure (mm Hg.): 17.6

Percent Volatile by Volume (%): 87%

Vapor Density (AIR = 1): 0.6

Evaporation Rate (ethyl ether = 1): Slower than 1

Solubility in Water : Complete

Appearance and Odor: light amber liquid, Sassafras odor

pH (concentrate) = 9.0-9.3

**SECTION IV -- FIRE AND EXPLOSION HAZARD DATA**

Flash point: None (T.C.C.)

Flammable Limits: LEL = N.A. UEL = N.A.

Extinguishing Media: Water

Special Fire Fighting Procedures: None.

Unusual Fire and Explosion Hazards: None known to Hillyard Industries.

**SECTION V -- PHYSICAL HAZARDS**

Stability: Stable

Conditions to Avoid: N.A.

Incompatibility (Materials to Avoid): None of which we have knowledge.

Hazardous Decomposition Products or Byproducts: As with any organic materials, combustion will produce carbon dioxide and probably carbon monoxide.

Hazardous Polymerization: Will not occur

Conditions to Avoid: None known to Hillyard Ind.

**SECTION VI -- HEALTH HAZARD DATA**

Routes of entry: Inhalation? No Skin? No Ingestion? No

**SECTION VI -- HEALTH HAZARD DATA (continued)**

**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. Primary Irritation test on the concentrate per the Federal Hazardous Substance Act showed the concentrated product was a primary skin irritant and an eye irritant.
2. None known to manufacturer.

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

**Signs and Symptoms of Exposure:** May cause irritation to skin and eyes.

**Medical Conditions Generally Aggravated by Exposure:** Open cuts and sores may be irritated by contact.

**Emergency and First Aid Procedures:** In case of contact with eyes or skin, flush with plenty of water for 15 minutes.

Remove contaminated clothing. Call a physician if irritation persists. Wash clothing before reuse. If swallowed give water; may cause diarrhea; call physician

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Rinse area with water and pick up with wet vac or mop.

**Waste Disposal Method:** Dispose of in accordance with state or local regulations.

**Precautions To Be Taken In Handling And Storing:** Not applicable.

**Other Precautions:** Do not dispose of in storm drains or streams.

**SECTION VIII -- CONTROL MEASURES:**

**Respiratory Protection (Specify Type):** Not normally required.

**Ventilation:**

**Local Exhaust =** Normally adequate **Mechanical (General) =** Recommended **Special =** N.A. **Other =** N.A.

**Protective Gloves:** None required with normal use. **Eye Protection:** Splash goggles where eye contact is likely.

**Other Protective Clothing or Equipment:** Not normally required.

**Work / Hygienic Practices:** Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling; wash clothing before reuse.

**SECTION IX - TRANSPORTATION INFORMATION:**

**Applicable regulations:** DOT = no; IMCO = no; IATA = no

**Proper shipping name:** Cleaning compound

**UN No.:** not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable

**Labels required:** not required **DOT Exception:** not applicable

**EPA Hazardous waste/number code:** not listed

**Hazardous waste characteristics:**

**Ignitability =** not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable

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## MATERIAL SAFETY DATA SHEET

**NFPA RATING:** Health = 0 Flammability = 0 Reactivity = 0  
**MIS RATING:** Health = /0 Flammability = 0 Reactivity = 0

## SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (#0771)

**Manufacturer's Name:** HILLYARD INDUSTRIES **Product Name:** ARSENAL SUPER SHINE-ALL  
 CONCENTRATE Ready To Use

**Address:** 302 North Fourth Street **Date Prepared:** October 3, 1997  
 St. Joseph, MO 64501 **Prepared by:** Regulatory Affairs Department

**Emergency Telephone No.:** (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire,  
 exposure or accident involving chemicals.) **Other information calls:** (816) 233-1321 (Ext. 8285)

<http://www.hillyard.com>

## SECTION II -- INGREDIENTS/IDENTITY INFORMATION

## Components

(Specific Chemical Identity:

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	none	none	N.A.	—
Tall oil soap, potassium	61790-44-1	not established	not established	N.A.	—

(1) Regulated in FL, MA, PA, RI

## SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

**Boiling Point:** 743 mmHg 205°F **Specific Gravity (H₂O = 1):** 25°C = 1.00 & 39°C = 1.00  
**Vapor Pressure (mm Hg.):** 17.5 **Percent Volatile by Volume (%):** 99.81%  
**Vapor Density (AIR = 1):** 0.6 **Evaporation Rate (ethyl ether = 1):** Slower than 1  
**Solubility in Water:** Complete **Appearance and Odor:** Very light amber liquid, Sassafras odor  
**pH (concentrate) =** 7.5-8.5 Diluted 1:128 with water

## SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

**Flash point:** None (T.C.C.) **Flammable Limits:** LEL = N.A. UEL = N.A.  
**Extinguishing Media:** Water  
**Special Fire Fighting Procedures:** None.  
**Unusual Fire and Explosion Hazards:** None known to Hillyard Industries.

## SECTION V -- PHYSICAL HAZARDS

**Stability:** Stable **Conditions to Avoid:** N.A.  
**Incompatibility (Materials to Avoid):** None of which we have knowledge.  
**Hazardous Decomposition Products or Byproducts:** As with any organic materials, combustion will produce  
 carbon dioxide and probably carbon monoxide.  
**Hazardous Polymerization:** Will not occur **Conditions to Avoid:** None known to Hillyard Ind.

## SECTION VI -- HEALTH HAZARD DATA

**Routes of entry:** Inhalation? No Skin? No Ingestion? No

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Diluted product is not expected to be a Primary Irritant per the Federal Hazardous Substance Act; eye exposure to diluted material may cause mild irritation
2. None known to manufacturer.



**SECTION VI -- HEALTH HAZARD DATA (continued)**

National Toxicology Program = No      I.A.R.C. Monographs = No      OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

**Signs and Symptoms of Exposure:** May cause irritation to skin and eyes.

**Medical Conditions Generally Aggravated by Exposure:** Open cuts and sores may be irritated by contact.

**Emergency and First Aid Procedures:** In case of contact with eyes or skin, flush with plenty of water for 15 minutes.

Call a physician if irritation persists. If swallowed give water; may cause diarrhea; call physician

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Rinse area with water and pick up with wet vac or mop.

**Waste Disposal Method:** Dispose of in accordance with state or local regulations.

**Precautions To Be Taken In Handling And Storing:** Not applicable.

**Other Precautions:** Do not dispose of in storm drains or streams.

**SECTION VIII -- CONTROL MEASURES**

**Respiratory Protection (Specify Type):** Not normally required.

**Ventilation:**

**Local Exhaust =** Normally adequate      **Mechanical (General) =** Recommended      **Special =** N.A.      **Other =** N.A.

**Protective Gloves:** None required with normal use.      **Eye Protection:** None required with normal use.

**Other Protective Clothing or Equipment:** Not normally required.

**Work / Hygienic Practices:** Avoid prolonged contact with eyes, skin, and clothing. Wash thoroughly after handling; wash clothing before reuse.

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## MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 0 Flammability = 0 Reactivity = 0  
 HMIS RATING: Health = /0 Flammability = 0 Reactivity = 0

## SECTION I - IDENTITY AND MANUFACTURER'S INFORMATION (Ready to use)

Manufacturer's Name: HILLYARD INDUSTRIES Product Name: ARSENAL SPRAY CLEAN HD  
 Address: 302 North Fourth Street Date Prepared: March 15, 2004  
 St. Joseph, MO 64501 Prepared by: Regulatory Affairs Department  
 Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire,  
 exposure or accident involving chemicals.) Other information calls: (816) 233-1321 (Ext. 8285)  
<http://www.hillyard.com>

## SECTION II - INGREDIENTS/IDENTITY INFORMATION

(Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Dipropylene glycol methyl ether	34590-94-8	100 ppm	100 ppm	N/A	1-5%
Water	7732-18-5	none	none	N/A	---

V.O.S. (Diluted 1:10) = 3%

## SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 208°F Specific Gravity (H₂O = 1): 25°C 1.01 & 39°C = 1.01  
 Vapor Pressure (mm Hg.): 17.5 Percent Volatile by Volume (%): 99.26%  
 Vapor Density (AIR = 1): 0.74 Evaporation Rate (ethyl ether = 1): slower than 1.  
 Solubility in Water: complete Appearance and Odor: Slightly hazy, dark purple liquid;  
 pH (concentrate): 11.3 mountain berry odor

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash point: None (T.C.C.) Flammable Limits: LEL = N/A UEL = N/A  
 Extinguishing Media: Water, carbon dioxide, dry chemical or foam  
 Special Fire Fighting Procedures: Normal fire fighting procedures may be used. Cool and cautiously approach or  
 handle fire-exposed containers.  
 Unusual Fire and Explosion Hazards: N/A

## SECTION V - PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: N/A  
 Incompatibility (Materials to Avoid): Oxidizing materials and strong acids  
 Hazardous Decomposition Products or Byproducts: Produces normal products of combustion when exposed to fire.  
 Hazardous Polymerization: Will not occur Conditions to Avoid: None known

## SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Ingestion? Yes

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. When tested per the Federal Hazardous Substance Act concentrate was not considered a primary skin irritant. Not an eye irritant per 16 CFR 1500.42. Six animals showed slight conjunctivae irritation with some vessels definitely injected but complete recovery was found in 72 hours. It was not acutely oral toxic at 5 g./kg. Only spray diluted product. Inhalation of fine fog mist can cause irritation of mucous membranes. Fine fog mist application is not recommended. 2. None known to Hillyard Industries.

## Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

**SECTION VI – HEALTH HAZARD DATA continued**

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

**Signs and Symptoms of Exposure:** Concentrated product may produce skin and eye irritation. Ingestion may produce burns of the mouth, throat, esophagus and stomach.

**Medical Conditions Generally Aggravated by Exposure:** Skin problems such as industrial dermatitis.

**Emergency and First Aid Procedures:** In case of contact flush eyes or skin with plenty of water for 15 minutes. If swallowed do not induce vomiting unless directed to do so by medical personnel. If inhaled move to fresh air. If discomfort persists, get medical attention.

**SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Absorb with floor dry or similar inert material. Sweep or scrape up and put in appropriate container. Rinse spill area thoroughly with water.

**Waste Disposal Method:** Disposal is regulated by the Resource Conservation and Recovery Act; concentrate is corrosive per EPA Hazardous Waste classification. Disposal of regulated quantities should be neutralized at a permitted facility in accordance with all federal, state and local requirements.

**Precautions To Be Taken In Handling And Storing:** Keep container closed when not in use. Container disposal: Triple rinse (or equivalent) then offer clean, dry container for recycling or reconditioning. Waste from normal use may be sewer to public-owned treatment works in compliance with applicable federal, state and local requirements.

**Other Precautions:** Do not use with fog mist or fine droplet sprayer without respiratory protection. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and 40 CFR Part 372.

**SECTION VIII – CONTROL MEASURES**

**Respiratory Protection (Specify Type):** No special air handling needed with diluted material in normal use.

**Ventilation:**

Local Exhaust =	Recommended	Mechanical (General) =	Recommended
Special =	N/A	Other =	N/A

**Other Protective Clothing or Equipment:** Not usually necessary.

**Work / Hygienic Practices:** Wash thoroughly after handling.

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## MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 3, Flammability = 0, Reactivity = 0

HMIS RATING: Health = /3, Flammability = 0, Reactivity = 0

## SECTION I - IDENTITY AND MANUFACTURER'S INFORMATION (960A)

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: ARSENAL RESTROOM CLEANER

Address: 302 North Fourth Street  
St. Joseph, MO 64501

Date Prepared: April 15, 2003

Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816) 233-1321 (Ext. 8285)

<http://www.hillyard.com>

## SECTION II - INGREDIENTS/IDENTIFY INFORMATION

## Components

(Specific Chemical Identity:

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Phosphoric acid*(1)	7664-38-2	1 mg./m ³	1 mg./m ³	3 mg/m ³	10-15%
Citric acid	77-29-9	not established	not established	not established	7-12
Water	7732-18-5	none	none	N.A.	---
1-Butoxy-2-Propanol	5131-66-8	not established	not established	N.A.	---
Linear Primary Alcohol Ethoxylate	68439-46-3	not established	not established	N.A.	---
Poly (oxy 1,2-Ethanediy)	9036-19-5	not established	not established	N.A.	---
Lauramine Oxide	1643-20-5	not established	not established	N.A.	---

*This product contains the following chemicals subject to the reporting requirements of SARA Title III, Sec. 313, and 40 CFR Part 372: Phosphoric acid.

(1) Regulated by OSHA, and the following states: CT, FL, IL, LA, MA, NJ, NY, PA, and RI. ; (2) Regulated by OSHA and the following states: FL, IL, LA, MA, NJ, PA, RI.

VOS = Less than 10%

## SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 208°F

Specific Gravity (H₂O = 1): 25°C = 1.09 & 39°C = 1.09

Vapor Pressure (mm Hg.): 16.99

Percent Volatile by Volume (%): 69.79%

Vapor Density (AIR = 1): 1.32

Evaporation Rate (ethyl ether = 1): slower than 1

Solubility in Water: complete

Appearance and Odor: Clear, pink liquid, cherry odor

pH = 1.36

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash point: None to 200°F(T.C.C.) Flammable Limits: LEL = N.A. UEL = N.A.

Extinguishing Media: Foam, dry chemical, carbon dioxide, water spray.

Special Fire Fighting Procedures: Hot phosphoric acid is corrosive. Self contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals.

Unusual Fire and Explosion Hazards: May generate hydrogen gas in contact with some metals.

## SECTION V - PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: None known to manufacturer.

Incompatibility (Materials to Avoid): Corrodes some metals and alloys; cyanides and strong alkalis (ammonia) or bleach.

Hazardous Decomposition Products or Byproducts: Hydrogen gas from contact with some metals.

Hazardous Polymerization: Will not occur Conditions to Avoid: N.A.

## SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? by mist Skin? yes Ingestion? yes

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Concentrate is harmful or fatal if swallowed. Concentrate was not considered to be a primary skin irritant per Federal Hazardous Substance Act; however, five out of six test subjects had crust formation by day seven. Concentrate was considered to be an eye irritant per FHSA. Neo-vascularization, an indication of corrosion, was observed in all six test subjects by day seven. Concentrate induced mortality in four of 10 test subjects at a dose of 5 g./kg. Inhalation - Overexposure may cause nose and throat irritation. Acute inhalation - 1 Hour Toxic Limit test - not toxic at nominal concentration of at least 44.69 mg/l (actual concentration 62.04 mg./L). This was the maximum concentration that could be generated by this test. 2. None known by Hillyard Industries.

**SECTION VI - HEALTH HAZARD DATA continued**

**Chemical listed as Carcinogen or Potential Carcinogen:**

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

**Signs and Symptoms of Exposure:** Contact: burns of eyes, skin, and on mouth and lips after ingestion, with sour taste of acid, severe gastrointestinal irritation. Inhalation of high concentrations of vapors results in respiratory and eye irritation, narcosis, headache, nausea, dizziness.

**Medical Conditions Generally Aggravated by Exposure:** None known to manufacturer.

**Emergency and First Aid Procedures:** If swallowed get medical attention immediately. Inhalation - If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately. In case of contact, immediately flush eyes or skin with plenty of water for 15 minutes. Get medical attention immediately.

**SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with Federal, State, and Local regulations. Use solvent-resistant eyewear with splash guards. Solvent-impermeable rubber gloves, rubber boots and rubber apron or suit to prevent skin contact. Avoid contamination of storm drains, sewers, or other unauthorized treatment drainage systems and natural waterways.

**Waste Disposal Method:** Disposal is regulated under the Resource Conservation and Recovery Act (40 CFR 261.22) as a corrosive waste. Regulated quantities should be neutralized by a permitted facility in accordance with applicable local, state, and federal regulations.

**Precautions To Be Taken In Handling And Storing:** Product residue may remain on or in empty containers. All precautions for handling the product must be used in handling the empty container or residue. Container disposal: Triple rinse (or equivalent) then offer clean, dry container for recycling or reconditioning. Waste from normal use may be sewerered to a public-owned treatment works in compliance with applicable federal, state and local requirements.

**Other Precautions:** Avoid breathing vapors or fine fog spray mist. Prevent build-up of vapors by opening all windows and doors to achieve cross-ventilation. Use only with adequate ventilation. Do not breathe vapors or fine fog spray mist. Ensure fresh air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and after application. Follow respirator manufacturer's directions for respirator use. Close container after each use. Do not take internally.

**SECTION VIII - CONTROL MEASURES**

**Respiratory Protection (Specify Type):**

Not usually necessary. If spraying in a fine fog mist use NIOSH approved respirator (TC-21C-279, TC-23C-736, or TC-23C-745).

**Ventilation:** At least 3 air exchanges per hour suggest in good public restrooms.

**Local Exhaust = Recommended Mechanical (General) = Recommended Special = N.A. Other = N.A.**

**Protective Gloves:** Impervious gloves (rubber). **Eye Protection:** Solvent resistant eyewear with splash shields.

**Other Protective Clothing or Equipment:** Not usually necessary. Where there is a danger of contact with concentrated cleaner use solvent resistant rubber gloves, rubber boots and rubber apron or suit to prevent skin contact.

**Work / Hygienic Practices:** Wash thoroughly after handling. Upon contact remove contaminated clothing; wash before reuse.

**SECTION IX - TRANSPORTATION INFORMATION**

**Applicable regulations:** DOT = No; IMCO = No; IATA = No

**Proper shipping name:** Cleaning compound

**UN No.:** not applicable

**Limited Qty.:** not applicable

**Hazard Class:** not applicable

**Labels required:** not required

**DOT Exception:** not applicable

**EPA Hazardous waste/number code:** not listed

**Hazardous waste characteristics:**

**Ignitability = not applicable; Corrosivity = yes; Reactivity = not applicable**

**DISCLAIMER OF WARRANTIES**

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## MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 2 Flammability = 0 Reactivity = 0  
 HMIS RATING: Health = 2 Flammability = 1 Reactivity = 0

## SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (507N-45C)

Manufacturer's Name: HILLYARD INDUSTRIES  
 Address: 302 North Fourth Street  
 St. Joseph, MO 64501

Product Name: ARSENAL RE-JUV-NAL  
 Date Prepared: February 4, 2002  
 Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816) 233-1321 (Ext. 8285)

<http://www.hillyard.com>

## SECTION II -- INGREDIENTS/IDENTITY INFORMATION

## Components

(Specific Chemical Identity:

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Didecyl dimethyl ammonium chloride	7173-51-5	not established	N/A	N/A	2.54
n-Alkyl (C ₁₄ 50%, C ₁₂ 40%, C ₁₆ 10%) dimethyl benzyl ammonium chloride	8001-54-5	not established	N/A	N/A	1.69
Octyl dimethyl amine oxide	2605-78-9	not established	N/A	N/A	---
Edtate Disodium	139-33-3	not established	N/A	N/A	---
Deionized water	7732-18-5	none	N/A	N/A	---

## SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 210°F Specific Gravity (H₂O = 1): 25°C = 1.00 & 39°C = 1.00  
 Vapor Pressure (mm Hg.): 17.6 Percent Volatile by Volume (%): 94.7  
 Vapor Density (AIR = 1): 0.6 Evaporation Rate (ethyl ether = 1): slower than 1  
 Solubility in Water: complete Appearance and Odor: clear, reddish-orange liquid; floral odor  
 pH of concentrate: 7.2 - 8.2

## SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: >200°F (Tag Closed Cup) Flammable Limits: LEL = Not applicable UEL = Not applicable  
 Extinguishing Media: Foam, alcohol foam, carbon dioxide, dry chemical, water  
 Special Fire Fighting Procedures: Must wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.  
 Unusual Fire and Explosion Hazards: Products of combustion are toxic.

## SECTION V -- PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: N/A  
 Incompatibility (Materials to Avoid): Strong oxidizing and reducing agents.  
 Hazardous Decomposition Products or Byproducts: Thermal decomposition may produce toxic vapors/fumes of Hydrogen chloride, amines, and other organic materials, and oxides of carbon and nitrogen  
 Hazardous Polymerization: Will not occur Conditions to Avoid: None known to Hillyard

## SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? yes Skin? yes Eye? Yes Ingestion? yes

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. From previous experience with a 2 oz. per gallon alkaline quat, the oral LD50 (rat): 1850 mg/kg; Dermal LD50 (Rabbit): 4430 mg/kg.; Eye: Diluted product 1:64 (rabbit) essentially non-irritating; Skin irritation: Diluted product 1:64 (rabbit) Non-irritating Inhalation of fine fog mist can cause irritation of mucous membranes. Fine fog mist application is not recommended. 2. None known to Hillyard.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No

L.A.R.C. Monographs = No OSHA = No

Signs and Symptoms of Exposure: Direct eye contact with concentrate can cause severe eye irritation; and direct skin contact will produce severe irritation, which upon prolonged contact may produce burns. Overexposure to fine fog mist of product can produce irritation of the mucous membranes. Ingestion can produce immediate burning pain in the mouth, throat and abdomen; severe swelling of the larynx; skeletal muscle paralysis affecting the ability to breathe; circulatory shock; and /or convulsions.

**SECTION VI -- HEALTH HAZARD DATA continued:**

**Medical Conditions Generally Aggravated by Exposure:** None known to manufacturer.

**Emergency and First Aid Procedures:** Eyes: Flush with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Get immediate medical attention. If physician is not available, flush for additional 15 minutes and then transport victim to medical care. Skin: Wash with large amounts of running water, and soap if available, for 15 minutes; Remove contaminated clothing and shoes. Get immediate medical attention. Wash clothing and decontaminated shoes before reuse. Ingestion: If swallowed, immediately give 3-4 glasses of milk (if unavailable, give water). DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Have physician determine if patient's condition allows for induction of vomiting or evacuation of the stomach. Do not give anything by mouth to a convulsing or unconscious person. Inhalation: Remove from area to fresh air. If not breathing, clear airway and start artificial respiration. If victim is having trouble breathing, give supplemental oxygen, if available. Get immediate medical attention.

**NOTE TO PHYSICIAN:** Probable mucosal damage may contraindicate the use of gastric lavage. Supplemental oxygen and other measures to support breathing may be needed to combat circulatory shock. Persistent convulsions may be controlled by the cautious intravenous injection of a short acting barbiturate drug.

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Caution. Floors may become slippery. Wear appropriate protective gear and respiratory protection where mist or vapors of unknown concentrations may be generated (self-contained breathing apparatus preferred). Dike and contain spill with inert material (sand, earth, etc.) and transfer the liquid and solid separately to containers of recovery or disposal. Keep spill out of sewers and open bodies of water.

**Waste Disposal Method:** Dispose of in compliance with all federal, state and local laws and regulations. Incineration is the preferred method.

**Precautions To Be Taken In Handling And Storing:** Keep away from children.

**Other Precautions:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning & Community Right to Know Act of 1986 and 40 CFR Part 372.

**SECTION VIII -- CONTROL MEASURES**

**Ventilation:** In processes where mists or vapors must be generated, proper ventilation must be provided in accordance with good ventilation practices. **Respiratory Protection (Specify Type):** In processes where mists or vapors may be generated, a NIOSH/MSHA jointly approved respirator is advised in the absence of proper environmental controls. **Protective Gloves:** Rubber or neoprene, when needed, to prevent skin contact with concentrate. **Eye Protection:** Wear chemical splash goggles where there is a potential for eye contact. Use safety glasses with side shields under normal use conditions. **Other Protective Clothing or Equipment:** Eye wash; safety shower, protective clothing (long sleeves, coveralls or other, as appropriate), when needed to prevent skin contact with concentrate. **Work / Hygienic Practices:** Wash hands thoroughly after handling.

**SECTION IX - TRANSPORTATION INFORMATION**

**Applicable regulations:** 49 CFR = No; IMCO = No; IATA = No

**Proper shipping name:** Cleaning Compound; **UN No.:** Not applicable; **Limited Qty.:** Not applicable;

**Hazard Class:** Not applicable

**Labels required:** Not required **Exception:** Not applicable

**EPA Hazardous waste number/code:** Not listed

**Hazardous waste characteristics:** Ignitability = Not applicable; Corrosivity = Not applicable; Reactivity = Not applicable

**DISCLAIMER OF WARRANTIES**

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**MATERIAL SAFETY DATA SHEET**

NFPA RATING: Health = 1 Flammability = 0 Reactivity = 0  
 HMIS RATING: Health = 1/1 Flammability = 0 Reactivity = 0

**SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (2 oz/gal. Ready to Use)**

Manufacturer's Name: HILLYARD INDUSTRIES Product Name: ARSENAL RE-JUV-NAL

Address: 302 North Fourth Street Date Prepared: October 9, 1999

St. Joseph, MO 64501 Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816) 233-1321 (Ext. 8285)

<http://www.hillyard.com>

**SECTION II -- INGREDIENTS/IDENTITY INFORMATION**

**Components**

(Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Didecyl dimethyl ammonium chloride	7173-51-5	not established	N/A	N/A	trace
n-Alkyl (C ₁₄ 50%, C ₁₂ 40%, C ₁₆ 10%) dimethyl benzyl ammonium chloride	8001-54-5	not established	N/A	N/A	trace
Octyl dimethyl amine oxide	2605-78-9	not established	N/A	N/A	---
Edtate Disodium	139-33-3	not established	N/A	N/A	---
Deionized water	7732-18-5	none	N/A	N/A	---

**SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS**

Boiling Point: 207°F Specific Gravity (H₂O = 1): 25°C = 1.00 & 39°C = 1.00  
 Vapor Pressure (mm Hg.): 17.6 Percent Volatile by Volume (%): 99.93%  
 Vapor Density (AIR = 1): 0.6 Evaporation Rate (ethyl ether = 1): slower than 1  
 Solubility in Water: complete Appearance and Odor: clear, light red liquid; floral odor  
 pH of concentrate: 6.0 - 7.0

**SECTION IV -- FIRE AND EXPLOSION HAZARD DATA**

Flash point: none to boiling (Tag Closed Cup) Flammable Limits: LEL = N/A UEL = N/A  
 Extinguishing Media: N/A  
 Special Fire Fighting Procedures: none  
 Unusual Fire and Explosion Hazards: none

**SECTION V -- PHYSICAL HAZARDS**

Stability: Stable Conditions to Avoid: none known to Hillyard  
 Incompatibility (Materials to Avoid): Strong acids  
 Hazardous Decomposition Products or Byproducts: Thermal decomposition may yield carbon monoxide, carbon dioxide, ammonia, and nitrous oxides.  
 Hazardous Polymerization: will not occur Conditions to Avoid: none known to Hillyard

**SECTION VI -- HEALTH HAZARD DATA**

Routes of entry: Inhalation? no Skin? yes Ingestion? yes

**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. Prolonged contact may cause slight eye and slight skin irritation. If swallowed may cause gastrointestinal tract irritation. Inhalation of fine fog mist can cause irritation of mucous membranes. Fine fog mist application is not recommended. 2. None known by Hillyard.



**SECTION VI -- HEALTH HAZARD DATA continued**

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

Signs and Symptoms of Exposure: Prolonged contact may cause minimal eye irritation and slight skin irritation. Ingestion of diluted material may cause gastrointestinal tract irritation.

Medical Conditions Generally Aggravated by Exposure: None known to manufacturer.

Emergency and First Aid Procedures: In case of contact immediately flush eyes or skin with water for 15 minutes; if irritation persists Get Medical Attention. Ingestion: Drink promptly a large quantity of water. Avoid alcohol. Call a physician.

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

Steps To Be Taken In Case Material Is Released Or Spilled: Contain spill. Avoid contamination of food, water or feed.

