

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

(1159A)

Manufacturer's Name: HILLYARD INDUSTRIES**Product Name:** ARSENAL DEGREASER**Address:** 302 North Fourth Street
St. Joseph, MO 64501**Date Prepared:** March 14, 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	%
Sodium metasilicate (1)	6834-92-0	not established	not established	2 mg/M ³	1-2%
Water	7732-18-5	none	none	N/A	---
Tetrasodium salt of Ethylenediamine	64-02-8	not established	not established	N/A	---
Tetraacetic acid					
Complex Blend of Surfactants	Unknown to Hillyard	not established	not established	N/A	---
Lauramine oxide	1643-20-5	not established	not established	N/A	---
Cationic Surfactant	68444-16-6	not established	not established	N/A	---

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

VOC (concentrate) = 0.50%; Diluted 1:40 VOC=0.01%

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 202°F **Specific Gravity (H₂O = 1):** 25°C = 1.04 & 39°C = 1.04
Vapor Pressure (mm Hg.): 17.5 **Percent Volatile by Volume (%):** 90%
Vapor Density (AIR = 1): 0.6 **Evaporation Rate (ethyl ether = 1):** less than 1
Solubility in Water: complete **Appearance and Odor:** clear, amber liquid, non-objectionable odor
pH (concentrate) = 12.9

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, carbon dioxide, dry chemical or foam
Special Fire Fighting Procedures: N/A
Unusual Fire and Explosion Hazards: N/A

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 oxide (trace)
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 not a primary skin irritant when tested per the Federal Hazardous Substance Act Procedure. Concentrate was a primary eye irritant when tested per the Federal Hazardous Substance Act Procedure. Prolonged overexposure to the eyes may produce be corrosive to eyes. Not toxic at 5 g./kg. on oral toxicity test. 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%.

SECTION VI -- HEALTH HAZARD DATA continued

Signs and Symptoms of Exposure: Prolonged exposure to concentrated product may produce severe 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: If swallowed, give a large amount of water and call a physician. For eye and skin contact, flush immediately with plenty of water for at least 15-20 minutes; for eyes, lift eyelids and flush with water and get medical assistance immediately. If skin irritation persists, 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: 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 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: USE WITH ADEQUATE VENTILATION. Avoid breathing of fine fog 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. Close container after each use. 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: Do not use with fog mist or fine droplet sprayer with concentrate unless one uses respiratory protection. When used according to label direction respiratory protection is not needed. 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 Sodium metasilicate.

Ventilation:

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

Protective Gloves: Not required **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: 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

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.