

MATERIAL SAFETY DATA SHEET

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

SECTION I – IDENTITY AND MANUFACTURER'S INFORMATION (0652D)**Manufacturer's Name:** HILLYARD INDUSTRIES**Product Name:** MRD 2**Address:** 302 North Fourth Street**Date Prepared:** April 28, 2008

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	%
Sodium metasilicate	6834-92-0	2 mg/M ³	2 mg/M ³	N/A	5-7
Butyl cellosolve (2-Butoxyethanol) * (1)	111-76-0	50 ppm	20 ppm	N/A	2-5
Potassium hydroxide (2)	1310-58-3	2 mg/M ³	2 mg/M ³	N/A	1-3
Water	7732-18-5	none	none	N/A	---
Anionic surfactant	unknown to Hillyard	not established	not established	N/A	---

* This product contains the following chemicals subject to the reporting requirements of SARA Title III, Section 313, and 40 CFR Part 372: 2-Butoxyethanol.

(1) Regulated by OSHA and the following states: FL, IL, LA, MA, NJ, PA, RI.

(2) Regulated by OSHA and the following states: CT, FL, IL, LA, MA, NJ, NY, PA, RI.

VOC = 32 g/l.; VOC less water = 410 g/l.

SECTION III – PHYSICAL / CHEMICAL CHARACTERISTICS**Boiling Point:** 738 mm Hg 216°F **Specific Gravity (H₂O= 1):** 22°C = 1.04 & 39°C = 1.03**Vapor Pressure (mm Hg.):** 17.4 **Percent Volatile by Volume (%):** 92.4**Vapor Density (AIR = 1):** 0.7 **Evaporation Rate (ethyl ether = 1):** slower than 1**Solubility in Water:** appreciable**Appearance and Odor:** Clear, pale yellow liquid; butyl cellosolve odor**pH (concentrate) =** 13.5**SECTION IV – FIRE AND EXPLOSION HAZARD DATA****Flash point:** None (T.C.C.)**Flammable Limits:** LEL = N/A UEL = N/A**Extinguishing Media:** Foam, carbon dioxide, dry chemical (water spray to cool closed containers)**Special Fire Fighting Procedures:** Self-contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals.**Unusual Fire and Explosion Hazards:** None known to manufacturer**SECTION V – PHYSICAL HAZARDS****Stability:** Stable**Conditions to Avoid:** N/A**Incompatibility (Materials to Avoid):** Do not mix with strong acids.**Hazardous Decomposition Products or Byproducts:** As with any organic material, combustion will produce carbon dioxide and carbon monoxide.**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. Corrosive to eyes and skin.

2. Chronic local effects may consist of multiple areas of superficial destruction of the skin or dermatitis.

SECTION VI – HEALTH HAZARD DATA cont.

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%.

Signs and Symptoms of Exposure: Butyl cellosolve is readily absorbed through the skin in toxic amounts. Inhalation of high concentration of vapors results in respiratory and eye irritation, narcosis, hematuria and damages liver and kidneys. Not toxic to rats at 5 g/kg. (acute oral toxicity test); not toxic to rats at 4.4 mg/l. Maximum achievable concentration (acute inhalation - 1 hour exposure).

Medical Conditions Generally Aggravated by Exposure: Repeated overexposure may result in damage to the blood.

Emergency and First Aid Procedures: In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Do not use while wearing contact lenses. GET MEDICAL ATTENTION IMMEDIATELY. Wash clothing before reuse and thoroughly clean contaminated shoes before reuse.

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

Steps To Be Taken In Case Material Is Released Or Spilled: Absorb large spills with floor dry material (see disposal below).

Small spills: Flush with water and pick up with mop or wet vacuum.

Waste Disposal Method: Dispose of in accordance with state or local regulations. EPA Hazardous Waste Classification:

Corrosive (pH = 13.5 on concentrate). Do not dispose of in storm drains or streams.

Precautions To Be Taken In Handling And Storing: Spray mist may produce respiratory irritation or damage and increase susceptibility to respiratory illness. Keep container closed when not in use. Since empty packages retain product residue, follow label warning even after package is empty.

Other Precautions: USE WITH ADEQUATE VENTILATION. Avoid breathing vapors or 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 20 CFR 1910.94 for technical guidelines on keeping air contamination below acceptable exposure limits.

SECTION VIII – CONTROL MEASURES

Respiratory Protection (Specify Type): Ventilate to keep air below TLV. A NIOSH approved respirator for organic vapor should be worn if needed to keep level below TLV.

Ventilation:

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

Protective Gloves: Impervious rubber **Eye Protection:** Chemical safety goggles

Other Protective Clothing or Equipment: Impervious boots and aprons where splashing of concentrate is a problem.

Work / Hygienic Practices: Wash thoroughly after handling.

SECTION IX – TRANSPORTATION INFORMATION

DOT SHIPPING DESCRIPTION ON BILL OF LADING:

(Gallon boxes) = Consumer Commodity ORM-D

Package Marking = Consumer Commodity ORM-D Label = None Hazard Class = not applicable

DOT SHIPPING DESCRIPTION ON BILL OF LADING:

(5 and 55 Gallon packages) = Compound, cleaning, liquid, (Potassium hydroxide), 8, NA 1760, III

Package Marking = Compound, cleaning liquid (Potassium hydroxide), NA 1760

Package Label = Corrosive Hazard Class = 8 Package Group = III

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.

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