Waste Disposal Method: Dispose of in accordance with all federal, state, and local regulations.

Precautions To Be Taken In Handling And Storing: Keep away from children.

Other Precautions: Triple rinse empty containers thoroughly with water before disposal. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and 40 CFR Part 372.

**SECTION VIII -- CONTROL MEASURES**

Respiratory Protection (Specify Type): None normally required. If exposed to fine mist droplets of less than 15 microns, a NIOSH/MSHA approved respirator should be worn.

Ventilation:

Local Exhaust = N/A Mechanical (General) = recommended Special = N/A Other = N/A

Protective Gloves: none normally required for product Eye Protection: none normally required for product

Other Protective Clothing or Equipment: none.

Work / Hygienic Practices: wash hands thoroughly after handling.

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## MATERIAL SAFETY DATA SHEET

EPA Reg. No. 47371-131-1658

EPA Est. No. 1658-MO-1

NFPA RATING: Health = 2 Flammability = 0 Reactivity = 0  
 HMIS RATING: Health = 2 Flammability = 1 Reactivity = 0

## SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (1091B)

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: ARSENAL NON-ACID RESTROOM  
DISINFECTANT/CLEANERAddress: 302 North Fourth Street  
St. Joseph, MO 64501

Date Prepared: July 22, 2008

Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

Other information calls: (816) 233-1321 (Ext. 8285)

<http://www.hillyard.com>

## SECTION II -- INGREDIENTS/IDENTITY INFORMATION

## Components

(Specific Chemical Identity:

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Didecyl dimethyl ammonium chloride	7173-51-5	not established	N/A	N/A	2.54
n-Alkyl (C ₁₄ 50%, C ₁₂ 40%, C ₁₆ 10%) dimethyl benzyl ammonium chloride	8001-54-5	not established	N/A	N/A	1.69
Alcohols, C ₉₋₁₁ , ethoxylated	68439-46-3	not established	N/A	N/A	---
Edtate Disodium	139-33-3	not established	N/A	N/A	---
Deionized water	7732-18-5	none	N/A	N/A	---

## SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 210°F Specific Gravity (H₂O = 1): 25°C = 1.00 & 39°C = 1.00  
 Vapor Pressure (mm Hg.): 17.6 Percent Volatile by Volume (%): 94.7  
 Vapor Density (AIR = 1): 0.6 Evaporation Rate (ethyl ether = 1): slower than 1  
 Solubility in Water: complete Appearance and Odor: clear, blue liquid; floral odor  
 pH of concentrate: 7.2 - 8.2

## SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: >200°F (Tag Closed Cup) Flammable Limits: LEL = Not applicable UEL = Not applicable  
 Extinguishing Media: Foam, alcohol foam, carbon dioxide, dry chemical, water  
 Special Fire Fighting Procedures: Must wear NIOSH/MSHA approved self-contained breathing apparatus and protective clothing. Cool fire-exposed containers with water spray.  
 Unusual Fire and Explosion Hazards: Products of combustion are toxic.

## SECTION V -- PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: N/A  
 Incompatibility (Materials to Avoid): Strong oxidizing and reducing agents.  
 Hazardous Decomposition Products or Byproducts: Thermal decomposition may produce toxic vapors/fumes of Hydrogen chloride, amines, and other organic materials, and oxides of carbon and nitrogen  
 Hazardous Polymerization: Will not occur Conditions to Avoid: None known to Hillyard

## SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? yes Skin? yes Eye? Yes Ingestion? yes

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. From previous experience with a 2 oz. per gallon alkaline quat, the oral LD50 (rat): 1850 mg/kg; Dermal LD50 (Rabbit): 4430 mg/kg.; Eye: Diluted product 1:64 (rabbit) essentially non-irritating; Skin irritation: Diluted product 1:64 (rabbit) Non-irritating. Inhalation of fine fog mist can cause irritation of mucous membranes. Fine fog mist application is not recommended. 2. None known to Hillyard.

Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

Signs and Symptoms of Exposure: Direct eye contact with concentrate can cause severe eye irritation; and direct skin contact will produce severe irritation, which upon prolonged contact may produce burns. Overexposure to fine fog mist of product can produce irritation of the mucous membranes. Ingestion can produce immediate burning pain in the mouth, throat and abdomen; severe swelling of the larynx; skeletal muscle paralysis affecting the ability to breathe; circulatory shock; and /or convulsions.

**SECTION VI -- HEALTH HAZARD DATA continued:**

**Medical Conditions Generally Aggravated by Exposure:** None known to manufacturer.

**Emergency and First Aid Procedures:** Eyes: Flush with large amounts of running water for at least 15 minutes. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. Get immediate medical attention. If physician is not available, flush for additional 15 minutes and then transport victim to medical care. Skin: Wash with large amounts of running water, and soap if available, for 15 minutes; Remove contaminated clothing and shoes. Get immediate medical attention. Wash clothing and decontaminated shoes before reuse. Ingestion: If swallowed, immediately give 3-4 glasses of milk (if unavailable, give water). DO NOT induce vomiting. If vomiting occurs, give fluids again. Get immediate medical attention. Have physician determine if patient's condition allows for induction of vomiting or evacuation of the stomach. Do not give anything by mouth to a convulsing or unconscious person. Inhalation: Remove from area to fresh air. If not breathing, clear airway and start artificial respiration. If victim is having trouble breathing, give supplemental oxygen, if available. Get immediate medical attention. NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Supplemental oxygen and other measures to support breathing may be needed to combat circulatory shock. Persistent convulsions may be controlled by the cautious intravenous injection of a short acting barbiturate drug.

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Caution. Floors may become slippery. Wear appropriate protective gear and respiratory protection where mist or vapors of unknown concentrations may be generated (self-contained breathing apparatus preferred). Dike and contain spill with inert material (sand, earth, etc.) and transfer the liquid and solid separately to containers of recovery or disposal. Keep spill out of sewers and open bodies of water.

**Waste Disposal Method:** Dispose of in compliance with all federal, state and local laws and regulations. Incineration is the preferred method.

**Precautions To Be Taken In Handling And Storing:** Keep away from children.

**Other Precautions:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning & Community Right to Know Act of 1986 and 40 CFR Part 372.

**SECTION VIII -- CONTROL MEASURES**

**Ventilation:** In processes where mists or vapors must be generated, proper ventilation must be provided in accordance with good ventilation practices. **Respiratory Protection (Specify Type):** In processes where mists or vapors may be generated, a NIOSH/MSHA jointly approved respirator is advised in the absence of proper environmental controls. **Protective Gloves:** Rubber or neoprene, when needed, to prevent skin contact with concentrate. **Eye Protection:** Wear chemical splash goggles where there is a potential for eye contact. Use safety glasses with side shields under normal use conditions. **Other Protective Clothing or Equipment:** Eye wash; safety shower, protective clothing (long sleeves, coveralls or other, as appropriate), when needed to prevent skin contact with concentrate. **Work / Hygienic Practices:** Wash hands thoroughly after handling.

**SECTION IX - TRANSPORTATION INFORMATION**

**Applicable regulations:** 49 CFR = No; IMCO = No; IATA = No

**Proper shipping name:** Cleaning Compound; **UN No.:** Not applicable; **Limited Qty.:** Not applicable;

**Hazard Class:** Not applicable

**Labels required:** Not required **Exception:** Not applicable

**EPA Hazardous waste number/code:** Not listed

**Hazardous waste characteristics:** **Ignitability** = Not applicable; **Corrosivity** = Not applicable; **Reactivity** = Not applicable

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**MATERIAL SAFETY DATA SHEET**

**NFPA RATING:** Health = 1 Flammability = 0 Reactivity = 0  
**HMIS RATING:** Health = /1 Flammability = 0 Reactivity = 0

**SECTION I - IDENTITY AND MANUFACTURER'S INFORMATION** (2 oz/gal. Ready to Use)

**Manufacturer's Name:** HILLYARD INDUSTRIES **Product Name:** ARSENAL NON-ACID RESTROOM CLEANER

**Address:** 302 North Fourth Street  
St. Joseph, MO 64501

**Date Prepared:** January 31, 2006  
**Prepared by:** Regulatory Affairs Department

**Emergency Telephone No.:** (800)-424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.)

**Other information calls:** (816) 233-1321 (Ext. 8285)  
<http://www.hillyard.com>

**SECTION II - INGREDIENTS/IDENTITY INFORMATION****Components**

(Specific Chemical Identity:

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Didecyl dimethyl ammonium chloride	7173-51-5	not established	N/A	N/A	trace
n-Alkyl (C ₁₄ 50%, C ₁₂ 40%, C ₁₆ 10%) dimethyl benzyl ammonium chloride	8001-54-5	not established	N/A	N/A	trace
Octyl dimethyl amine oxide	2605-78-9	not established	N/A	N/A	---
Edtate Disodium	139-33-3	not established	N/A	N/A	---
Deionized water	7732-18-5	none	N/A	N/A	---

**SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS**

**Boiling Point:** 207°F **Specific Gravity (H₂O = 1):** 25°C = 1.00 & 39°C = 1.00  
**Vapor Pressure (mm Hg.):** 17.6 **Percent Volatile by Volume (%):** 99.93%  
**Vapor Density (AIR = 1):** 0.6 **Evaporation Rate (ethyl ether = 1):** slower than 1  
**Solubility in Water:** complete **Appearance and Odor:** clear, pale blue liquid; floral odor  
**pH of concentrate:** 6.0 - 7.0

**SECTION IV - FIRE AND EXPLOSION HAZARD DATA**

**Flash point:** none to boiling (Tag Closed Cup) **Flammable Limits:** LEL = N/A UEL = N/A  
**Extinguishing Media:** N/A  
**Special Fire Fighting Procedures:** none  
**Unusual Fire and Explosion Hazards:** none

**SECTION V - PHYSICAL HAZARDS**

**Stability:** Stable **Conditions to Avoid:** none known to Hillyard  
**Incompatibility (Materials to Avoid):** Strong acids  
**Hazardous Decomposition Products or Byproducts:** Thermal decomposition may yield carbon monoxide, carbon dioxide, ammonia, and nitrous oxides.  
**Hazardous Polymerization:** will not occur **Conditions to Avoid:** none known to Hillyard

**SECTION VI - HEALTH HAZARD DATA**

**Routes of entry:** Inhalation? no Skin? yes Ingestion? yes

**SECTION VI – HEALTH HAZARD DATA continued**

**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. Prolonged contact may cause slight eye and slight skin irritation. If swallowed may cause gastrointestinal tract irritation. Inhalation of fine fog mist can cause irritation of mucous membranes. Fine fog mist application is not recommended. 2. None known by Hillyard.

**Chemical listed as Carcinogen or Potential Carcinogen:**

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

**Signs and Symptoms of Exposure:** Prolonged contact may cause minimal eye irritation and slight skin irritation. Ingestion of diluted material may cause gastrointestinal tract irritation.

**Medical Conditions Generally Aggravated by Exposure:** None known to manufacturer.

**Emergency and First Aid Procedures:** In case of contact immediately flush eyes or skin with water for 15 minutes; if irritation persists Get Medical Attention. Ingestion: Drink promptly a large quantity of water. Avoid alcohol. Call a physician.

**SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Contain spill. Avoid contamination of food, water or feed.

**Waste Disposal Method:** Dispose of in accordance with all federal, state, and local regulations.

**Precautions To Be Taken In Handling And Storing:** Keep away from children.

**Other Precautions:** Triple rinse empty containers thoroughly with water before disposal. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and 40 CFR Part 372.

**SECTION VIII – CONTROL MEASURES**

**Respiratory Protection (Specify Type):** None normally required. If exposed to fine mist droplets of less than 15 microns, a NIOSH/MSHA approved respirator should be worn.

**Ventilation:**

**Local Exhaust =** N/A **Mechanical (General) =** recommended **Special =** N/A **Other =** N/A

**Protective Gloves:** none normally required for product **Eye Protection:** none normally required for product

**Other Protective Clothing or Equipment:** none.

**Work / Hygienic Practices:** wash hands thoroughly after handling.

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## MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 0 Flammability = 0 Reactivity = 0  
 HMIS RATING: Health = 1 Flammability = 0 Reactivity = 0

## SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (538N-77A)

Manufacturer's Name: HILLYARD INDUSTRIES Product Name: ARSENAL NEUTRALIZER  
 Address: 302 North Fourth Street Date Prepared: December 10, 2007  
 St. Joseph, MO 64501 Prepared by: Regulatory Affairs Department  
 Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.) Other information calls: (816) 233-1321 (Ext. 8285)  
<http://www.hillyard.com>

## SECTION II -- INGREDIENTS/IDENTITY INFORMATION

## Components

(Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Dipropylene Glycol Methyl Ether	34590-94-8	100ppm	100ppm	STEL=150	1-4
Water	7732-18-5	N/A	N/A	N/A	---
EDTA Tripotassium salt	17572-97-3	N/A	N/A	N/A	---
B-Alanine, N-(2-carboxyethyl)-N-[3-(decyloxy) propyl] monosodium salt	64972-19-6	N/A	N/A	N/A	---
Linear Primary Alcohol Ethoxylate	68439-46-3	N/A	N/A	N/A	---

VOS = 2% (concentrate) or 0.22 lbs./gal.: VOS = 0.03% (diluted)

## SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 209°F Specific Gravity (H₂O = 1): 25°C = 1.12 & 39°C = 1.12  
 Vapor Pressure (mm Hg.): 17.6 Percent Volatile by Volume (%): 74.5  
 Vapor Density (AIR = 1): 0.7 Evaporation Rate (ethyl ether = 1): slower than 1  
 Solubility in Water: complete Appearance and Odor: blue, clear liquid; non-objectionable odor

## SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: None (T.C.C.) Flammable Limits: LEL = N/A UEL = N/A  
 Extinguishing Media: N/A  
 Special Fire Fighting Procedures: None  
 Unusual Fire and Explosion Hazards: None

## SECTION V -- PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: N/A  
 Incompatibility (Materials to Avoid): Aluminum and copper metal; strong oxidizers  
 Hazardous Decomposition Products or Byproducts: None known  
 Hazardous Polymerization: Will not occur Conditions to Avoid: N/A

## SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? No Skin? No Ingestion? No

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Test showed that per the Federal Hazardous Substance Act this concentrated product was not considered to be a primary skin irritant; however, the concentrate did induce moderate irritation with complete recovery by day 11. The sample was considered to be a primary eye irritant per the Federal Hazardous Substance Act testing with complete recovery by day 14.
2. None known

## MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 0 Flammability = 0 Reactivity = 0  
 HMIS RATING: Health = 1/0 Flammability = 0 Reactivity = 0

## SECTION I - IDENTITY AND MANUFACTURER'S INFORMATION (538N-80A) RTU

Manufacturer's Name: HILLYARD INDUSTRIES Product Name: ARSENAL HEAVY DUTY FLOOR  
 CLEANER READY TO USE

Address: 302 North Fourth Street  
 St. Joseph, MO 64501

Date Prepared: January 16, 2007  
 Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire,  
 exposure or accident involving chemicals.) Other information calls: (816) 233-1321 (Ext. 8285)

<http://www.hillyard.com>

## SECTION II - INGREDIENTS/IDENTITY INFORMATION

## Components

(Specific Chemical Identity:

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Dipropylene glycol methyl ether ⁽¹⁾	34590-94-8	100 ppm	100 ppm	STEL-150 ppm	Less than 1
Water	7732-18-5	none	none	N/A	---

(1) Regulated by OSHA and the following states: FL, IL, LA, MA, NJ, PA, RI.

