

Material Safety Data Sheet

XIM Etch-I-M #4408

Complies with OSHA's Hazard Communication Standard 29CFR 1910.1200

Quick Identifier, Common Name: (Used on label and Data Sheet)

SECTION 1: PRODUCT IDENTIFICATION

Manufacturer's Name: XIM Products, Inc. **Date Prepared:** 02/18/05 **Prepared By:** J.E. Jarufe
Address: 1169 Bassett Road **Up-dated:** 02/18/05
Westlake, Ohio 44145 **Product Class:** Water Based Etching Cream (Acidic)

Emergency Calls: (800) 424-9300 **H.M.I.S. Health** 3
Information Calls: (440) 871-4737 **Flammability** 0
Reactivity 0

SECTION 2: INGREDIENTS

| INGREDIENT | CAS NO. | OSHA PEL | | ACGIH TLV | |
|---------------------|-----------|-----------------------|----------------------|-----------------------|------------------------------|
| | | TWA | STEL | TWA | STEL |
| Ammonium Bifluoride | 1341-49-7 | 2.5 mg/m ³ | | 2.5 mg/m ³ | |
| Sodium Bifluoride | 1333-83-1 | 2.5 mg/m ³ | | 2.5 mg/m ³ | |
| * Acrylamide | <.006 | 79-06-1 | .3 mg/m ³ | | .03 mg/m ³ (skin) |

* **Warning:** This product contains chemicals known to the state of California to cause cancer.

DOT INFORMATION: 20 CORROSIVE LIQUID, 8, UN1760, pgII
39 CONSUMER COMMODITY, ORM-D

SECTION 3: PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Cream **Appearance and Odor:** Lavender cream, Pungent odor
Boiling Range: 200-500 deg. F **Vapor Pressure:** N/A
Vapor Density: Heavier than air 3.8 (Air = 1)
Evaporation Rate: Slower than ether
Weight per Gallon: 9.04 lb/gal
Solubility in Water: Infinitely
VOC: < 105 g/l < 0.88 lb/gal
Percent Volatile: 68.9 % by Volume

SECTION 4: FIRE AND EXPLOSION DATA

Flash Point: NA
Flammability Limits: LEL - - NA
Extinguishing Media: Carbon Dioxide or Foam
Flammability Class: DOT: Not Flammable **OSHA :** Not Flammable

Special Fire Fighting Procedures:

Containers exposed to heat should be kept cool with water. Do not get material on skin or clothing. Avoid inhalation of fumes or mists. Stay upwind, out of low areas, and ventilate closed spaces before entering. Do not use water directly on leak or spill area. Keep combustibles away from spilled material. Protective clothing may not be effective if it becomes wet. Move containers away from fire, if possible to do so without risk.

Unusual Fire and Explosion Hazards:

Closed containers may explode (due to build up of steam pressure)

During fire conditions, product may evolve toxic and corrosive gasses of hydrofluoric acid and ammonia and oxides of carbon.

Routes of Entry: Inhalation, Skin Contact, Eye Contact, Ingestion.

Effects of Overexposure:

Inhalation: – Causes severe irritation and burns to upper respiratory tract including nose, throat, larynx and lungs. Can cause burning sensation, chest pain, wheezing, cough, difficulty breathing, shortness of breath and choking. Inhalation of strong concentration or aspiration of liquid product can cause fluids to accumulate in the lungs and larynx which can progress to airway obstruction, respiratory acidosis, shock, coma, and possible death. Symptoms may be delayed 12 to 36 hours after exposure. Some individuals may suffer from residual chronic lung disease. Pulmonary effects can result even from splashes on the skin.

Eye Contact: Causes severe burns to eyes and surrounding areas. Permanent eye damage may occur.

Skin Contact: Can cause severe burns especially when wet. Effects may be delayed from 12 to 24 hours after initial exposure. The fluoride ion is capable of penetrating the skin where it will attack underlying tissues and bone. Repeated or prolonged skin contact may cause an allergic dermatitis.

Ingestion: Causes burns to the mouth, throat, esophagus, and stomach. Can cause perforation of the esophagus and stomach. Can cause nausea, vomiting, bleeding, diarrhea, abdominal pain and shock. Damage to stomach and esophagus may progress for several weeks. Permanent damage in the form of constriction of the esophagus may occur. Can cause damage to kidneys and liver.

Notes: This product is extremely hazardous by all routes of exposure, especially when product is dissolved in water. Any contact with this product should be considered serious.

Chronic Toxicity: Exposure to fluorides over years may produce embrittlement and decalcification of bones and increased calcification of ligaments and vertebrae resulting in stiffness. Repeated ingestion of more than 6 mg. of fluoride per day may result in mottling of the teeth of developing children, and osteosclerosis in adults and children.

EMERGENCY AND FIRST AID PROCEDURES:

Eyes: Immediately flush eyes with clean, flowing water for at least 15 minutes while holding eyelids away from eyes. See Physician.

Skin: Brush solid material from point of contact then wash with soap and water. Pay particular attention to the underside of the fingernails. Remove all contaminated clothing. After washing for at least 15 minutes, immerse the burned area in a solution of 0.135 iced aqueous benzalkonium chloride until the pain is relieved. As a alternative first aid treatment, 2.5% calcium gluconate gel may be massaged into the burn area until the pain is relieved. For large burn areas get medical assistance immediately.

Inhalation: Remove from exposure to fresh air. If breathing is difficult oxygen may be administered by certified persons only. Seek immediate medical attention.

Ingestion: DO NOT INDUCE VOMITING. Give 1-2 glasses of water to dilute or a magnesium-containing (Milk of magnesium) or a calcium containing antacid for their soothing effect. Consult a physician immediately.

SECTION: 6: REACTIVITY DATA

Stability: Stable. **Materials to avoid:** Alkalis, sulfides, cyanides, aluminum, amines, Corrodes Porcelain, Glass, Aluminum.

Hazardous Polymerization: Will not occur.

Decomposition Products: By high heat and fire: toxic and corrosive gasses of hydrofluoric acid and ammonia and oxides of carbon.

Conditions to avoid: Avoid extreme heat.

SECTION 7: SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES

Precautions to take for handling and storage:

Store upright in sealed containers away from heat and flame. Do not store in glass, aluminum or porcelain containers.

Other precautions: Remove and wash contaminated clothing before reuse.

Steps to take in Case of Spills:

Ventilate area. For small spills, dilute 50 to 100 fold with water. For larger spills, dike the area with absorbent and scoop up.

Waste Disposal Method: Dispose of in accordance with local, state, and federal regulations.

For further information, contact the United States Environmental Protection Agency RCRA hotline (800) 242-9342.

SECTION 8: SPECIAL PROTECTION/SAFE HANDLING INFORMATION

Handling and Storage: Do not reseal if contamination is suspected. Employee education and training in safe handling of this product are required under OSHA Hazard Communication Standard. Keep from freezing.

Respiratory Protection: Use NIOSH/MSHA approved respirator to avoid breathing fumes if ventilation is inadequate.

Ventilation: Local exhaust

Protective Gloves: Butyl rubber or neoprene gloves are recommended to prevent contact exposure. Launder cloths before reuse.

Eye Protection: Safety glasses with side shields or chemical goggles are recommended. DO NOT WEAR CONTACT LENSES!

NOTE: Read MSDS completely before use and follow all label instructions.