1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Everbrite
Synonyms: N/A
Chemical Family: Acids
Application: Aluminum Cleaner / Brightener
Distributed By: Chem-Wipe Industries Ltd.
24 - Hour Emergency Telephone Number (CANUTEC): (613) 996 6666 - Collect Calls Accepted *666 Cellular Service
Preparation Date of MSDS: February 22/10
Prepared By: Chem-Wipe Industries Ltd.

2. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Components:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Percent</th>
<th>LD50s &amp; LC50s Route &amp; Species:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid 7664-93-9</td>
<td>9-30</td>
<td>Inhalation LC50 Rat : 510 mg/m^3/2H</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inhalation LC50 Mouse : 320 mg/m^3/2H</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oral LD50 Rat : 2140 mg/kg</td>
</tr>
<tr>
<td>Hydrofluoric Acid 70%</td>
<td>14-28</td>
<td>Inhalation LC50 Rat : 1276 ppm/1H</td>
</tr>
<tr>
<td>7664-39-3</td>
<td></td>
<td>Inhalation LC50 Mouse : 342 ppm/1H</td>
</tr>
<tr>
<td>Ammonyx LO Mixture</td>
<td>3-10</td>
<td>Oral LD50 Mouse : 2700 mg/kg</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Potential Acute Health Effects:

Eye Contact: Corrosive to eye tissue and may cause severe damage and blindness

Skin Contact: Corrosive! Effects on the skin may be delayed and damage may occur without the onset of pain. Hydrofluoric Acid may cause severe skin burns which will be slow in healing. The fluoride ion readily penetrates the skin causing destruction of deep tissue layers and even bone. The subcutaneous tissue may be affected, becoming blanched (whitened) and bloodless. Gangrene of the affected areas may follow.

Inhalation: Corrosive to respirator passages. May cause sore throat, coughing, labored breathing and lung congestion / inflammation.

Ingestion: Corrosive. May cause burns of the mouth, throat and stomach. May cause abdominal discomfort, nausea, vomiting and diarrhea. May cause kidney damage.
4. FIRST AID MEASURES

Eye Contact: Irrigate eye for at least 30 minutes with copious quantities of water, keeping the eyelids apart and away from eyeballs during irrigation. Get competent medical attention immediately, preferably an eye specialist. If a physician is not immediately available, apply one or two drops of ophthalmic anesthetic, (e.g., 0.5% Pontocaine Hydrochloride solution). Do not use oily drops, ointment or HF skin burn treatments. Place ice pack on eyes until reaching emergency room.

Skin Contact: Remove the victim from the contaminated area and immediately place him under a safety shower or wash him with a water hose, whichever is available. Remove all contaminated clothing. Handle all HF-contaminated material with gloves made of appropriate material, such as PVC or neoprene. Keep washing with large amounts of water for a minimum of 15 minutes. Have someone make arrangements for medical attention while you continue flushing the affected area with water. If the following materials are available, limit the washing to five minutes and immerse the burned area in a solution of 0.2% iced aqueous Hyamine 1622 or 0.13% iced aqueous Zephiran Chloride. If immersion is not practical, towels should be soaked with one of the above solutions and used as compresses for the burn area. Ideally compresses should be changed every 2 minutes. Alternately, 2.5% calcium gluconate gel should be massaged into the affected area. Seek medical attention as soon as possible for all burns regardless of how minor they may appear initially. Hyamine 1622 is a trade name for tetracaine benzethonium chloride; Merck Index Monograph 1078, a quaternary ammonium compound sold by Rohm & Haas, Philadelphia. Zephiran Chloride is a trade name for benzalkonium chloride, Merck Index Monograph 1059, also a quaternary ammonium compound, sold by Sanofi-Synthelabo Inc., New York, NY. AN ALTERNATIVE FIRST AID PROCEDURE: The effect of HF, i.e. onset of pain, particularly in dilute solutions, may not be felt for up to 24 hours. It is important, therefore, that persons using HF have immediate access to an effective antidote even when they are away from their work place in order that first aid treatment can be commenced immediately. We recommend that any person in contact with HF should carry, or have access to a tube of HF Antidote Gel at all times; ideally with one tube at the work place, one on the person and one at home. It is imperative that any person who has been contaminated by HF should seek medical advice when the treatment by HF Antidote Gel has been applied.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately. Get medical attention immediately.