VOS = 0.004 lbs./gallon

## SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 209°F Specific Gravity (H₂O = 1): 25°C = 0.999 & 39°C = 0.999  
 Vapor Pressure (mm Hg.): 17.5 Percent Volatile by Volume (%): 99.8 %  
 Vapor Density (AIR = 1): 0.6245 Evaporation Rate (ethyl ether = 1): slower than 1  
 Solubility in Water: complete Appearance and Odor: Clear, light red liquid; fresh & clean odor  
 pH (concentrate) = 7.09

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash point: None to boiling (Tag Closed Cup) Flammable Limits: LEL = N/A UEL = N/A  
 Extinguishing Media: Foam, dry chemical, carbon dioxide, water spray  
 Special Fire Fighting Procedures: None known to manufacturer.  
 Unusual Fire and Explosion Hazards: None known to manufacturer.

## SECTION V - PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: None known to manufacturer  
 Incompatibility (Materials to Avoid): None known to manufacturer.  
 Hazardous Decomposition Products or Byproducts: None known to manufacturer.  
 Hazardous Polymerization: Will not occur Conditions to Avoid: N/A

## SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? No Skin? No Ingestion? No

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. Product when diluted with D.I. water in Arsenal Dispenser it is not a primary skin or eye irritant when tested according to Federal Hazardous Substance Act. Acute oral limit test showed the concentrated product was not orally toxic at 5g./kg. The diluted product may cause slight irritation to mouth, throat, esophagus and stomach if swallowed. Inhalation of fine fog mist can cause irritation of mucous membranes. Fine fog mist application is not recommended. 2. None known to manufacturer.

**SECTION VI – HEALTH HAZARD DATA continued**

**Chemical listed as Carcinogen or Potential Carcinogen:**

**National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No**

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

**Signs and Symptoms of Exposure:** Direct eye contact with D.I. water diluted product not an irritant but some individuals may show slight conjunctivae irritation with some swelling of blood vessels, with complete recovery in 72 hours.

Not a skin irritant. Ingestion may cause irritation to mouth, throat and stomach. May cause gastric tract disorder.

**Medical Conditions Generally Aggravated by Exposure:** None known by Hillyard.

**Emergency and First Aid Procedures:** In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If inhaled remove to fresh air. If discomfort persists, get medical attention.

**SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Small spills: Flush with water and pick-up with mop or wet vac. Large spills may be absorbed with floor dry material.

**Waste Disposal Method:** Dispose of in accordance with all federal, state and local requirements.

**Precautions To Be Taken In Handling And Storing:** Keep away from children. Container disposal: Triple rinse (or equivalent) then offer clean, dry container for recycling or reconditioning. Waste from normal use may be sewerred to a public-owned treatment works in compliance with applicable federal, state and local requirements.

**Other Precautions:** Avoid breathing of vapors or fine fog mist. Use only with adequate ventilation. Do not breathe fine fog mist. Wash thoroughly after handling. Keep container closed when not in use. Do not get in eyes or on skin. Do not take internally. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning & Community Right to Know Act of 1986 and 40 CFR Part 372.

**SECTION VIII – CONTROL MEASURES**

**Respiratory Protection (Specify Type):** None normally required. Ventilate to keep air below TLV on Dipropylene Glycol Methyl Ether.

**Ventilation:** At least 10 air exchanges per hour suggested in public areas with good ventilation.

**Local Exhaust = Recommended Mechanical (General) = Recommended Special = N/A Other = N/A**

**Protective Gloves:** Not required for normal use.

**Eye Protection:** Not required for normal use.

**Other Protective Clothing or Equipment:** Not usually necessary

**Work / Hygienic Practices:** Wash thoroughly after handling

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## MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 2 Flammability = 0 Reactivity = 0  
 HMIS RATING: Health = /2 Flammability = 0 Reactivity = 0

## SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (538N-80A)

Manufacturer's Name: HILLYARD INDUSTRIES Product Name: ARSENAL HEAVY DUTY FLOOR CLEANER  
 Address: 302 North Fourth Street Date Prepared: January 16, 2007  
 St. Joseph, MO 64501 Prepared by: Regulatory Affairs Department

Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals.) Other information calls: (816) 233-1321 (Ext. 8285)

<http://www.hillyard.com>

## SECTION II -- INGREDIENTS/IDENTITY INFORMATION

## Components

## (Specific Chemical Identity:

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Dipropylene glycol methyl ether ⁽¹⁾	34590-94-8	100 ppm	100 ppm	STEL-150 ppm	5-10
Water	7732-18-5	none	none	N/A	---
Linear Primary Alcohol Ethoxylate	68439-46-3	not established	not established	N/A	---
Potassium salt of fatty acid	69669-25-6	not established	not established	N/A	---
Potassium dodecyl benzene sulfonate	27177-77-1	not established	not established	N/A	---
Tetrasodium salt of EDTA	64-02-8	not established	not established	N/A	---

(1) Regulated by OSHA and the following states: FL, IL, LA, MA, NJ, PA, RI.

VOS = 0.5 lbs./gallon

## SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 206°F Specific Gravity (H₂O = 1): 25°C = 1.04 & 39°C = 1.04  
 Vapor Pressure (mm Hg.): 17.4 Percent Volatile by Volume (%): 73.3 %  
 Vapor Density (AIR = 1): 1.1 Evaporation Rate (ethyl ether = 1): slower than 1  
 Solubility in Water: complete Appearance and Odor: Clear, red liquid; fresh & clean odor  
 pH (concentrate) = 7.8

## SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: None to boiling (Tag Closed Cup) Flammable Limits: LEL = N/A UEL = N/A  
 Extinguishing Media: Foam, dry chemical, carbon dioxide, water spray  
 Special Fire Fighting Procedures: None known to manufacturer  
 Unusual Fire and Explosion Hazards: None known to manufacturer

## SECTION V -- PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: None known to manufacturer  
 Incompatibility (Materials to Avoid): None known to manufacturer.  
 Hazardous Decomposition Products or Byproducts: None known to manufacturer.  
 Hazardous Polymerization: Will not occur Conditions to Avoid: N/A

## SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? No Skin? No Ingestion? No

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. According to Primary Skin Irritation Test (FHSA), product concentrate is a primary skin irritant. Eye Irritation Test (FHSA) = corrosive. Acute oral limit test showed the product was not oral toxic at 5g./kg. Since the product is corrosive it may be harmful if swallowed. Acute inhalation - 1 Hour Toxic Limit test - not toxic at nominal concentration of at least 11.1 mg/l. Inhalation of fine fog mist can cause irritation of mucous membranes. Fine fog mist application is not recommended. 2. None known to manufacturer.

## Chemical listed as Carcinogen or Potential Carcinogen:

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No  
 This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

**SECTION VI -- HEALTH HAZARD DATA continued**

**Signs and Symptoms of Exposure:** Direct eye contact can cause burns or severe irritation; prolonged skin contact may cause irritation. Ingestion may cause irritation to mouth, throat and stomach. May cause gastric tract disorder.

**Medical Conditions Generally Aggravated by Exposure:** Skin problems such as dermatitis may be aggravated by exposure to concentrated product.

**Emergency and First Aid Procedures:** In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. GET MEDICAL ATTENTION IMMEDIATELY. Wash clothing before reuse. If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Small spills: Flush with water and pick-up with mop or wet vac. Large spills may be absorbed with floor dry material.

**Waste Disposal Method:** Dispose of in accordance with all federal, state and local requirements.

**Precautions To Be Taken In Handling And Storing:** Keep away from children. Container disposal: Triple rinse (or equivalent) then offer clean, dry container for recycling or reconditioning. Waste from normal use may be sewerred to a public-owned treatment works in compliance with applicable federal, state and local requirements.

**Other Precautions:** Avoid breathing of vapors or fine fog mist. Use only with adequate ventilation. Do not breathe fine fog mist. Wash thoroughly after handling. Keep container closed when not in use. Do not get in eyes, on skin or on clothing. Do not take internally. This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning & Community Right to Know Act of 1986 and 40 CFR Part 372.

**SECTION VIII -- CONTROL MEASURES**

**Respiratory Protection (Specify Type):** None normally required. Ventilate to keep air below TLV on Dipropylene Glycol Methyl Ether.

**Ventilation:** At least 10 air exchanges per hour suggested in public areas with good ventilation.

**Local Exhaust =** Recommended **Mechanical (General) =** Recommended **Special =** N/A **Other =** N/A

**Protective Gloves:** If prolonged or repeated contact is possible, wear rubber or other impervious gloves.

**Eye Protection:** Splash goggles if risk of contact.

**Other Protective Clothing or Equipment:** Not usually necessary

**Work / Hygienic Practices:** Wash thoroughly after handling

**SECTION IX - TRANSPORTATION INFORMATION**

**Applicable regulations:** 49 CFR = no; IMCO = no; IATA = no

**Proper shipping name:** Cleaning Compound

**UN No.:** not applicable **Limited Qty.:** not applicable **Hazard Class:** not applicable

**Labels required:** not required **DOT Exception:** not applicable

**EPA Hazardous waste number / code:** not listed

**Hazardous waste characteristics:**

**Ignitability =** not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable

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## MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 1 Flammability = 0 Reactivity = 0  
 HMIS RATING: Health = 1/1 Flammability = 0 Reactivity = 0

## SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (#907A)

Manufacturer's Name: HILLYARD INDUSTRIES Product Name: ARSENAL CARPET SPOTTER  
 Address: 302 North Fourth Street Date Prepared: June 23, 1998  
 St. Joseph, MO 64501 Prepared by: Regulatory Affairs Department  
 Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire,  
 exposure or accident involving chemicals.) Other information calls: (816) 233-1321 (Ext. 8285)  
<http://www.hillyard.com>

## SECTION II -- INGREDIENTS/IDENTITY INFORMATION

Components (Specific Chemical Identity: Common Name(s))	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	none	none	N/A	---
Propylene Glycol N-Propyl Ether	1569-01-3	not established	not established	N/A	---
Potassium Dodecyl Benzene Sulfonate	27177-77-1	not established	not established	N/A	---
VOS = 0.51 lbs./gallon					

## SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 204°F Specific Gravity (H₂O = 1): 25°C = 1.00 & 39°C = 1.00  
 Vapor Pressure (mm Hg.): 17.4 Percent Volatile by Volume (%): 97%  
 Vapor Density (AIR = 1): 0.8 Evaporation Rate (ethyl ether = 1): slower than 1  
 Solubility in Water: complete Appearance and Odor: Semi-hazy, water white liquid,  
 nonobjectionable odor  
 pH (concentrate) = 10.5

## SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: None to boiling (Tag Closed Cup) Flammable Limits: LEL = N/A · UEL = N/A  
 Extinguishing Media: Foam, dry chemical, carbon dioxide, water spray.  
 Special Fire Fighting Procedures: None known to manufacturer.  
 Unusual Fire and Explosion Hazards: Keep container closed when not in use.

## SECTION V -- PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: None known to Hillyard Industries.  
 Incompatibility (Materials to Avoid): Strong oxidizing materials  
 Hazardous Decomposition Products or Byproducts: As with any organic material, combustion will produce  
 carbon dioxide, carbon monoxide, water and unidentified  
 organic compounds.  
 Hazardous Polymerization: Will not occur Conditions to Avoid: None known

## SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? No Skin? No Ingestion? No

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. When tested according to the Federal Hazardous Substance Act concentrated product was not considered to be a skin irritant; prolonged contact with the concentrate may produce severe skin irritation. When tested according to the Federal Hazardous Substance Act concentrate was considered to be a primary eye irritant. Acute oral toxicity on concentrated product is greater than 5 g/kg. Concentrated product was not shown to be acutely toxic when administered at a nominal concentration of 37.9 mg./L (Actual concentration of 23.7 mg./l). 2. None known by Hillyard Industries.

**Chemical listed as Carcinogen or Potential Carcinogen:**

National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

**Signs and Symptoms of Exposure:** None known to Hillyard Industries.

**Medical Conditions Generally Aggravated by Exposure:** Respiratory tract irritations may be aggravated by nuisance dust from excess dried solids.

**Emergency and First Aid Procedures:** In case of contact, immediately flush eyes or skin with plenty of water for 15 minutes. If skin irritation persists, get medical attention. If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Large spill: Absorb with an inert material such as sand, earth or vermiculite. Small spill: Pick up with wet vac or mop.

