

**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**

(538N-73A)

**Manufacturer's Name:** HILLYARD INDUSTRIES

**Product Name:** D.M.B. (Descaler & Metal Brightener)

**Address:** 302 North Fourth Street

**Date Prepared:** January 16, 2007

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	%
Phosphoric acid*(1)	7664-38-2	1mg./m <sup>3</sup>	1mg./m <sup>3</sup>	3mg/m <sup>3</sup>	30-35%
Water	7732-18-5	none	none	N.A.	---
Linear Primary Alcohol Ethoxylate	68439-46-3	not est.	not est.	N.A.	---

\*This product contains the following chemicals subject to the reporting requirements of SARA Title III, Sec. 313, and 40 CFR Part 372: Phosphoric acid.

(1) Regulated by OSHA, CT, FL, IL, LA, MA, NJ, NY, PA, and RI.

VOC (less water) = 2 g/l.; VOS with water = 6.49 lbs/gal.

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

**Boiling Point:** 214°F

**Specific Gravity (H<sub>2</sub>O = 1):** 25°C = 1.07 & 39°C = 1.08

**Vapor Pressure (mm Hg.):** 17.0

**Percent Volatile by Volume (%):** 80%

**Vapor Density (AIR = 1):** 1.0

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

**Solubility in Water:** complete

**Appearance and Odor:** Clear, colorless liquid; non-objectionable odor

**pH = 0.3**

**SECTION IV -- FIRE AND EXPLOSION HAZARD DATA**

**Flash point:** None to Boiling (T.C.C.) **Flammable Limits:** LEL = N.A. UEL = N.A.

**Extinguishing Media:** Foam, dry chemical, carbon dioxide, water spray.

**Special Fire Fighting Procedures:** Hot phosphoric acid is corrosive. Self contained breathing apparatus and protective clothing should be worn in fighting fires involving chemicals.

**Unusual Fire and Explosion Hazards:** May generate hydrogen gas in contact with some metals.

**SECTION V -- PHYSICAL HAZARDS**

**Stability:** Stable **Conditions to Avoid:** None known to manufacturer.

**Incompatibility (Materials to Avoid):** Corrodes some metals and alloys; cyanides and strong alkalies (ammonia) or bleach.

**Hazardous Decomposition Products or Byproducts:** Hydrogen gas from contact with some metals.

**Hazardous Polymerization:** Will not Occur **Conditions to Avoid:** N.A.

**SECTION VI -- HEALTH HAZARD DATA**

**Routes of entry:** Inhalation? by mist Skin? yes Ingestion? yes

**HEALTH HAZARDS (1. Acute and 2. Chronic)**

1. According to Primary Skin Irritation Test (FHSA), product concentrate is severe irritant on prolonged exposure; Eye Irritation Test (FHSA) = eye irritant. When tested as specified this product was not considered to be a UN/DOT corrosive at 4 hours. Prolonged skin contact may cause skin burns. Spray mist may irritate nose and throat. Harmful or fatal if swallowed.

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

**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%.

#### SECTION VI -- HEALTH HAZARD DATA (cont.)

**Signs and Symptoms of Exposure:** Contact: eye irritation and/or burns of skin, and on mouth and lips after ingestion, with sour taste of acid, severe gastrointestinal irritation, nausea, vomiting, bloody diarrhea. Inhalation of high concentrations of vapors results in respiratory and eye irritation, narcosis, headache, nausea, dizziness.

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

**Emergency and First Aid Procedures:** If swallowed, immediately give large quantities of water or milk. Follow with milk of magnesia, beaten eggs or vegetable oil. Do not induce vomiting. Call a physician immediately. In case of contact, immediately flush eyes or skin with plenty of water for 15 minutes. For eyes, GET PROMPT MEDICAL ATTENTION. Remove and wash all contaminated clothing before reuse. If excess inhaled, remove to fresh air.

#### 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. Avoid contamination of storm drains, sewers, or other unauthorized treatment drainage systems and natural waterways.

**Waste Disposal Method:** Disposal is regulated under the Resource Conservation and Recovery Act (40 CFR 261.22) as a corrosive waste. Regulated quantities should be neutralized by a permitted facility in accordance with applicable local, state, and federal regulations.

**Precautions To Be Taken In Handling And Storing:** Product residue may remain on or in empty containers. All precautions for handling the product must be used in handling the empty container or residue. Container disposal: Triple rinse (or equivalent) then offer clean, dry container for recycling or reconditioning. Waste from normal use may be sewer to a public-owned treatment works in compliance with applicable federal, state and local requirements.

**Other Precautions:** Avoid breathing fine fog spray mist. Use with adequate ventilation. Open windows and doors, use exhaust fans or other means to insure fresh air entry during application and drying. Refer to OSHA STANDARD 29 CFR 1910.94 for technical guidelines on keeping air contamination below applicable exposure limits. Avoid contact with skin, eyes and clothing. Do not take internally.

#### SECTION VIII -- CONTROL MEASURES

##### Respiratory Protection (Specify Type):

Not usually necessary. If spraying in a fine fog mist use NIOSH approved respirator (TC-21C-279, TC-23C-736, or TC-23C-745).

**Ventilation:** At least 3 air exchanges per hour suggested in good public restrooms.

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

**Protective Gloves:** Impervious gloves (rubber). **Eye Protection:** Chemical safety goggles.

**Other Protective Clothing or Equipment:** Not usually necessary

**Work / Hygienic Practices:** Wash thoroughly after handling. Upon contact remove contaminated clothing; wash before reuse.

#### 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 **DOT Exception:** not applicable

**EPA Hazardous waste number / code:** not listed

**Hazardous waste characteristics:**

**Ignitability =** not applicable **Corrosivity =** yes **Reactivity =** not applicable

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