

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

(Ready to use)

Manufacturer's Name: HILLYARD INDUSTRIES

Product Name: ARSENAL VINDICATOR+ #H/L031

 Address: 302 North Fourth Street
 St. Joseph, MO 64501

Date Prepared: March 10, 1998

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	%
Didecyl dimethyl ammonium chloride	7173-51-5	not established	N/A	N/A	less than 1
n-Alkyl (C ₁₄ 50%, C ₁₂ 40%, C ₁₆ 10%) dimethyl benzyl ammonium chloride	8001-54-5	not established	N/A	N/A	less than 1
Deionized water	7732-18-5	none	N/A	N/A	—

SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS

Boiling Point: 212°F

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

Vapor Pressure (mm Hg.): 17.5

Percent Volatile by Volume (%): 99.9

Vapor Density (AIR = 1): 0.6

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

Solubility in Water: complete

Appearance and Odor: clear, yellow liquid; wintergreen odor

pH: 6 - 8 depending on pH of water

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 gastro-intestinal 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

SECTION VI -- HEALTH HAZARD DATA cont.

Signs and Symptoms of Exposure: Prolonged contact may cause minimal eye irritation and slight skin irritation. Ingestion of diluted material may cause gastro-intestinal 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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