**Waste Disposal Method:** Dispose of waste in accordance with state and local regulations. Container disposal: Triple rinse (or equivalent), then offer clean, dry container for recycling or reconditioning.

**Precautions To Be Taken In Handling And Storing:** Prevent product from entering drinking water supplies or streams.

**Other Precautions:** This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III. Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR Part 372.

**SECTION VIII -- CONTROL MEASURES**

**Respiratory Protection (Specify Type):** None required when used per label directions.

**Ventilation:**

**Local Exhaust =** Not necessary **Mechanical (General) =** Recommended **Special =** N/A **Other =** N/A

**Protective Gloves:** If prolonged or repeated contact is possible, wear rubber or other impervious gloves.

**Eye Protection:** Safety goggles when using concentrate.

**Other Protective Clothing or Equipment:** Wear trousers and long sleeved shirt.

**Work / Hygienic Practices:** Wash thoroughly after handling.

**SECTION IX - TRANSPORTATION INFORMATION**

**Applicable regulations:** 49 CFR = no; IMCO = no; IATA = no

**Proper shipping name:** Cleaning compound

**UN No.:** not applicable **Limited Qty.:** not applicable **Hazard Class =** not applicable

**Labels required:** not required **DOT Exception:** not applicable

**EPA Hazardous waste number / code:** not listed

**Hazardous waste characteristics:**

**Ignitability =** not applicable; **Corrosivity =** not applicable; **Reactivity =** not applicable

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## MATERIAL SAFETY DATA SHEET

NFPA RATING: Health = 1 Flammability = 0 Reactivity = 0  
 HMIS RATING: Health = 1/1 Flammability = 0 Reactivity = 0

## SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (#490N-08A)

Manufacturer's Name: HILLYARD INDUSTRIES Product Name: ARSENAL CARPET SPOTTER (Ready to Use)  
 Address: 302 North Fourth Street Date Prepared: June 23, 1998  
 St. Joseph, MO 64501 Prepared by: Regulatory Affairs Department  
 Emergency Telephone No.: (800) 424-9300 (Only in the event of chemical emergency involving a spill, leak, fire,  
 exposure or accident involving chemicals.) Other information calls: (816) 233-1321 (Ext. 8285)  
<http://www.hillyard.com>

## SECTION II -- INGREDIENTS/IDENTITY INFORMATION

## Components

(Specific Chemical Identity:

Common Name(s)	CAS#	OSHA PEL	ACGIH TLV	OTHER LIMITS RECOMMENDED	%
Water	7732-18-5	none	none	N/A	---
Propylene Glycol N-Propyl Ether	1569-01-3	not established	not established	N/A	---
VOS = 0.02 lbs./gallon					

## SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 204°F Specific Gravity (H₂O = 1): 25°C = 0.99 & 39°C = 0.99  
 Vapor Pressure (mm Hg.): 17.5 Percent Volatile by Volume (%): 99.8%  
 Vapor Density (AIR = 1): 0.6 Evaporation Rate (ethyl ether = 1): slower than 1  
 Solubility in Water: complete Appearance and Odor: hazy, white liquid, nonobjectionable odor  
 pH (concentrate) = 7.4

## SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

Flash point: None to boiling (T.C.C.) Flammable Limits: LEL = N/A UEL = N/A  
 Extinguishing Media: Carbon dioxide, dry chemical foam, water spray.  
 Special Fire Fighting Procedures: Wear full protective equipment including self-contained breathing apparatus.  
 Unusual Fire and Explosion Hazards: None known by manufacturer.

## SECTION V -- PHYSICAL HAZARDS

Stability: Stable Conditions to Avoid: None known to manufacturer  
 Incompatibility (Materials to Avoid): Strong oxidizing materials  
 Hazardous Decomposition Products or Byproducts: As with any organic material, combustion will produce carbon dioxide, carbon monoxide, water and unidentified organic compounds.  
 Hazardous Polymerization: Will not occur Conditions to Avoid: None known

## SECTION VI -- HEALTH HAZARD DATA

Routes of entry: Inhalation? No Skin? No Ingestion? No

## HEALTH HAZARDS (1. Acute and 2. Chronic)

1. When tested per the Federal Hazardous Substance Act product was not considered to be a primary skin irritant. Prolonged overexposure may cause mild skin irritation. The product was not considered an eye irritant per the Federal Hazardous Substance Act. The product was not acutely toxic following oral administration at 5 g/kg. 2. None known by Hillyard Industries.

**SECTION VI -- HEALTH HAZARD DATA cont.**

**Chemical listed as Carcinogen or Potential Carcinogen:**

**National Toxicology Program = No I.A.R.C. Monographs = No OSHA = No**

This product has no carcinogens listed by IARC, NTP, NIOSH, or ACGIH as of this date, greater than or equal to 0.1%.

**Signs and Symptoms of Exposure:** None known by manufacturer.

**Medical Conditions Generally Aggravated by Exposure:** Respiratory tract irritations may be aggravated by nuisance dust from excess dried solids.

**Emergency and First Aid Procedures:** In case of contact, immediately flush skin with plenty of water for 15 minutes. If irritation persists, get medical attention.

**SECTION VII -- PRECAUTIONS FOR SAFE HANDLING AND USE**

**Steps To Be Taken In Case Material Is Released Or Spilled:** Large spill: Absorb with an inert material such as sand, earth or vermiculite. Small spill: Pick up with wet vac or mop.

**Waste Disposal Method:** Dispose of waste in accordance with state and local regulations. Container disposal: Triple rinse (or equivalent), then offer clean, dry container for recycling or reconditioning.

**Precautions To Be Taken In Handling And Storing:** Prevent product from entering drinking water supplies or streams.

**Other Precautions:** This product contains no reportable quantities of toxic chemicals subject to reporting requirements of Section 313 of SARA Title III Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR Part 372.

**SECTION VIII -- CONTROL MEASURES**

**Respiratory Protection (Specify Type):** None required when used per label directions.

**Ventilation:**

**Local Exhaust = Not necessary Mechanical (General) = Recommended Special = N/A Other = N/A**

**Protective Gloves:** Not necessary **Eye Protection:** Not necessary

**Other Protective Clothing or Equipment:** Wear trousers and long sleeved shirt.

**Work / Hygienic Practices:** Wash thoroughly after handling.

**DISCLAIMER OF WARRANTIES**

**NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY NATURE ARE MADE WITH RESPECT TO THE PRODUCT(S) OR INFORMATION CONTAINED IN THIS MATERIAL SAFETY DATA SHEET.**

**The information and recommendations contained in this Material Safety Data Sheet are supplied pursuant to 29 CFR 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. All information contained herein is presented in good faith and is believed to be appropriate and accurate.**

**THE BUYER OR USER ASSUMES ALL RISKS ASSOCIATED WITH THE USE, MISUSE OR DISPOSAL OF THIS PRODUCT. THE BUYER OR USER IS RESPONSIBLE TO COMPLY WITH ALL FEDERAL, STATE OR LOCAL REGULATIONS CONCERNING THE USE, MISUSE OR DISPOSAL OF THESE PRODUCTS.**



ALGAE CLEAR CONTROL PLUS  
 MATERIAL SAFETY DATA SHEET  
 20% POLY-2% COPPER ALGAECIDE

SECTION I - IDENTIFICATION

MANUFACTURER'S NAME..... Haviland Products Company  
 ADDRESS (STREET,CITY,STATE,ZIP) 421 Ann St., N.W., Grand Rapids, MI 49504  
 PHONE NUMBER..... (616) 361-6691  
 EMERGENCY PHONE NUMBER..... CHEMTREC (800) 424-9300  
 EFFECTIVE DATE..... 1/1/94  
 TRADE NAME..... 20% POLY-2% COPPER ALGAECIDE  
 CHEMICAL FAMILY..... Poly Quaternary

SECTION II - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	OSHA/PEL	ACGIH/TLV (Units)	PROD. CAS #
Poly(oxyethylene (dimethyliminio) ethylene- (dimethyliminio) ethylene dichloride)	Not Established	Not Established	31075-24-8
Copper Triethanolamine Complex	Not Established	Not Established	None
Triethanolamine	Not Established	Not Established	102-71-6
Copper as Metal	Not Established	Not Established	7440-50-8

SECTION III - PHYSICAL DATA

BOILING POINT..... Above 212°F  
 FREEZING POINT..... No Information Available  
 VAPOR PRESSURE (mm Hg)..... 14.7 @ 20°C  
 VAPOR DENSITY (Air=1)..... Vapor is Water  
 SOLUBILITY IN H2O..... Miscible  
 APPEARANCE/ODOR..... Clear Blue Liquid; Slight Odor  
 SPECIFIC GRAVITY (H2O=1)..... 1.2  
 PH..... 6-7

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT..... Above 212°F  
 LOWER EXPLOSIVE LIMIT (% by Volume) Not Applicable  
 UPPER EXPLOSIVE LIMIT (% by Volume) Not Applicable

MATERIAL SAFETY DATA SHEET

20% POLY-2% COPPER ALGAECIDE

EXTINGUISH MEDIA..... Water fog, carbon dioxide, and dry chemical.

SPECIAL FIRE FIGHTING PROCEDURES... None Currently Known

UNUSUAL FIRE HAZARD..... None Currently Known

=====

SECTION V - HEALTH HAZARD DATA

=====

CARCINOGENICITY..... None

NTP..... No

IARC..... No

OVER EXPOSURE EFFECTS..... Irritation to eyes.

PRIMARY ROUTE(S) OF ENTRY..... Eye Contact

FIRST AID PROCEDURES..... In case of contact: Immediately wash eyes and skin with plenty of water. If inhaled: Remove to fresh air. If swallowed: Get medical attention.

EXPOSURE AGGRAVATED MEDICAL CONDITIONS None Currently Known

=====

SECTION VI - REACTIVITY DATA

=====

CHEMICAL STABILITY..... Stable

CONDITIONS TO AVOID..... Not Applicable

INCOMPATIBLE MATERIALS..... None Currently Known

DECOMPOSITION PRODUCTS..... None Currently Known

HAZARDOUS POLYMERIZATION..... Will Not Occur

POLYMERIZATION AVOID..... Not Applicable

=====

SECTION VII - SPILL OR LEAK PROCEDURE

=====

FOR SPILL ..... Absorb with sawdust or sand and bury in approved landfill.

WASTE DISPOSAL METHOD..... Do not reuse empty drum. Return to drum reconditioner or destroy by perforating or crushing; dispose of according to federal, state and local regulations.

=====

SECTION VIII - SPECIAL PROTECTION

=====

RESPIRATORY PROTECTION..... None Needed for Normal Use

VENTILATION..... Not Required for Normal Use

PROTECTIVE GLOVES..... Rubber or other impervious materials.

EYE PROTECTION..... Chemical splash proof goggles.

OTHER PROTECTIVE EQUIPMENT.... A safety shower and eye bath should be available. For operations where spills or splashing may occur, use an impervious body covering and boots.

HANDLING AND STORAGE..... Keep container closed when not in use.



MATERIAL SAFETY DATA SHEET

20% POLY-2% COPPER ALGAECIDE

SECTION IX - SPECIAL PRECAUTIONS

HAZARD CLASS..... None  
 DOT SHIPPING NAME..... None  
 UN NUMBER..... None  
 REPORTABLE QUANTITY (RQ)..... Not Listed

REFERENCES ZZ1CMBTX

SPARTAN CHEMICAL COMPANY, INC. - MATERIAL SAFETY DATA SHEET

SECTION I: PRODUCT INFORMATION

Product Name or Number (as it appears on label)  
AIRLIFT SMOKE AND ODOR ELIMINATOR (BULK)

Manufacturer's Name - Spartan Chemical Company, Inc.  
Emergency Telephone No. - 800/537-8990  
Address - 110 N. Westwood Ave., Toledo, OH 43607

NFPA RATINGS: Health-0 Fire-0 React-0  
HMIS RATINGS: Health-0 Fire-0 React-0 Pers. Prot.-A

SECTION II: HAZARDOUS INGREDIENTS

Chemical Name(s) - Isopropanol  
CAS Registry No. - 67-63-0 Weight - 1-5%  
TWA (mg/m³) - 980 STEL (mg/m³) - 980 Ceiling (mg/m³) - 1225  
Carcinogen - No

SECTION III: PHYSICAL DATA

Boiling Point - 212 F  
Specific Gravity (H₂O = 1) - 1.0  
Percent Solid by Weight - 1-3  
Vapor Pressure - 18 mm Hg @ 75 F  
Evaporation Rate (But. Ace. = 1) - <1  
Vapor Density (Air = 1) - Unknown  
Solubility in Water - Complete  
Appearance and Odor - Water white, pleasant fragrance  
Material Is - Liquid  
pH - 5.5-6.5

SECTION IV: FIRE & EXPLOSION HAZARD DATA

Flash Point - None  
Method Used - ASTM - D56  
Flammable Limits - N/A  
Extinguishing Media - N/A  
Special Fire Fighting Procedures - None  
Unusual Fire and Explosion Hazards - None

SECTION V: HEALTH HAZARD DATA

Effects of Overexposure - Conditions to Avoid: May cause eye irritation.  
Avoid contamination of food. Do not get in eyes.  
Threshold Limit Value - Not Established  
Conditions Aggravated by Use - Unknown  
Primary Routes of Entry: N/A  
Emergency and First Aid Procedures -  
Eyes: Remove contact lenses. In case of contact, flush eyes with water  
for at least 15 minutes. If irritation persists, call a physician.  
Skin: Flush with water for at least 15 minutes.  
Inhalation: Move person to fresh air.

