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## Material Safety Data Sheet

Reviewed Date: April 2004

### IDENTITY (As used on label and list) **CHROMIUM MASK ETCHANT**

Date Prepared: June 8, 1992

Signature of Preparer: Martin E. Hecht

Chemtrec Emergency Telephone: 1-800-424-9300

### SECTION I - Hazardous Ingredients/Identity Information

Hazardous Components		%	OSHA PEL	ACGIH TLV	Other limits Recommended
Ceric Sulfate	CAS# 13590-82-4	5-10	N/A	N/A	N/A
Nitric Acid (HNO <sub>3</sub> )	CAS# 7697-37-2	5-10	2ppm (TWA)	5mg/m <sup>3</sup>	2ppm (TWA)
Sulfuric Acid	CAS# 7664-93-9	1-5	1mg/m <sub>3</sub>	1mg/m <sup>3</sup>	N/A
Water	(non-hazardous)	>75	N/A	balance	N/A

### SECTION II - Physical /Chemical Characteristics

Boiling Point	N/A	Specific Gravity (H <sub>2</sub> O = 1)	1.16
Vapor Pressure (mm Hg.)	N/A	Melting Point	N/A
Vapor Density (AIR = 1)	N/A	Evaporation Rate (Butyl Acetate = 1)	N/A
Solubility in Water	Miscible		
Appearance and Odor	Orange, red clear liquid		

### SECTION III - Fire and Explosion Hazard Data

<b>Flash Point (Method Used)</b>	<b>Flammable Limits</b>	<b>LEL</b>	<b>UEL</b>
Non-flammable	N/A	N/A	N/A

**Extinguishing Media:** Water Spray

**Special Fire Fighting Procedures:** full protective clothing and self-contained breathing apparatus NIOSH approved.

**Unusual Fire and Explosion Hazards:** avoid inhalation of poisonous gas oxides of nitrogen. Avoid contact with organic material.

### SECTION IV - Reactivity Data

**Stability:** Unstable

Stable XX

**Conditions to avoid:** Organic materials, strong oxidants, and heat

**Incompatibility (Materials to avoid):** Carbides, H<sub>2</sub>S, turpentine, combustible organics reducing agents, organic matter, strong base metals.

**Hazardous Decomposition or Byproducts:** oxides of nitrogen, strong bases, metals.

**Hazardous Polymerization:** May Occur \_\_\_\_\_  
Will not Occur XX

**Conditions to Avoid:** Excessive heat.

**SECTION V - Health Hazard Data**

<b>Route(s) of Entry</b>	<u>Inhalation?</u>	<u>Skin?</u>	<u>Ingestion?</u>
<b>Corrosive liquid &amp; vapors</b>	yes	yes	yes

**Health Hazards (Acute and Chronic)**

**Corrosive!** Vapors are irritating and may cause damage to the eyes. Splashes may cause severe burns and permanent eye damage.

<u>Carcinogenicity:</u>	<u>NPT?</u>	<u>IARC Monographs?</u>	<u>OSHA Regulated?</u>
no	no	no	no

**Signs and Symptoms of Exposure:**

Long term exposure to concentrated vapors may cause erosion of the teeth. **CORROSIVE!** Inhalation can lead to breathing disorders. May cause eye and skin irritation. May cause severe burns.

**Medical Conditions Generally Aggravated by Exposure:** Person with pre-existing skin disorders or eye disease may be more susceptible to the effects of this substance.

**Emergency and First Aid Procedures:**

**Contact:** Wash thoroughly with water.

**Inhalation:** Call a doctor and give artificial respiration if victim is not breathing.

**Ingestion:** Call doctor and if patient is conscious, give large quantities of water. **DO NOT INDUCE VOMITING!**

**Eyes:** Wash eyes with plenty of water at least 15 minutes. Get medical attention immediately.

**SECTION VI - Precautions for Safe Handling and Use**

**Steps to Be Taken in Case Material is Released or Spilled:** Isolate or enclose the area of spill or leak. Neutralize with calcium carbonate, wash with excess water. Pick up with absorbent material (sand or vermiculite) and dispose in a RCRA approved waste facility.

**Waste Disposal Method:** Clean-up personnel should wear protective clothing and respiratory equipment suitable for toxic fumes. Dispose of in accordance with local, state or federal regulations.

**Precautions to Be Taken in Handling and Storing:** Store in a well-ventilated area. Room temperature storage - sealed bottles.

**Other Precautions:** Store away from incompatible materials. Protect from physical damage and direct sunlight.

**SECTION VII - Control Measures**

**Respiratory Protection (Specify Type):**

If TLV is exceeded, wear a self-contained breathing apparatus

<b>Ventilation:</b>	<b>Local Exhaust:</b> Preferred to keep employee limits below airborne exposure limits.	<b>Special:</b> Eye bath & Shower facilities near work area.
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<b>Mechanical (General)</b>	<b>Other</b>
N/A	N/A

<b>Protective Gloves</b>	<b>Eye Protection</b>
Imperious Rubber	Goggles, safety glasses

**Other Protective Clothing or Equipment**

Rubber apron/ use appropriate industrial practices for handling acids.

**Work/Hygienic Practices:** Use appropriate care for handling corrosive liquids.

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## Material Safety Data

### Addendum to Material Safety Data Sheet

### REGULATORY STATUS

This addendum must not be detached from the MSDS  
Identifies SARA 313 substance(s) Any copying or redistribution of the MSDS must include a copy of this addendum

Hazard Categories for SARA  
 Section 311/312 Reporting  
 Acute Chronic Fire Pressure Reactive

Products or Components of Products	Sara Ehs Sect.302		SARA Section 313 Chemicals		CERCLA Sec. 103	RCRA
	RQ (lbs.)	TPQ (lbs.)	Name List	Chemical Category	RQ (lbs.)	Sec. 261.33
Sulfuric Acid (7664-93-9)	1000	1000	Yes	No	1000	No
Nitric Acid (7697-37-2)	1000	1000	Yes	No	1000	No

**SARA Section 302 EHS RQ:** Reportable Quantity of Extremely Hazardous Substance, listed at 40 CFR 355.

**SARA Section 302 EHS TPO:** Threshold Planning Quantity of Extremely Hazardous Substance. An asterisk (\*) following a Threshold Planning Quantity signifies that if the material is a solid and has a particle size equal to or larger than 100 micrometers. The Threshold Planning Quantity - 10,000 LBS. **SARA Section 313 Chemicals:** Toxic Substances subject to annual release reporting requirements listed at 40 CFR 372.65.

**CERCLA Sec. 103:** Comprehensive Environmental Response, Compensation and Liability Act (Superfund). Releases to air, land or water of these hazardous substances which exceed the Reportable Quantity (RQ) must be reported to the National Response Center. (S00-424-8802); Listed at 40 CFR 302-4 .

**RCRA:** Resource Conservation and Reclamation Act. Commercial chemical product wastes designated as acute hazards and toxic under 40 CFR 261.23