

Larry D. Katz

REC'D NOV 16 2007

#820

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-37A)

Manufacturer's Name: HILLYARD INDUSTRIES Product Name: ARSENAL SPRAY CLEAN HD
 Address: 302 North Fourth Street Date Prepared: July 31, 2001
 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	%
Ethanolamine	141-43-5	3 ppm	3 ppm	N/A	1-5%
Dipropylene glycol methyl ether	34590-94-8	100 ppm	100 ppm	N/A	17-23%
Water	7732-18-5	none	none	N/A	---
Propylene glycol butyl ether	5131-66-8	not established	not established	N/A	---
Linear primary alcohol ethoxylate	68439-46-3	not established	not established	N/A	---
Tetrasodium salt of EDTA	64-02-8	not established	not established	N/A	---

V.O.S. (concentrate) = 33%; V.O.S. (Diluted 1:10) = 3%

SECTION III - PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 209°F Specific Gravity (H₂O = 1): 25°C 1.00 & 39°C = 1.01
 Vapor Pressure (mm Hg.): 19.5 Percent Volatile by Volume (%): 91.39
 Vapor Density (AIR = 1): 2.05 Evaporation Rate (ethyl ether = 1): slower than 1
 Solubility in Water: complete Appearance and Odor: clear dark purple liquid; mountain berry odor
 pH (concentrate): 12

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 but was considered to be an eye irritant. Concentrate was not acutely oral toxic at 5 g./kg. The submitted test sample (concentrated product) was acutely toxic to 10% of the test subjects following a 1-hour inhalation exposure at a nominal concentration of 43.51 mg./kg. (actual concentration 24.77 mg.); however when diluted it was not acutely toxic to test subjects following a 1 hour exposure at nominal concentration of 39.66 mg./L (actual concentration = g./L). This was the maximum concentration that could be generated with this test system. Direct contact with concentrate in eyes can cause severe irritation and damage. Prolonged and repeated exposure to skin may produce irritation or damage. DO NOT SPRAY CONCENTRATED PRODUCT. Only spray diluted product. Inhalation of fine fog mist can cause irritation of mucous membranes. Fine fog mist application is not recommended. Inhalation of spray mist may result in varying degrees of irritation. 2. None known to Hillyard Inc.

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 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: Inhalation: Remove person to fresh air. If breathing difficulty persists or occurs later, call physician. Skin and eye contact: Immediately flush with plenty of water for 15 minutes. Get prompt medical attention. Remove and wash all contaminated clothing before reuse. Ingestion: Immediately give large amounts of water and 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 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 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): Ventilate to keep air concentration below TLV on ethanalamine.

Ventilation:

Local Exhaust = Recommended Mechanical (General) = Recommended

Special = N/A Other = N/A

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

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.

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: 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 CFR1500.42. 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.

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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.

DISCLAIMER OF WARRANTIES

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