□ SECTION VI: REACTIVITY DATA

Stability: Stable X  
Incompatibility (Materials to Avoid) - Strong Oxidizers  
Hazardous Decomposition Products - None Known  
Hazardous Polymerization: Will Not Occur X

SECTION VII: SPILL OR LEAK PROCEDURES

Steps to Be Taken in Case Material Is Released or Spilled -  
Flush with water through sanitary sewer system.  
Waste Disposal Method - Same as above

SECTION VIII: SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type) - None  
Ventilation - Good general ventilation should be sufficient for most conditions. Local exhaust ventilation may be necessary for some operations.  
Protective Gloves (Specify Type) - Not Required  
Eye Protection (Specify Type) - Safety Glasses  
Other Protective Equipment - None

SECTION IX: SPECIAL PRECAUTIONS

Precautions to Be Taken in Handling and Storing - Nothing Special  
Other Precautions - None

Spartan Chemical Company, Inc. - AIRLIFT SMOKE AND ODOR ELIMINATOR  
(BULK)

Ref: 29 CFR 1910:1200 (OSHA)

NAME: Thomas J. Mitchell  
TITLE: Director of Research  
DATE: July 18, 1996  
SUPERCEDES: November 27, 1995

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(184935)

18% V.O.C. Pump Refills  
Country Garden, Ocean Breeze, Vita Splash, Mountain Spa,  
Linen Fresh, Santa Fe, Vanilla, Tropix

# MATERIAL SAFETY DATA SHEET

MANUFACTURER/SUPPLIER:

Effective Date: 04/01/99

Technical Concepts, L.P.  
1301 Allanson Road, Mundelein, IL 60060

Page 1 of 2

This Material Safety Data Sheet is being provided to your company for the purpose of providing current health and safety information to your management and employees who work with this product. Please read the data provided and then provide it to those people at your company who have the responsibility to insure compliance with both FEDERAL and STATE Right to Know regulations, and to those employees that request information on this product.

Federal Regulations: Parts 29 and 42 Code of Federal Regulations

State of Illinois: Public Act 83-240

## SECTION 1 PRODUCT IDENTIFICATION

**Supplier Name and Address:** Technical Concepts, L.P.  
1301 Allanson Rd.  
Mundelein, IL 60060  
(847) 837-4100

**Chemical Family:** Mixture

**Formula:** N/A

**Hazard Classification:** Consumer Commodity, ORM-D

**NFPA Rating System:** Fire-3/Health-2/Reactivity-0

**Emergency (InfoTrack): 800-535-5053**

## SECTION 2 HAZARDOUS COMPONENTS

This product is a mixture for which no health hazard data exist. The hazard communication standard requires that such mixtures be assumed to present the same health hazard as do the components that constitute at least 1% of the mixture (0.1% for carcinogens) although OSHA has noted that the hazards of the individual components may be altered by including them in a mixture.

Components of this product that are listed as Hazardous Materials and/or present in quantities as defined in OSHA 29 CFR 1910.1200:

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act and 40 CFR 372: Acetone

Ingredients	CAS #	TLV/PEL	%
D.I. WATER	7732-18-5	980 PPM	45-50
SDA ALCOHOL	64-17-5	1000 PPM	12-18
ACETONE	67-64-1	750 PPM	24-26
DIETHYLENE GLYCOL MONOETHYL ETHER	111-90-0	NE	5-7
FRAGRANCE (Proprietary mixture)		NE	1-2

NE= not established

## SECTION 3 PHYSICAL DATA

**Boiling point:** 159F  
**Vapor Pressure:** 42 MMHG  
**Vapor Density (air=1):** >1  
**Solubility in Water:** 100%  
**Appearance & Odor:** Colorless liquid, pleasantly scented

**Specific Gravity:** 0.93  
**Percent Volatile:** 45%  
**Evaporation Rate:** >1 (n-butyl acetate=1)

## SECTION 4 FIRE AND EXPLOSION DATA

**Flash Point (Method):** 30 F  
**Extinguishing Media:** Water, carbon dioxide, dry chemical or foam, Class A, BC, or ABC Fire extinguishers.  
**Special Fire Fighting Procedures:** Self-contained breathing apparatus and protective clothing should be worn in fighting fires.  
**Unusual Fire & Explosion Hazards:** Contains acetone.

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**SECTION 5 HEALTH HAZARD DATA**

TLV: Not Determined

**EFFECTS OF OVEREXPOSURE:**

**Eyes:** Can slight to moderate irritation.

**Skin:** May cause minimal irritation.

**Inhalation:** May cause nasal irritation and drowsiness.

**Ingestion:** Not a significant route of exposure for this product line and no significant adverse effects expected.

**EMERGENCY FIRST AID PROCEDURES:**

**Inhalation:** Remove to fresh air.

**Eye contact:** Flush eyes with water, get medical attention if irritation persists.

**Ingestion:** Do not induce vomiting, call a physician.

**Skin Contact:** No treatment is necessary under ordinary circumstances.

**Medical Conditions Aggravated by Exposure:** None Expected.

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**SECTION 6 REACTIVITY DATA**

**Stability:** Stable

**Incompatibility:** Strong oxidizing agents

**Hazardous Decomposition Products:** Carbon containing materials when burned will produce carbon dioxide and carbon monoxide.

**Hazardous Polymerization:** Will Not Occur

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**SECTION 7 SPILL OR LEAK PROCEDURES**

**Steps to be taken in case material is released or spilled:** No special clean-up procedure is necessary. Remove all sources of flame, sparks and heat. Provide adequate ventilation.

**Waste Disposal Method:** Dispose in accordance with all local, state and federal regulations.

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**SECTION 8 SPECIAL PROTECTION**

**Respiratory Protection:** Not normally needed under normal circumstances.

**Ventilation:** General room ventilation is normally sufficient.

**Protective Gloves:** Not required.

**Eye Protection:** Not required.

**Other Protective Equipment:** None required.

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**SECTION 9 SPECIAL PRECAUTIONS OR COMMENTS**

**Precautions to be taken in handling and storing:** Avoid exposure to excessive heat and prevent from freezing.

**Other Precautions:** None Required.

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INITIAL DATE: APRIL 1999

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Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof Technical Concepts makes no representations as to the completeness or accuracy thereof. Information is provided upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will Technical Concepts be responsible for damages of any nature whatsoever resulting from use of or reliance upon said information. NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

**ANSUL**

**SAPPHIRE**  
SUPPRESSION SYSTEMS

Computer  
3M

**SECTION II**

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**Material Safety Data Sheet**

3M MATERIAL SAFETY DATA SHEET 3M (TM) Novec (TM) 1230 Fire Protection Fluid 04/08/2003

**3M**

**Material Safety Data Sheet**

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**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME: 3M (TM) Novec (TM) 1230 Fire Protection Fluid  
MANUFACTURER: 3M  
DIVISION: 3M Specialty Materials

ADDRESS: 3M Center  
St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 04/08/2003  
Supersedes Date: 09/23/2002

Document Group: 16-3425-2

Product Use:  
Specific Use: STREAMING AND FLOODING FIRE PROTECTION

**SECTION 2: INGREDIENTS**

Ingredient	C.A.S. No.	% by Wt
1,1,1,2,2,4,5,5-NONAFLUORO-4-(TRIFLUOROMETHYL)-3-PENTANONE	756-13-8	> 99.9

**SECTION 3: HAZARDS IDENTIFICATION**

**3.1 EMERGENCY OVERVIEW**

Specific Physical Form: Liquid  
Odor, Color, Grade: clear colorless, low odor.  
General Physical Form: Liquid

Immediate health, physical, and environmental hazards: This product, when used under reasonable conditions and in accordance with the 3M directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards. This product is very low in acute toxicity. The LC50 (rat) is >10% v/v. The NOAEL for cardiac sensitization is also >10% v/v, providing a large margin of safety when used at effective design concentrations as a fire protection fluid.

**3.2 POTENTIAL HEALTH EFFECTS**

# SECTION II

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## Material Safety Data Sheet

3M MATERIAL SAFETY DATA SHEET 3M (TM) Novex (TM) 1230 Fire Protection Fluid 04/09/2003

### Eye Contact:

Contact with the eyes during product use is not expected to result in significant irritation.

### Skin Contact:

Contact with the skin during product use is not expected to result in significant irritation.

### Inhalation:

Prolonged or repeated exposure, above recommended guidelines, may cause:  
May be absorbed following inhalation and cause target organ effects.

### Ingestion:

No health effects are expected.

### Target Organ Effects:

Prolonged or repeated exposure, above recommended guidelines, may cause:

Liver Effects: Signs/symptoms may include loss of appetite, weight loss, fatigue, weakness, abdominal tenderness and jaundice.

## 3.3 POTENTIAL ENVIRONMENTAL EFFECTS

NOTE: Hydrolysis is not expected to be a significant degradation pathway. Product is highly insoluble in water and volatile, and use as a clean extinguishing agent would not typically result in releases to aquatic environments. Photolytic half-life: 3-5 days Persistent photolytic degradation product: Trifluoroacetic acid. Global Warming potential (GWP): 1. Zero Ozone Depletion Potential (ODP). Aquatic Toxicity: Not applicable.

## SECTION 4: FIRST AID MEASURES

### 4.1 FIRST AID PROCEDURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

**Eye Contact:** Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

**Skin Contact:** Wash affected area with soap and water. If signs/symptoms develop, get medical attention.

**Inhalation:** If signs/symptoms develop, remove person to fresh air. If signs/symptoms persist, get medical attention.

**If Swallowed:** Do not induce vomiting. Give victim two glasses of water. Never give anything by mouth to an unconscious person. If signs/symptoms develop, get medical attention.

## SECTION 5: FIRE FIGHTING MEASURES

### 5.1 FLAMMABLE PROPERTIES

Autoignition temperature

*Not Applicable*

Flash Point

*Not Applicable*

Flammable Limits - LEL

*Not Applicable*

Flammable Limits - UEL

*Not Applicable*

## Material Safety Data Sheet

3M MATERIAL SAFETY DATA SHEET 3M (TM) Novec (TM) 1230 Fire Protection Fluid 04/02/2003

**5.2 EXTINGUISHING MEDIA**

Product is a fire-extinguishing agent.

**5.3 PROTECTION OF FIRE FIGHTERS**

**Special Fire Fighting Procedures:** Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

**Unusual Fire and Explosion Hazards:** Not applicable.

**Note:** See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**Accidental Release Measures:** Observe precautions from other sections. Call 3M- HELPS line (1-800-364-3577) for more information on handling and managing the spill. Ventilate the area with fresh air. Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spilled material as possible. Clean up residue. Place in a metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

**In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.**

**SECTION 7: HANDLING AND STORAGE****7.1 HANDLING**

Avoid eye contact with vapors, mists, or spray. Avoid breathing of vapors, mists or spray. Contents may be under pressure, open carefully.

**7.2 STORAGE**

Keep container in well-ventilated area.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 ENGINEERING CONTROLS**

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment. Provide appropriate local exhaust ventilation on open containers. Provide local exhaust ventilation at transfer points.

**8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)****8.2.1 Eye/Face Protection**

Avoid eye contact.

The following eye protection(s) are recommended: Indirect Vented Goggles.

**8.2.2 Skin Protection**

Avoid prolonged or repeated skin contact.



# SECTION II

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## Material Safety Data Sheet

3M MATERIAL SAFETY DATA SHEET 3M (TM) Novec (TM) 1230 Fire Protection Fluid 04/08/2003

Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials. Gloves made from the following material(s) are recommended: Butyl Rubber.

### 8.2.3 Respiratory Protection

Avoid breathing of vapors, mists or spray.

Select a NIOSH approved respirator based on airborne concentration of contaminants and in accordance with OSHA regulations. Consult the current 3M Respirator Selection Guide for additional information or call 1-800-243-4630 for 3M technical assistance.

If respiratory protection is needed, a supplied air respirator is recommended. Organic vapor cartridge respirators are not recommended because they do not effectively absorb Novec 1230 vapors.

### 8.2.4 Prevention of Swallowing

Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

## 8.3 EXPOSURE GUIDELINES

None Established

Exposure guideline pending

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Specific Physical Form:	Liquid
Odor, Color, Grade:	clear colorless, low odor.
General Physical Form:	Liquid
Autoignition temperature	<i>Not Applicable</i>
Flash Point	<i>Not Applicable</i>
Flammable Limits - LEL	<i>Not Applicable</i>
Flammable Limits - UEL	<i>Not Applicable</i>
Boiling point	49 °C
Vapor Density	11.6 [ <i>Ref Std: AIR=1</i> ]
Vapor Pressure	244 mmHg [ <i>Details: @20C</i> ]
Specific Gravity	1.6 [ <i>Ref Std: WATER=1</i> ]
pH	<i>Not Applicable</i>
Melting point	-108 °C
Solubility in Water	Nil
Evaporation rate	> 1 [ <i>Ref Std: BUOAC=1</i> ]
Volatile Organic Compounds	<i>No Data Available</i>
Percent volatile	100 %
VOC Less H ₂ O & Exempt Solvents	<i>No Data Available</i>
Viscosity	0.5 centipoise

## SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid: Strong bases; Amines; Alcohols

## Material Safety Data Sheet

3M MATERIAL SAFETY DATA SHEET 3M (TM) Novec (TM) 1230 Fire Protection Fluid 04/08/2003

Additional Information: Direct Sunlight, ultraviolet light

Hazardous Polymerization: Hazardous polymerization will not occur.

## Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During Combustion
Carbon dioxide	During Combustion
Hydrogen Fluoride	During Combustion

## SECTION 11: TOXICOLOGICAL INFORMATION

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

## SECTION 12: ECOLOGICAL INFORMATION

## ECOTOXICOLOGICAL INFORMATION

## CHEMICAL FATE INFORMATION

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Method:** Incinerate in an industrial or commercial facility in the presence of a combustible material. Combustion products will include HF. Facility must be capable of handling halogenated materials.  
As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste. Reclaim if feasible. For information on product return, contact your distributor.

EPA Hazardous Waste Number (RCRA): Not regulated

Since regulations vary, consult applicable regulations or authorities before disposal.

## SECTION 14: TRANSPORT INFORMATION

ID Number(s):  
98-0212-3028-3, 98-0212-3029-1, 98-0212-3030-9, 98-0212-3031-7

## SECTION II

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### Material Safety Data Sheet

3M MATERIAL SAFETY DATA SHEET 3M (TM) Novoc (TM) 1230 Fire Protection Fluid 04/03/2003

Please contact the emergency numbers listed on the first page of the MSDS for Transportation Information for this material.

