

MATERIAL SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Product Name: **ALUMINUM ETCH TYPE D**
TRANSENE COMPANY INC.
10 Electronics Avenue
Danvers MA 01923
978-777-7860 fax: 978-739-5640
www.transene.com

Emergency Contact #: Chemtrec 1-800-424-9300

Revised: July 2006

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

| | CAS # | % | Hazard Data Toxicity (mg/M ³) |
|--|-----------|---------|--|
| Phosphoric Acid H ₃ PO ₄ | 7664-38-2 | 55-65% | 1.0 mg/M ³ |
| Sodium-M-Nitrobenzene Sulfonate | 127-68-4 | 5-10% | 2300 mg/M ³ |
| Acetic Acid C ₂ H ₄ O ₂ | 64-19-7 | 1-5% | 10 ppm |
| Distilled Water - non-hazardous | | balance | |

None of the ingredients in this products are suspected carcinogens.

SECTION 3 - HEALTH HAZARD DATA TLV not determined

Routes of entry: Inhalation - Yes Skin - Yes Ingestion - Yes

Health Hazards (Acute and chronic): Solution is moderately irritating to the eyes, skin, and mucous membranes. Concentrated solutions moderately toxic by ingestion. Direct contact can cause severe burns. Persons with pre-existing skin disorders or disease may be more susceptible to the effects of this substance.

Carcinogenicity - N/A NTP - N/A IARC Monographs - N/A OSHA Regulated - N/A

Signs and Symptoms of exposure:

Eye contact: Flood with excess of water for at least 15 minutes. Get medical attention.

Skin contact: Flood with water and cover with moist baking soda. Get medical attention.

Inhalation: Removal to clean air is usually sufficient. If not breathing, give artificial respiration. Contact a physician.

Ingestion: Do not induce vomiting. Give water with milk of magnesia or beaten eggs

Medical Conditions: See signs and symptoms of exposure

Generally aggravated by exposure: N/A

SECTION 4 - FIRST AID MEASURES

First Aid:

Eye Contact: Flood with excess of water for at least 15 minutes. Contact a physician.

Skin Contact: Flood with water and cover with moist baking soda. Contact a physician.

Inhalation: Removal to clean air is usually sufficient. If not breathing, give artificial respiration.
Contact a physician.

Ingestion: Do not induce vomiting! Give water with milk of magnesia or beaten eggs.

SECTION 5 - FIRE FIGHTING MEASURES

Flash point: None flammable Flammable limits: N/A
Fire extinguishing media: Water spray, dry chemical, or foam. Contact with common metals produces hydrogen (H₂) which may form flammable mixtures with air under conditions of fire, toxic vapors may form, corrosive liquid.
Special fire fighting procedures: Wear self-contained breathing apparatus during the fire and protect skin from vapors or mist.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Steps to be taken in case material is released or spilled: Cover contaminated are with soda ash, slaked lime mixture (50:50) mix and add water to form a slurry. Scoop up slurry and save for disposal.

SECTION 7 - HANDLING AND STORAGE

Precautions to be taken in handling and storage: protect containers against physical damage. Store in cool, dry, well ventilated location, away from where fire hazards may be acute. Keep away from oxidizers and bases. Protect units from direct sunlight. Loosen container cautiously.
Other precautions: Ventilation: a system of local exhaust is recommended to keep employee exposures below the airborne exposure limits. Local exhaust ventilation is generally preferred because it can control the emissions of the dust or vapor at its source preventing dispersion into the general work area. Refer to ACGIH document, "industrial ventilation, a manual of recommended practices" for details.

SECTION 8 – EXPOSURE CONTROL/PERSONAL PROTECTION

Respiratory protection (specify type): Organic vapors / acid gases (NIOSH approved). HNO₃ is an oxidizer and should not come in contact with cartridges and canisters that contain oxidizable materials, such as activated charcoal.
Ventilation: local exhaust X
Protective gloves: Viton with cotton lining, latex, or nitrile
Eye protection: face shield or splash-proof goggles. Do not wear contact lenses when working with this product.
Other protective clothing or equipment: lab coat, coveralls or apron.
Work / hygienic practices: Handle with care. Wash after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|-------------------------------|
| Boiling Point: 100°C | Specific Gravity (25°C): 1.45 |
| Vapor Pressure (mm Hg.) N/A | Melting Point: N/A |
| Vapor Density (air=) N/A | Evaporation rate: N/A |
| Solubility (H ₂ O): miscible | |

Appearance and odor: Clear, colorless, syrupy liquid, odorless.

SECTION 10 – STABILITY AND REACTIVITY

Stability: stable

Conditions to avoid: Avoid contact with common metals, strong bases, oxidizers and combustible organics.

Incompatibility: Strong bases, oxidizers, most metals and combustible organics.

Hazardous decomposition or by products: various oxides of phosphorus, nitrogen and some carbon dioxide (CO₂)

Hazardous Polymerization: Will not occur

Conditions to avoid: N/A

SECTION 11 – TOXICOLOGICAL INFORMATION

No data found for product

SECTION 12 – ECOLOGICAL INFORMATION

No data found for product

SECTION 13 – DISPOSAL CONSIDERATIONS

Waste disposal method: Add above slurry or mixture (as is) slowly to a large volume of soda ash solution with agitation. Neutralize and flush to sewer with running water in a concentration permitted by local, state and federal regulations.

SECTION 14 - TRANSPORTATION INFORMATION

DOT CLASS: Corrosive liquid, acidic, inorganic N.O.S.
(Phosphoric acid and acetic acid)
UN3264

SECTION 15 – REGULATORY INFORMATION

SARA Title III Hazard Classes:

Fire hazard - No

Release of pressure - No

Acute health hazard - Yes

SECTION 16 – OTHER INFORMATION

NFPA Rating:

Health - 3

Flammability - 0

Instability - 1

The information published in this Material Safety Data Sheet has been compiled from our experience and data presented in various technical publications. It is the user's responsibility to determine the suitability of this information for the adoption of necessary safety precautions. We reserve the right to revise Material Safety Data Sheets periodically as new information becomes available.