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

Notes to Physician: General: For burns of moderate areas, (greater than 8 square inches), ingestion and significant inhalation exposure, severe systemic effects may occur, and admission to a critical care unit should be considered. Monitor and correct for hypocalcemia, cardiac arrhythmias, hypomagnesemia and hyperkalemia. In some cases renal dialysis may be indicated. Inhalation: Treat as chemical pneumonia. Monitor for hypocalcemia, 2.5% calcium gluconate in normal saline by nebulizer or by IPPB with 100% oxygen may decrease pulmonary damage. Bronchodilators may also be administered. Skin: For deep skin burns or contact with concentrated HF (over 50%) solution, consider infiltration about the affected area with 5% calcium gluconate [equal parts of 10% calcium gluconate and sterile saline for injection]. Burns beneath the nail may require splitting the nail and application of calcium gluconate to the exposed nail bed. For certain burns, especially of the digits, use of intra-arterial calcium gluconate may be indicated. Eyes: Irrigation may be facilitated by use of Morgan lens or similar ocular irrigator, using 1 % aqueous calcium gluconate solution [50ml of calcium gluconate 10% in 500 ml normal saline]. HF ANTIDOTE GEL: Distributed by Pharmascience Inc. , 8400 Darnley Rd. , Montreal, Canada, H4T 1 M4. Phone: (514) 340 - 1114 Fax: (514) 342 - 7764
5. FIRE FIGHTING MEASURES

- Flash Point (˚C): None - will not burn
- Flash Point Method: None - will not burn
- Auto Ignition Temperature (˚C): None - will not burn
- Flammable Limits in Air - Lower (%): None - will not burn
- Flammable Limits in Air - Upper (%): None - will not burn
- Extinguishing Media: Water, Carbon dioxide, Foam or dry chemical.
- Special Exposure Hazards: Strong dehydrating agent may cause ignition of finely divided combustible materials on contact. Reacts violently with water with the evolution of heat. It can react explosively with organic materials. Reacts with metals to generate flammable hydrogen gas.
- Special Protective Equipment: Fire fighters should wear full protective clothing, including self-contained breathing equipment.
- HMIS Ratings for this product are: HEALTH 4, FLAMMABILITY 0, REACTIVITY 2

6. ACCIDENTAL RELEASE MEASURES

- Procedure for Clean Up: Ventilate area. Eliminate all ignition sources. Prevent spilled material from entering sewers, confined spaces, drains, or waterways. Spills: Evacuate the danger area. Apply magnesium sulfate (dry) to the spill area. Follow up with inert absorbent and add soda ash or magnesium oxide and slaked lime. Collect in appropriate plastic containers and save for disposal. Wash spill site with soda ash solution. NOTE: Porous materials (concrete, wood, plastic, etc.) will absorb HF and become a hazard for an indefinite time. Such spills should be cleaned and neutralized immediately. Wear appropriate protective equipment.
- Personal Precautionary Measures: Restrict access to unprotected personnel. Wear appropriate protective equipment.
- Environmental Precautionary Measures: Prevent entry into sewers or streams, dike if needed.

7. HANDLING AND STORAGE

- Handling: Avoid breathing vapor. Avoid contact with eyes, skin and clothing. Keep away from sources of ignition. Use extreme care when diluting with water. ALWAYS ADD ACID TO WATER. CAUTION: Hydrogen, a highly flammable gas, can accumulate to explosive concentrations inside drums, or any type of steel containers or tanks upon storage. Carbon steel storage tanks must be vented. Empty containers may contain hazardous product residues. Use corrosion-resistant transfer equipment when transferring acid. Carbon steel, cast iron, as well as certain alloys or stainless steels are suitable for use for acid concentrations equal to or greater than 93%. However, the effect of lower concentrations on materials of construction can be very complex.
- Storage: Store above freezing point. Elevated temperatures will increase the corrosion rate of most metals as well as cause build-up of pressure due to sulfur dioxide generation. Store packaged acid in a dry, well-ventilated location. Avoid storage with incompatible materials. Storage tanks should be protected from water getting in, be well ventilated, and maintained structurally in a safe and reliable condition. Sulfuric acid will attack some forms of plastics and coatings. Always add acid to water - not water to acid. If kept in upper floors of building, floors should be acid proof with drains to a recovery tank.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Electrical installations should be protected against the corrosive action of acid vapors.

Respiratory Protection: A NIOSH/MSHA approved air-purifying respirator should be used. An air-supplied respirator if concentrations are higher or unknown.

Gloves: Neoprene gloves. PVC gloves.

Skin Protection: Apron, coveralls and/or other resistant protective clothing. Impervious boots.

Eyes: Chemical safety goggles and or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes.

Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location. Trouser legs should be worn outside (not tucked in) rubber boots. Where there is a danger of spilling or splashing, acid resistant aprons or suits should be worn.

