

**MATERIAL SAFETY DATA SHEET**

**NFPA RATING:** Health = 3 Flammability = 0 Reactivity = 0  
**HMIS RATING:** Health = 3 Flammability = 1 Reactivity = 0

**SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION (1102A)****Manufacturer's Name:** HILLYARD INDUSTRIES**Product Name:** VINDICATOR+**Address:** 302 North Fourth Street  
St. Joseph, MO 64501**Date Prepared:** January 18, 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:**

<b>Common Name(s)</b>	<b>CAS#</b>	<b>OSHA PEL</b>	<b>ACGIH TLV</b>	<b>OTHER LIMITS RECOMMENDED</b>	<b>%</b>
Didecyl dimethyl ammonium chloride	7173-51-5	not established	N/A	N/A	10.14
n-Alkyl (C <sub>14</sub> 50%, C <sub>12</sub> 40%, C <sub>16</sub> 10%)	8001-54-5	not established	N/A	N/A	6.76
dimethyl benzyl ammonium chloride					
Ethylenediamine tetraacetic acid	60-00-4	not established	N/A	N/A	1-5
Ethanol	64-17-5	1000ppm	1000ppm	N/A	1-4
Deionized water	7732-18-5	none	N/A	N/A	---
Nonionic surfactant	68439-46-3	Not established	N/A	N/A	---

**SECTION III -- PHYSICAL / CHEMICAL CHARACTERISTICS**

**Boiling Point:** 204°F **Specific Gravity (H<sub>2</sub>O = 1):** 25°C = 0.99 & 39°C = 0.99  
**Vapor Pressure (mm Hg.):** 18.17 **Percent Volatile by Volume (%):** 77.59  
**Vapor Density (AIR = 1):** 0.7 **Evaporation Rate (ethyl ether = 1):** slower than 1  
**Solubility in Water:** complete **Appearance and Odor:** clear, yellow liquid; fresh 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 by 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. Causes irreversible eye damage and skin burns. Harmful if swallowed. Do not get in eyes, on skin or on clothing. When handling product, protect eyes by wearing goggles or face shield and protect skin by wearing rubber gloves. Inhalation of fine fog mist can cause irritation of mucous membranes. Fine fog mist application is not recommended. LD50 Rat = 1650 mg/kg; dermal LD50 (rabbit) 1870 mg./kg.; eye irritation (rabbit) = Severe irritant; skin irritation (rabbit) = severe irritant on similar alkaline formulation containing 10.8% active quat. 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** Causes irreversible eye damage. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Avoid contact with skin. Harmful if inhaled. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

## SECTION VI -- HEALTH HAZARD DATA continued:

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

**Emergency and First Aid Procedures:** **If in eyes:** Hold eye open and rinse slowly and gently with water for at least 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. **If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. **If swallowed:** 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person. **If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor or going for treatment. **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 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 for 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** Store in original container in areas inaccessible to children. Open dumping is prohibited Do not reuse empty container. Wrap and discard in trash or recycle. 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 may 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.

**Storage and Handling:** Store at temperatures below 140°F. Keep container closed until used. Do not contaminate drinking water, food or feed by storage or disposal. **Work / Hygienic Practices:** Wash hands thoroughly after handling.

## SECTION IX - TRANSPORTATION INFORMATION

**Applicable regulations:** DOT = Yes; IMCO = Yes; IATA = Yes

**Proper shipping name (Gallon Boxes) for U.S. Highway:** Consumer Commodity ORM-D

**Proper shipping name (5 & 55 Gallon Drums) for U.S. Highway:** Disinfectants, Corrosive Liquid, N.O.S. (Didecyl dimethyl ammonium chloride, N-alkyl dimethyl benzyl ammonium chloride), 8, UN 1903, PG III

**UN No.:** UN1903

**Limited Qty.:** not applicable

**Hazard Class:** 8

**Label required:** Not required on gallon boxes by highway; 5 & 55 gallon drum = Corrosive Label

**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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