

**MATERIAL SAFETY DATA SHEET**

**SECTION 1. IDENTIFICATION OF PRODUCT**

**Name:** H.D. ALUMINUM BRIGHTENER  
**Identity:** Aluminum Brightener      **MSDS Number:** 0045      **Date:** 02/04/05      **Supersedes:** 5/15/2003  
**TOXICITY:** 3      **FIRE:** 0      **REACTIVITY:** 1      **PROTECTION:** F

**SECTION II. HAZARDOUS INGREDIENTS/IDENTITY INFORMATION**

Name	CAS Number	PEL	TLV	%
Hydrofluoric Acid	7664-39-3	C3ppm	3ppm	<10
Sulfuric Acid	7664-93-9	STEL 3	1mg/m3	10

**SECTION III. PHYSICAL/CHEMICAL CHARACTERISTICS**

<b>Boiling Point:</b> 212° F	<b>Specific Gravity:</b> 1.120 ± 0.005	<b>Vapor Pressure (mm Hg.):</b> ND	<b>Melting Point:</b> ND
<b>Vapor Density (Air = 1):</b> 1	<b>Evaporation (H2O = 1):</b> 1	<b>Water Solubility:</b> Complete	<b>pH @ 77F:</b> <1
			<b>VOCgm/L:</b> 0

**Appearance and Odor:** Clear, colorless liquid, Sharp odor

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

<b>Flash Point (TCC):</b>	<b>% LEL:</b>	<b>% UEL:</b>	<b>Flammable Limits:</b>
None	ND	ND	ND

**Extinguishing Media:** Water fog, foam, carbon dioxide. Cool containers exposed to flames with water from side.

**Special Fire Fighting Procedures:** Prevent breathing vapors. Wear SCBA and impervious protective clothing.

**Unusual Fire and Explosion:** Extremely corrosive material when heated. May liberate flammable hydrogen gas on contact with reactive metals

**SECTION V. HEALTH HAZARD DATA**

**Route(s) of Entry:** INHALATION? Yes    EYES? Yes    SKIN? Yes    INGESTION? Yes

**(Acute) Health Hazards:**

**Eyes:** Corrosive. Causes eye burns. May cause permanent damage

**Skin:** Corrosive. Causes skin burns. It may not produce an immediate burning sensation upon skin contact, delaying the awareness of worker that contact has occurred.

**Ingestion:** Can cause severe mouth, throat and stomach burns and can cause systemic toxicity unless medical treatment is promptly initiated.

**Inhalation:** Harmful to mucous membrane. Irritation of upper respiratory tract. Onset of symptoms may be delayed for several hours.

**(Chronic) Health Hazards:** None Known

**Signs and Symptoms of Exposure:**

**Eyes:** Immediate burning sensation; small quantities can result in vision impairment

**Skin:** Causes skin burns. It may not produce an immediate burning sensation upon skin contact.

**Ingestion:** Intolerable burning in mouth

**Inhalation:** Higher levels causes eye, nose, & throat irritation and intolerable.

**Medical Conditions Generally Aggravated by Exposure:** Pre-existing contact site disorders.

**Emergency First Aid Procedures:**

**Eyes:** Immediately flush eyes with large amounts of water for about 15 minutes. Hold eyelids apart during the flushing to ensure thorough rinsing. Have 0.5% tetracaine hydrochloride solution available as eye drops and 1% calcium gluconate for irrigation in normal saline solution for 1-2 hours to prevent or lessen corneal damage. Follow instructions on the literature for the medications. Do not use the solution described for skin treatment. Get medical attention.

## Emergency First Aid Procedures continued.....

- Skin:** Immediately flush all affected areas with large amount of running water for at least 15 minutes. Remove and discard contaminated clothing and shoes. Limit washing to 5 minutes if immersing burned area in a solution of aqueous Zephiran Chloride until pain is relieved. Alternately, 2.5% calcium gluconate gel may be massaged into the burn area until pain is relieved. Get medical attention. Follow recommended dilution for Zephiran Chloride in the literature.
- Ingestion:** DO NOT INDUCE VOMITING. Several glasses of milk or milk of magnesia may be given as a soothing effect. Obtain medical attention without delay.
- Inhalation:** Remove to fresh air. Keep the victim lying down, quiet and warm. Obtain medical attention.

### SECTION VI. TOXICITY DATA

**Carcinogenicity:** NTP? No IARC No OSHA REGULATED? No

### SECTION VII. REACTIVITY DATA

- Stability:** Stable **Hazardous Polymerization Will Not Occur**
- Incompatibility (Materials to Avoid):** Avoid contact with metals which may liberate flammable hydrogen gas. Avoid sulfites and sulfides.
- Hazardous Decomposition Byproducts:** Acid vapors

### SECTION VIII. PRECAUTIONS FOR SAFE HANDLING AND USE

#### Steps to be Taken in Case Material is Released or Spilled:

- Small Spills:** Neutralize with soda ash and mop up.
- Large Spills:** Dike area and absorb into neutral material or pump up
- Disposal:** Meet Federal, State & Local Requirements
- Handling and Storage:** Store in cool, dry well ventilated area. Keep container tightly closed when not in use.
- Other Precautions:** Keep out of reach of children. FOR INDUSTRIAL AND INSTITUTIONAL USE ONLY.

### SECTION IX. CONTROL MEASURES

- Respiratory Protection:** NIOSH approved air purifying with vapor cartridge or canister
- Ventilation:** Normal indoor
- Local Exhaust:** Strongly recommended if generating mist or vapors
- Mechanical (General):** Not normally indicated unless mist is generated
- Protective Gloves:** Rubber, vinyl, impervious
- Eye Protection:** Face Shield/Chemical safety goggles
- Other Protective Clothing or Equipment:** Long pants, sleeves, apron
- Work/Hygienic Practices:** The recommendations described in this section are provided as general guidance for minimizing exposure when handling this product. Because use conditions will vary, depending upon customer applications, specific safe handling procedures should be developed by persons knowledgeable of the intended use conditions and equipment.

### SECTION X. DOT INFORMATION

COMPOUNDS, CLEANING LIQUID (Hydrofluoric Acid, Sulfuric Acid), 8, 6.1, NA1760, PG II

### SECTION XI. MISCELLANEOUS INFORMATION

- SARA 313:** Hydrofluoric and Sulfuric Acids are subject to reporting requirements
- Notice:** All information, recommendations, and suggestions appearing herein concerning this product are based upon data obtained from the manufacturer and/or recognized technical sources; however, manufacturer makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of his own use, handling and disposal of the product.

NA – Not Available

NE- Not Established

ND - No Determined