

**MATERIAL SAFETY DATA SHEET****EPA Reg. No. 1839-167-1658****EPA Est. No. 1658-MO-1**

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

**SECTION I -- IDENTITY AND MANUFACTURER'S INFORMATION** (543N-21A)**Manufacturer's Name:** HILLYARD INDUSTRIES**Product Name:** VINDICATOR+**Address:** 302 North Fourth Street**Date Prepared:** November 13, 2013 (version 5)

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	N/E	N/A	N/A	60-65
*Octyl decyl dimethyl ammonium chloride	32426-11-2	N/E	N/A	N/A	6.510
Didecyl dimethyl ammonium chloride	7173-51-5	N/E	N/A	N/A	3.255
Dioctyl dimethyl ammonium chloride	5538-94-3	N/E	N/A	N/A	3.255
Alkyl dimethyl benzyl ammonium chloride	68424-85-1	none	N/A	N/A	8.680
Ethanol	64-17-5	1000ppm	1000ppm	N/A	0 - 5

N/E = Not Established

N/A = Not Applicable

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

**Boiling Point:** >200°F **Specific Gravity (H<sub>2</sub>O = 1):** 25°C = 1.006 **Density =** 8.38lb/gal  
**Vapor Pressure (mm Hg.):** 18.17 **Percent Volatile by Weight (%):** 68 - 70  
**Vapor Density (AIR = 1):** <1 **Evaporation Rate (ethyl ether = 1):** Slower than 1  
**Solubility in Water:** Complete **Appearance and Odor:** clear, yellow liquid; floral fragrance  
**pH (concentrate):** 6.75 - 7.75

**SECTION IV -- FIRE AND EXPLOSION HAZARD DATA****Flash point:** 144°F (Tag CC) **Flammable Limits:** LEL = Not applicable UEL = Not applicable**Extinguishing Media:** Dry chemical, foam, carbon dioxide, water fog

**Special Fire Fighting Procedures:** Firefighters should wear full fire-fighting turn-out gear (full Bunker gear) including NIOSWH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

**Unusual Fire and Explosion Hazards:** Irritating and toxic gases or fumes may be released during a fire.**SECTION V -- PHYSICAL HAZARDS****Stability:** Stable **Conditions to Avoid:** Avoid strong oxidizing agents**Incompatibility (Materials to Avoid):** Anionic compounds, strong oxidizing agents**Hazardous Decomposition Products or Byproducts:** Upon decomposition, product may yield oxides of nitrogen and ammonia.**Hazardous Polymerization:** will not occur**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. May be fatal if absorbed through the skin. Do not get in eyes, on skin or on clothing. Wear protective eyewear (goggles or face shield), clothing, and gloves when handling. Harmful if swallowed. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash before reuse. 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:** Excessive inhalation of this material causes headache, dizziness, nausea and loss of motor skills. Ingestion of large amounts may produce gastrointestinal disturbances including irritation, nausea, and diarrhea.

**SECTION VI -- HEALTH HAZARD DATA continued:**

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

**Emergency and First Aid Procedures:** **If in eyes:** Immediately flush eyes with water for at least 15 minutes while holding eyelids open. Get medical attention or advice. **If on skin or clothing:** Immediately take off all contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. **If swallowed:** Get immediate medical attention or advice. Do not induce vomiting unless told to do so by the poison control center or doctor. **If inhaled:** Immediately move person to fresh air. If symptoms persist, get medical attention. 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. Isolate spill or leak area immediately. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. Wear appropriate personal protective equipment during clean-up. **Small Spills:** Absorb with earth, sand or other non-combustible materials. Transfer to containers for later disposal. Use clean non-sparking tools to collect absorbed material. **Large Spills:** Dike ahead of liquid spill for later disposal. Keep spill out of sewers and open bodies of water.

**Container Disposal:** Do not reuse empty container. Triple rinse empty container with water. Return metal drum then offer for reconditioning or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Plastic containers may be disposed of in a sanitary landfill, incinerated, or if allowed by local authorities, by burning. If burned, stay out of smoke. Offer for recycling if available. For containers 1 gallon or less: Do not reuse empty container (bottle, can, or bucket). Wrap container and put in trash. **Pesticide Disposal** – Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

**Precautions To Be Taken In Handling And Storing:** Avoid contact with skin and eyes. Avoid breathing vapors or mists of this product. Wash hands before drinking, smoking or using toilet facilities. As with all chemicals, good industrial hygiene practices should be followed when handling this material.

**Storage Procedures:** Do not contaminate water, food or feed by storage or disposal. Keep the container tightly closed and in a cool well-ventilated place. Avoid freezing or excessive heat.

**SECTION VIII -- CONTROL MEASURES**

**Ventilation:** Use with adequate ventilation

**Respiratory Protection (Specify Type):** If exposure limits are exceeded or if irritation is experienced, NIOSH approved respiratory protection should be worn.

**Personal Protective Equipment-Skin:** Work clothing sufficient to prevent all skin contact should be worn such as coveralls and long sleeves. Use impervious gloves. **Eye Protection:** Wear chemical goggles; face shield (if splashing is possible)

**Other Protective Clothing or Equipment:** Eye wash and safety shower is recommended.

**Storage and Handling:** Keep this product from heat, sparks or open flame or other sources of ignition. Store in dry place no lower in temperature than 50°F or higher than 120°F. Avoid contact with skin and eyes. Avoid breathing vapors or mists of this product. Wash hands before eating, drinking, smoking or using toilet facilities.

**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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