#### SECTION 15: REGULATORY INFORMATION

##### US FEDERAL REGULATIONS

Contact 3M for more information.

##### 311/312 Hazard Categories:

Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No Immediate Hazard - No Delayed Hazard - Yes

##### STATE REGULATIONS

Contact 3M for more information.

##### CHEMICAL INVENTORIES

The components of this product are in compliance with the chemical notification requirements of TSCA.

One or more of the components of this product have been notified to ELINCS (European List of Notified or New Chemical Substances). Certain restrictions apply. Contact the selling division for additional information.

Contact 3M for more information.

**Additional Information:** The components of this product are in compliance with the chemical notification requirements of the National Industrial Chemical Notification and Assessment Scheme (NICNAS) of Australia and the Canadian Environmental Protection Act (CEPA).

##### INTERNATIONAL REGULATIONS

Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

#### SECTION 16: OTHER INFORMATION

##### NEPA Hazard Classification

Health: 3 Flammability: 0 Reactivity: 1 Special Hazards: None

National Fire Protection Association (NEPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

##### HMIS Hazard Classification

Health: 0 Flammability: 0 Reactivity: 1 Protection: X - See PPE section.

Hazardous Material Identification System (HMIS(r)) hazard ratings are designed to inform employees of chemical hazards in the workplace. These ratings are based on the inherent properties of the material under expected conditions of normal use and are not intended for use in emergency

## Material Safety Data Sheet

3M MATERIAL SAFETY DATA SHEET 3M (TM) Novec (TM) 1230 Fire Protection Fluid 04/03/2003

situations. HMIS(r) ratings are to be used with a fully implemented HMIS(r) program. HMIS(r) is a registered mark of the National Paint and Coatings Association (NPCA).

Revision Changes:

Copyright was modified.

Section 15: Inventories information was modified.

Section 15: Inventories comment was modified.

Section 12: Ecotoxicological information was deleted.

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3M MSDSs are available at [www.3M.com](http://www.3M.com)

## I. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

### 1.1. Identification of the preparation

Product Name: "NITROGEN"  
Chemical Name: Nitrogen.  
CAS No.: 7727-37-9.  
Chemical Formula: N₂.  
EINECS Number: 231-783-9.

### 1.2. Use of the preparation

The intended or recommended use of this preparation is to discharge a FIRE EXTINGUISHING AGENT.

### 1.3. Company identification

Manufacturer/Supplier: ANSUL INCORPORATED  
Address: One Stanton Street, Marinette, WI 54143-2542  
Prepared by: Safety and Health Department  
Phone: 715-735-7411  
Internet/Home Page: <http://www.ansul.com>  
Date of Issue: September, 2006

### 1.4. Emergency telephone

CHEMTREC 800-424-9300 or 703-527-3887

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

2.1. Ingredient Name: Nitrogen.  
Chemical Formula: N₂.  
CAS No.: 7727-37-9.  
EINECS Number: 231-783-9.  
Concentration, Wt %: 100%.  
Hazard Identification: See Heading 3.

2.2. (i) There are no substances presenting a health or environmental hazard within the meaning of Directive 67/548/EEC, in concentrations equal to or greater than those laid down in the table set out in Article 3(3) of Directive 1999/45/EC, nor with lower limits given in Annex I to Directive 67/548/EEC or in Annexes II, III or V to Directive 1999/45/EC.

(ii) There are no substances for which there are Community workplace exposure limits, which are not already included in (i) above.

## 3. HAZARDS IDENTIFICATION

### FOR HUMANS:

EU Classification: Nonflammable Gas.  
R None.  
S 9 Keep container in a well ventilated place.

Limit Values for Exposure: None established.

This product has not been listed as carcinogenic by National Toxicology Program, IARC, or OSHA.

### SIGNS AND SYMPTOMS:

#### Acute Exposure:

Eye Contact: Non-irritating gas.  
Skin Contact: Non-irritating gas.  
Inhalation: Can cause suffocation by reducing oxygen available for breathing.  
Breathing very high concentrations of vapor can cause dizziness, shortness of breath, unconsciousness, or even death.

Ingestion: Non-irritating gas. Not a probable route of exposure.

Chronic Overexposure: No data available.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: None known.

### FOR ENVIRONMENT:

This is a component of the atmosphere.

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**4. FIRST AID MEASURES**

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Eye Contact:	Avoid direct contact with high pressure gas discharge.
Skin Contact:	Avoid direct contact with high pressure gas discharge.
Inhalation:	Avoid direct inhalation of undiluted gas. Gas is an asphyxiant.
Ingestion:	Not a probable route of exposure.

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**5. FIRE-FIGHTING MEASURES**

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Non-flammable gas. Use agent appropriate to surrounding material.  
Though gas cylinders are equipped with pressure and temperature relief devices, they should be removed from high temperature areas or fires, if safe to do so, to avoid risk of rupture.  
There are NO extinguishing media which must not be used for safety reasons.  
NO special protective equipment is needed for fire-fighters.

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**6. ACCIDENTAL RELEASE MEASURES**

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Material is a normal atmospheric gas.  
NO harm to the environment is expected from an accidental release of this preparation.

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**7. HANDLING AND STORAGE**

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**7.1. Handling**

Care should be taken in handling all chemical substances and preparations.  
Secure to prevent falling. Do not move without safety cap in place to prevent damage to valve.  
See incompatibility information in Heading 10.

**7.2. Storage**

Store cylinders with restraints to prevent possibility of rupture. Store as a compressed gas in DOT approved vessels.  
Keep safety cap in place while in storage.  
See incompatibility information in Heading 10.  
Store in original container. Keep tightly closed until used.  
There is NO danger to the environment from a storage release.

**7.3. Specific use**

The intended or recommended use of this preparation is to discharge a FIRE EXTINGUISHING AGENT.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

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**8.1. Exposure limit values**

There are NO currently occupational exposure limit values for this component.

**8.2. Exposure controls****8.2.1. Occupational exposure controls****8.2.1.1. Respiratory protection**

Exposure to high concentrations requires the use of self-contained breathing apparatus. Other respirators will not protect in an oxygen deficient atmosphere.

**8.2.1.2. Hand protection**

Use leather gloves when handling cylinders.

**8.2.1.3. Eye protection**

Use safety glasses with side shields or safety goggles.

**8.2.1.4. Skin protection**

No special equipment is needed.

**8.2.2. Environmental exposure controls**

None needed. This material is a normal atmospheric gas.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**9.1. General information**

Appearance: Colorless gas.  
Odor: None.

**9.2. Important health, safety, and environmental information**

pH: Not determined.  
Boiling point/boiling range: -195.8 °C.  
Flash point: None.  
Flammability (solid/gas): Not flammable.  
Explosive properties: Not explosive.  
Oxidizing properties: Not an oxidizer.  
Vapor Pressure: Not determined.  
Relative Density: Not applicable.  
Solubility:  
- Water solubility: Not soluble.  
- Fat solubility: Not soluble.  
Partition coefficient, n-octanol/water: Not determined.  
Viscosity: Not determined.  
Vapor density (Air = 1): 0.98.  
Evaporation rate: Not determined.

**9.3. Other information**

Auto-ignition temperature: Does not ignite.

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**10. STABILITY AND REACTIVITY**

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**10.1. Conditions to avoid**

Extremely high temperatures, as in a fire may cause a cylinder to fail.  
There are NO known conditions such as temperature, pressure, light, shock, etc., which may cause a dangerous reaction.

**10.2. Materials to avoid**

None known.

**10.3. Hazardous decomposition products**

Normally stable.  
Hazardous polymerization will not occur.  
Combustion or decomposition products will not form.

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**11. TOXICOLOGICAL INFORMATION**

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Can cause suffocation by reducing oxygen available for breathing. Breathing very high concentrations of vapor can cause dizziness, shortness of breath, unconsciousness, or even death.

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**12. ECOLOGICAL INFORMATION**

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**12.1. Ecotoxicity**

This material is a normal atmospheric gas.

**12.2. Mobility**

This material is a normal atmospheric gas.

**12.3. Persistence and degradability**

This material is a normal atmospheric gas.

**12.4. Bioaccumulative potential**

This material is a normal atmospheric gas.

**12.5. Other adverse effects**

Ozone depletion potential: None.  
Photochemical ozone creation potential: None.  
Global warming potential: None.

**13. DISPOSAL CONSIDERATIONS**

No harm to the environment is expected from this preparation.  
This material is a normal atmospheric gas.

**14. TRANSPORT INFORMATION**

Hazard Class or Division: Nitrogen, Compressed, Class 2.2, UN1066.  
Label: Non-flammable gas.  
Emergency response guide page number: 121; EMS (Intl): 2-04.  
For additional transport information, contact Ansul Incorporated.  
This material is a normal atmospheric gas.

**15. REGULATORY INFORMATION**

EU Classification: Nonflammable gas.  
R Phrases: None.  
S Phrases: 9 Keep container in a well ventilated place.  
Exposure Limit Values: None.  
EINECS Status: This component is included in EINECS inventories.  
EPA TSCA Status: This component is included in TSCA inventories.  
Canadian DSL (Domestic Substances List): This component is included in DSL inventories.  
Environmental restrictions: None are known.  
Restrictions on Marketing and Use: None are known.  
Refer to any other national measures that may be relevant.

**16. OTHER INFORMATION****(HMIS) HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS:**

HEALTH:	<u>0</u>	4. Severe Hazard
FLAMMABILITY:	<u>0</u>	3. Serious Hazard
REACTIVITY:	<u>0</u>	2. Moderate Hazard
		1. Slight Hazard
		0. Minimal Hazard

**(WHMIS) CANADIAN WORKPLACE HAZARDOUS MATERIAL IDENTIFICATION SYSTEM RATINGS:**

This product is rated **A Compressed Gas**.

Toxicological information added from the EINECS ESIS (Existing Substances Information System). A rating under WHMIS has been added, following the Canadian guidelines.

Format is from directive 2001/58/EC.

EINECS data is from <http://ecb.jrc.it/existing-chemicals/>

Data used to compile the data sheet is from Ansul Material Safety Data Sheet, February, 2002.

**17. DISCLAIMER**

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MATERIAL SAFETY  
DATA SHEET



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DIVISION: COMMERCIAL CARE DIVISION

TRADE NAME: HB QUAT DISINFECTANT CLEANER Ready-to-Use.  
(Product No. 25, Twist 'n Fill(tm) System)

ISSUED: JUNE 26, 2000  
SUPERSEDES: MARCH 8, 2000  
DOCUMENT: 08-6409-0

1. INGREDIENT

INGREDIENT	C.A.S. NO.	PERCENT
WATER		> 99
ALKYL (C12-C18) DIMETHYL BENZYL AMMONIUM CHLORIDE	7732-18-5	< 0.1
AMMONIUM CHLORIDE	68391-01-5	< 0.1
ALKYL (C12-C14) DIMETHYL ETHYLBENZYL AMMONIUM CHLORIDE	68956-79-6	< 0.1

NOTE: IN CASE OF EMERGENCY, THE NUMBERS AT THE TOP OF THIS PAGE PROVIDE 24 HOUR RESPONSE FROM ANY PHONE FOR ALL EMERGENCIES WITH THIS PRODUCT. The components of this product are in compliance with the chemical notification requirements of TSCA.

2. PHYSICAL DATA

BOILING POINT:	ca. 212 F
VAPOR PRESSURE:	N/D
VAPOR DENSITY:	N/D
EVAPORATION RATE:	complete
SOLUBILITY IN WATER:	ca. 1.0 Water = 1
SP. GRAVITY:	ca. 1.00 %
PERCENT VOLATILE:	ca. 9
pH:	< 100 CPS
VISCOSITY:	N/A
MELTING POINT:	N/A
APPEARANCE AND ODOR:	Liquid, clear, light yellow to colorless, mild odor.

3. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	> 200 F T.C.C.
FLAMMABLE LIMITS - LEL:	N/D
FLAMMABLE LIMITS - UEL:	N/D
AUTOIGNITION TEMPERATURE:	N/D
EXTINGUISHING MEDIA:	Water, Carbon dioxide, Dry chemical, Foam
SPECIAL FIRE FIGHTING PROCEDURES:	Wear full protective clothing, including helmet, self-contained,

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

MATERIAL SAFETY  
DATA SHEET



MSDS: 3M Brand HB QUAT DISINFECTANT CLEANER Ready-to-Use.  
(Product No. 25, Twist 'n Fill(tm) System)  
JUNE 26, 2000

3. FIRE AND EXPLOSION HAZARD DATA (continued)

positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

See the Hazardous Decomposition section for products of combustion.

NFPA HAZARD CODES: UNUSUAL REACTION HAZARD: none

OSHA FIRE HAZARD CLASS: Class IIIB Combustible Liquid

4. REACTIVITY DATA

STABILITY: Stable

INCOMPATIBILITY - MATERIALS TO AVOID:

None known.

HAZARDOUS POLYMERIZATION: Will Not Occur

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon Monoxide, and Carbon Dioxide, Oxides of Nitrogen, Hydrogen Chloride.

5. ENVIRONMENTAL INFORMATION

SPILL RESPONSE:

Observe precautions from other sections. Ventilate area. Contain spill. Cover with absorbent material. Collect spilled material.

Clean up residue with water. Place in a closed container.

RECOMMENDED DISPOSAL:

Discharge into wastewater treatment system. Reduce discharge rate if foaming occurs.

ENVIRONMENTAL DATA:

No data available.

This product is a disinfectant; it is toxic to microorganisms. Care must be taken to avoid improper disposal or release to the environment. When properly handled, use of this product is expected to have minimal environmental impact. Most components of this product will eventually degrade in the environment.

REGULATORY INFORMATION:

Volatile Organic Compounds: < 0.05 %.

VOC Less H2O & Exempt Solvents: N/D.