Hazardous Components:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Percent</th>
<th>Exposure limit - OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid 7664-93-9</td>
<td>9-30</td>
<td>1 mg/m³TWA</td>
</tr>
<tr>
<td>Hydrofluoric Acid 70% 7664-39-3</td>
<td>14-28</td>
<td>3 ppm TWA (as F)</td>
</tr>
<tr>
<td>Ammonyx LO Mixture</td>
<td>3-10</td>
<td>6 ppm STEL (as F)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Color: Clear to amber
Odor: Odorless, A pungent odor may exist if certain impurities are present in the acid
pH: XXXXX
Specific Gravity: N/A
Boiling Point (°C): N/A
Freezing Point (°C): N/A
Vapor Pressure: N/A
Vapor Density: N/A
% Volatile by Volume: N/A
Evaporation Rate: N/A
Solubility: N/A
VOCs (lbs/gallon): N/A
Viscosity: N/A
Molecular Weight: N/A
10. STABILITY AND REACTIVITY

Chemical Stability: Stable
Hazardous Polymerization: Will not occur
Conditions to Avoid: Avoid excessive heat, open flames and all ignition sources.
Materials to Avoid: Contact with Organic materials, may cause fire and explosions. Contact with metals may produce flammable hydrogen gas.
Hazardous Decomposition Products: Toxic Gases
Additional Information: When diluting, add acid to water. DO NOT add water to acid.

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure

Ingestion: Corrosive. May cause burns of the mouth, throat and stomach. May cause abdominal discomfort, nausea, vomiting and diarrhea. May cause kidney damage.

Skin Contact: Corrosive! Effects on the skin may be delayed and damage may occur without the onset of pain. Hydrofluoric Acid may cause severe skin burns which will be slow in healing. The fluoride ion readily penetrates the skin causing destruction of deep tissue layers and even bone. The subcutaneous tissue may be affected, becoming blanched (whitened) and bloodless. Gangrene of the affected areas may follow.

Inhalation: Corrosive to respirator passages. May cause sore throat, coughing, labored breathing and lung congestion / inflammation.

Eye Contact: Corrosive to eye tissue and may cause severe damage and blindness

Other:
Acute Test of Product: Not Available
Acute Oral LD50: Not Available
Acute Dermal LD50: Not Available
Acute inhalation LC50: Not Available

Carcinogenicity:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Percent</th>
<th>IARC - Group 1 (carcinogenic to humans)</th>
<th>IARC - Group 2A (probably carcinogenic)</th>
<th>IARC - Group 2B (possibly carcinogenic)</th>
<th>IARC - Group 3 (not classified)</th>
<th>IARC - Group 4 (probably not carcinogenic)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid 7664-93-9</td>
<td>9-30</td>
<td>Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Hydrofluoric Acid 70% 7664-39-3</td>
<td>14-28</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Ammonyx LO Mixture</td>
<td>3-10</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Hazardous Components:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Percent</th>
<th>ACGIH 2000 - Carcinogens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid 7664-93-9</td>
<td>9-30</td>
<td>A2 - Suspected Human Carcinogen (contained in strong inorganic acid mists)</td>
</tr>
<tr>
<td>Hydrofluoric Acid 70% 7664-39-3</td>
<td>14-28</td>
<td>Not Listed</td>
</tr>
<tr>
<td>Ammonyx LO Mixture</td>
<td>3-10</td>
<td>Not Listed</td>
</tr>
</tbody>
</table>

Carcinogenicity Comment: No additional information available.

Genotoxicity: Not Available

Reproductive / Developmental Toxicity: Not Available

Teratogenicity: Not Available

Embryo Toxicity: Not Available

Mutagenicity: Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Percent</th>
<th>Ecotoxicity - Fish Species Data</th>
<th>Acute Crustaceans Toxicity:</th>
<th>Ecotoxicity - Freshwater Algae Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sulfuric Acid 7664-93-9</td>
<td>9-30</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Hydrofluoric Acid 70% 7664-39-3</td>
<td>14-28</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
<tr>
<td>Ammonyx LO Mixture</td>
<td>3-10</td>
<td>Not Available</td>
<td>Not Available</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

Other Information: Harmful to aquatic life at low concentrations.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method: Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.

Contaminated Packaging: Empty containers should be disposed of through an approved waste management facility.

14. TRANSPORTATION INFORMATION

TDG (Canada):

TDG Proper Shipping Name: Everbrite

Hazard Class: 8 (6.1)

UN Number: 2922

Packaging Group: II

Note: No additional remarks.

Marine Pollutant: No.
15. REGULATORY INFORMATION

**Canadian DSL Inventory**

**Status:** Not listed

**WHMIS Hazardous Class:**

D1A VERY TOXIC MATERIALS
E CORROSIVE MATERIAL

**Symbols:**

![Symbols Image]

16. OTHER INFORMATION

**Additional Information:** This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS Contains all the information required by the CPR.

**Disclaimer:**

NOTICE TO READER:

Chem-Wipe Ind. expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refers to a Product Specification Sheet and/or a Certificate of Analysis.

All information appearing here in is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, Chem-Wipe Ind. makes no representations as to its accuracy or sufficiency. Conditions of use are beyond Chem-Wipe’s control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product, or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.