Since regulations vary, consult applicable regulations or authorities before disposal. U.S. EPA Hazardous Waste Number = None (Not U.S. EPA Hazardous).

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

3M General Offices

3M Center  
St. Paul, MN 55144-1000  
1-800-364-3577 or (651) 737-6501 (24 hours)

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MSDS: 3M Brand HB QUAT DISINFECTANT CLEANER Ready-to-Use.....  
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5. ENVIRONMENTAL INFORMATION (continued)

7. PRECAUTIONARY INFORMATION (continued)

EPICRA HAZARD CLASS:  
FIRE HAZARD: No PRESSURE: No REACTIVITY: No ACUTE: Yes CHRONIC: Yes

information presumes that this ready-to-use product has been diluted and dispensed from a TWIST'N FILL (tm) Chemical Dispenser.

6. SUGGESTED FIRST AID

Avoid creasing or impacting container side walls.

EYE CONTACT:  
Immediately flush eyes with large amounts of water. Get immediate medical attention.

SKIN CONTACT:  
Flush skin with large amounts of water. If irritation persists, get medical attention.

INHALATION:  
If signs/symptoms occur, remove person to fresh air. If signs/symptoms continue, call a physician.

IF SWALLOWED:  
Do not induce vomiting. Drink two glasses of water. Call a physician.

7. PRECAUTIONARY INFORMATION

EYE PROTECTION:  
Avoid eye contact. Avoid eye contact with vapor, spray, or mist.

SKIN PROTECTION:  
Avoid prolonged or repeated skin contact.

VENTILATION PROTECTION:  
Use in a well-ventilated area.

RESPIRATORY PROTECTION:  
Avoid breathing of vapors, mists or spray. Avoid breathing of airborne material.

PREVENTION OF ACCIDENTAL INGESTION:  
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Wash hands after handling and before eating. Do not ingest.  
Avoid contamination of food.

RECOMMENDED STORAGE:  
Store away from areas where product may come into contact with food or pharmaceuticals. Keep container closed when not in use. Keep out of the reach of children.

FIRE AND EXPLOSION AVOIDANCE:  
Keep container tightly closed.

OTHER PRECAUTIONARY INFORMATION:  
Not intended for consumer sale or use. NOTE: The above precautionary

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately

INGREDIENTS	VALUE	UNIT	TYPE	AUTH	SKIN*
WATER (CI2-C18)	NONE	NONE	NONE	NONE	NONE
AMMONIUM CHLORIDE	NONE	NONE	NONE	NONE	NONE
ALUMINUM CHLORIDE	NONE	NONE	NONE	NONE	NONE
ETHYLBENZYL AMMONIUM CHLORIDE	NONE	NONE	NONE	NONE	NONE

* SKIN NOTATION: Listed substances indicated with "N" under SKIN refer to the potential contribution to the overall exposure by the cutaneous route including mucous membranes and eyes, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

SOURCE OF EXPOSURE LIMIT DATA:  
- NONE: None Established

8. HEALTH HAZARD DATA

EYE CONTACT:  
Mild Eye Irritation: signs/symptoms can include redness, swelling, pain, and tearing.

SKIN CONTACT:  
Mild Skin Irritation (after prolonged or repeated contact): signs/symptoms can include redness, swelling, and itching.

INHALATION:  
Single over-exposure, above recommended guidelines, may cause:  
Irritation (upper respiratory); signs/symptoms can include soreness of the nose and throat, coughing and sneezing.

IF SWALLOWED:  
Ingestion is not a likely route of exposure to this product.  
Ingestion may cause:  
Irritation of Gastrointestinal Tissues: signs/symptoms can include pain, vomiting, abdominal tenderness, nausea, blood in

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St. Paul, MN 55144-1000  
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JUNE 26, 2000 (Product No. 25, Twist 'n Fill(tm) System) PAGE: 5 of 5

8. HEALTH HAZARD DATA (continued)

vomitus, and blood in feces.

**OTHER HEALTH HAZARD INFORMATION:**

**MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:** medical conditions, if any, known to be aggravated by exposure to this product are indicated in the appropriate portions of the Health Hazard Data section of this data sheet.

**CARCINOGENS:** components of this product, if any, known to cause, or suspected of causing, cancer as determined by OSHA, IARC, OR NTP are described in the Health Hazard Data section of this data sheet in accord with the OSHA Hazard Communications Standard, 29 CFR 1910.1200

SECTION CHANGE DATES

HEADING SECTION CHANGED SINCE MARCH 8, 2000 ISSUE

Abbreviations: N/D - Not Determined N/A - Not Applicable CA - Approximately  
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**XEROX**

**Material Safety Data Sheet**

**MSDS No:** D-0408  
**Date:** 4/28/83  
**Revision:** 10/05/01

**Manufacturer:** Xerox Corporation  
Rochester, NY 14644

**Telephone # (s):** *Safety Information: (800) 828-6571*  
*Health Emergency: (716) 422-2177*  
*Transportation Emergency (Chemtrec): (800) 424-9300*

**Section I - Product Identification**

**Trade Names/Synonyms:** Xerox Fuser Agent- 1065, 4135, 4235, 4635, 4635 MX, 5046, 5047, 5065, 5090/S, 5335, 5365, 5390, 5690, 6100, 8200, 8700V, 8790V, 9210, 9500, 9900, 9790V, 9700V, Document Centre System 35, DocuPrint 180 LPS, DocuPrint 96, DocuPrint 96 MX/ 115/155 EPS DocuTech 135, DocuTech 6115, DocuTech 6135, DocuTech 6155, DocuTech 6180

**Part No.:** WH: 8R882*, 8R1288, 8R2944*, 8R2945*, 8R2955, 8R3808*, 8R3840*, 8R3903, 94E14; XL: 8R90163

*Cancelled

**Chemical Name:** Mercapto-functional polydimethylsiloxane

**WHMIS Status:** This is not a WHMIS controlled product.

**Ingredients (% by wt.)**

Polydimethylsiloxane (85-95%)  
Mercapto-functional polydimethylsiloxane (5-15%)

**CAS No.**

63148-62-9  
108775-26-4/67923-16-4

**Section II - Emergency and First Aid**

**Primary Route of Entry:**

Inhalation

**Eyes:**

Flush thoroughly with water.

**Skin:**

Wash with soap and water.

**Inhalation:**

Remove from exposure.

**Ingestion:**

Dilute stomach contents with several glasses of water.

**Symptoms of Overexposure:**

May cause minimal irritation of respiratory passages on continuous exposure to high concentrations.

**Medical Conditions Generally Aggravated by Exposure:**

None

**Additional Information:**

None

**Section III - Toxicology and Health Information**

*This material has been evaluated by Xerox Corporation.*

**Oral LD₅₀:** >35 g/kg (rats).

**Dermal LD₅₀:** >3 g/kg (rabbits).

**Inhalation LC₅₀:** N.D.

**Eye Irritation:** Non-irritating.

**Skin Irritation:** Non-irritating.

**Skin Sensitization:** Non-sensitizing.

**Human Patch:** Non-irritating, non-sensitizing.

**Mutagenicity:** No mutagenicity detected in Ames, UDS Assays.

**Carcinogens:** None known.

**Aquatic LC₅₀:** >1000 mg/l (fathead minnows).

**TLV:** N.E.

**PEL:** N.E.

**STEL:** N.E.

**Ceiling:** N.E.

**XEL¹:** N.E.

**Additional Information:** None.

¹XEL-Xerox Exposure Limit

N.A. - Not Applicable N.E. -None Established N.D. -Not Determined

**Xerox** Trade Name: Xerox Fuser Agent- 1065, 4135, 4235, 4635, 4635 MX,  
5046, 5047, 5065, 5090/S, 5335, 5365, 5390, 5690, 6100, 8200, 8700V, 8790V,  
9210, 9500, 9900, 9790V, 9700V, Document Centre System 35, DocuPrint 180 LPS,  
DocuPrint 96, DocuPrint 96 MX/115/155 EPS, DocuTech 135, DocuTech 6115, DocuTech 6135,  
DocuTech 6155, DocuTech 6180,

MSDS No.: D-0408

#### Section IV - Physical Data

Appearance/Odor:	Clear liquid / slight	Softening Range:	N.A.
Boiling Point:	N.A.	Melting Point:	N.A.
Solubility in Water:	Insoluble	Specific Gravity (H ₂ O=1):	0.96
Evaporation Rate:	<1 (n-butylacetate = 1)	Vapor Pressure (mm Hg):	< 0.1 @ 20 °C
Vapor Density (Air=1):	N.A.	pH:	N.A.
Volatile:	<1 % (Wt.) <1% (Vol.)	VOC:	960 g/l

#### Section V - Fire and Explosion Data

Flash Point (Method Used):	>260°C (>500°F) P.M.C.C.
Flammable Limits	LEL: N.D., UEL: N.D.
NFPA 704:	Health - 0, Fire - 1, Reactivity - 0
Extinguishing Media:	Foam, carbon dioxide, water spray.
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus and protective clothing.
Fire and Explosion Hazards:	None

#### Section VI - Reactivity Data

Stability:	Stable
Hazardous Polymerization:	Will Not Occur
Hazardous Decomposition Products:	Silicone dioxide, carbon dioxide, carbon monoxide, formaldehyde and traces of incompletely burned carbon products.
Incompatibility (Materials to Avoid):	Strong oxidizing materials.

#### Section VII - Special Protection Information

Respiratory Protection:	None required when used as intended in Xerox products.
Eye Protection:	None required when used as intended in Xerox products.
Protective Gloves:	None required when used as intended in Xerox products.
Other:	None required when used as intended in Xerox products.

#### Section VIII - Special Precautions

Handling and Storage:	Use reasonable care and caution. Store in a cool, dry, well ventilated area. Clean up spills completely as residue is slippery.
Conditions to Avoid:	None

#### Section IX - Spill, Leak, and Disposal Procedures

For Spills or Leakage:	Clean thoroughly as residue is slippery. Soak up with an absorbent material. Place in appropriate chemical waste container. Flush spill area with water.
Waste Disposal Method:	Absorb liquid on vermiculite or other absorbent material. Dispose of in accordance with local, state and federal regulations. Biodegradation: non-biodegradable, Bioaccumulation: no evidence of accumulation.

#### Section X - Transportation Information

DOT Proper Shipping Name:	N.A. (Not Regulated)	ID Number:	N.A.
Hazard Classification:	N.A.	Packing Group:	N.A.

600E32970

**SECTION V - Reactivity Data**

Stability	Unstable		Conditions to Avoid - Extreme heat, direct sunlight
	Stable	X	
Incompatibility (Materials to Avoid) - Strong oxidizers.			
Hazardous Decomposition or Byproducts - Oxides of carbon, smoke or soot.			
Hazardous Polymerization	May Occur		Conditions to Avoid - None known
	Will Not Occur	X	

**SECTION VI - Health Hazard Data**

Route(s) of Entry	Eyes?	Inhalation?	Skin?	Ingestion?
	Yes	Yes	Yes	Yes
Health Hazards (Acute and Chronic) - Caution. Harmful if swallowed (contains petroleum distillates, aspiration hazard). May be harmful if inhaled. Causes skin and slight eye irritation.				
Carcinogenicity:	NTP?	IARC Monographs?	OSHA Regulated?	
None known	No	No	No	

**Signs and Symptoms of Exposure** - Slight irritation of eyes. Repeated or prolonged skin contact may cause irritation, redness and dermatitis. Excessive inhalation may cause headaches, dizziness, irritation of throat and eyes, and kidney effects. Swallowing may cause irritation of the digestive tract resulting in nausea and vomiting.

**Medical Conditions Generally Aggravated by Exposure** - None known.

**Emergency and First Aid Procedures:**

**If Swallowed** - Call a physician or Poison Control Center immediately. Do not induce vomiting because of aspiration pneumonia hazard. **If In Eyes** - Flush with plenty of water (for at least 15 minutes lifting eyelids to insure complete removal). Get medical attention if irritation persists. **If On Skin Or Clothing** - Remove contaminated clothing and wash before reuse. Wash skin with soap and warm water. Get medical attention if irritation persists. **If Inhaled** - Remove victim to fresh air. If breathing has stopped, qualified personnel should administer artificial respiration.

**SECTION VII - Precautions for Safe Handling and Use**

**Steps to be Taken in Case Material is Released or Spilled** - Isolate traffic and ventilate area. Eliminate all ignition sources. Wear protective gear as necessary. Dike to prevent spread. Pick up with an absorbent material and put in suitable container for proper disposal.

**Waste Disposal Method** - Consult local, state and federal regulations. Replace cap and discard container in trash. Do not puncture or incinerate container.

**Precautions to be Taken in Handling and Storing** - Do not breathe vapors or spray mist. Do not get in eyes. Avoid contact with skin and clothing. Wash contaminated skin promptly with soap and warm water. Avoid contamination of food and feedstuffs. Store in a cool (under 130° F) dry area away from heat or open flame. Do not store in direct sunlight.

**Other Precautions** - Follow label directions carefully. Keep out of reach of children. Do not deliberately concentrate and inhale vapors. Direct spray away from face. Replace cap when not in use. Do not use around ignition sources such as heat, sparks, open flame, etc. Do not puncture or incinerate container. Do not swallow.

**SECTION VIII - Control Measures**

**Respiratory Protection (Specify Type)** - Not usually necessary. Use with adequate ventilation. If PELs or TLVs are exceeded (see Section II), use an approved NIOSH/MSHA respirator.

Ventilation	Local Exhaust	Not usually needed	Special	None
	Mechanical (General)	Acceptable	Other	None

**Protective Gloves** -

Only if direct contact is possible. Use impervious.

**Eye Protection** -

Yes, goggles or approved safety glasses (ANSI Z87)

**Other Protective Clothing or Equipment** -

Not usually needed. Wear apron, boots, face shield, etc. when direct contact is possible.

**Work/Hygienic Practices** -

Normal. Wash thoroughly before eating, drinking, smoking, using restrooms, etc.

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