SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION:

Griffin Bros. Inc.
MANUFACTURER:
P.O. Box 7719
Salem, OR 97303
INFORMATION PHONE:
(800) 456-4743
For Medical and Chemical Emergencies CHEMTREC: 1-800-424-9300
PRODUCT NAME:
Aluminum Brightener
PRODUCT NUMBER:
G-475
DATE PREPARED:
06/12/07
LAST REVISION:
03/08/2015

2. HAZARDOUS IDENTIFICATION:

EMERGENCY OVERVIEW: Corrosive / Toxic

GHS CLASSIFICATION: Corrosive to Metals (Category 1) Skin: (Category 1B) Eyes: (Category 1)
Acute Toxicity Oral: (Category 1) Acute Toxicity Inhalation: (Category 3) Acute Toxicity Skin (Category 3)

GHS Label elements, including precautionary statements
SIGNAL WORD: Danger
PICTOGRAM(S):

HAZARD STATEMENT(S):
H290: May be corrosive to metals
H300: Fatal if swallowed
H311: Toxic if contact with skin
H314: Causes severe skin burns and eye damage
H331: Toxic if inhaled

PRECAUTIONARY STATEMENT(S):
P102: Keep Out of Reach of Children
P202: Do not handle until all safety precautions have been read and understood
P260: Do not breathe mist, spray, vapors
P262: Do not get in eyes, on skin or on clothing
P264: Wash hands thoroughly after using
P280: Wear eye protection, face protection, protective clothing, protective gloves

FIRST AID:
P301+P310 IF SWALLOWED: Rinse Mouth. Do Not induce vomiting. Immediately call a POISON CENTER or doctor/physician.
P303+P361+P353 IF ON SKIN (or Hair): Remove/ take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a comfortable position for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/physician.

POTENTIAL HEALTH EFFECTS:

EYE CONTACT: Corrosive - Severe irritation. Vapors, liquid and mists are extremely corrosive to the eyes. May cause temporary or permanent blindness if not treated promptly. May cause serious burns which may not be immediately painful or visible.

INHALATION: Mild exposure can irritate throat and respiratory system. Severe exposure can cause nose and throat burns, lung inflammation and pulmonary edema. Also depletion of calcium level in the body if not promptly treated.

INGESTION: Corrosive – Severe irritation. Can cause severe mouth, throat, and stomach burns. Can affect kidney functions and be fatal if swallowed. Causes gastritis, ulcerations and scarring of the digestive tract. Profound and possibly fatal hypocalcemia is likely to occur unless medical treatment is promptly imitated.

SKIN CONTACT: Corrosive – Severe irritation. Contains hydrofluoric acid. Vapors, liquid and mists are extremely corrosive to the skin. May cause ulcerations of the skin and possible fluoride absorption if not treated promptly. May cause serious burns which may not be immediately painful or visible. Hydrofluoric acid will penetrate the skin and attach to underlying tissue and bone.

SIGNS AND SYMPTOMS OF EXPOSURE: Irritation, pain, coughing, redness of skin.

3. COMPOSITION/INFORMATION ON INGREDIENTS:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>Range Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROFLUORIC ACID SOLUTION</td>
<td>7664393</td>
<td>6-16 %</td>
</tr>
<tr>
<td>SULFURIC ACID</td>
<td>7664939</td>
<td>15 – 25 %</td>
</tr>
</tbody>
</table>
Balance of formula contains Non-regulated proprietary ingredients.
4. FIRST AID MEASURES:

**EYE CONTACT:** Immediately flush eyes with water for at least 15 minutes. Hold eyelids open while flushing the eyes. Get medical attention.

**INHALATION:** Remove to fresh air. If feeling unwell, get competent medical attention immediately. If not breathing, give artificial respiration at once. Oxygen should be administered to a victim who is having difficulty breathing and by a qualified person only, until victim is able to breath easily by himself. Do not give stimulants unless instructed to do so by a physician.

**INGESTION:** If swallowed, drink volumes of water. Do Not induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Contact a physician immediately. Several glasses of milk or several ounces of Milk of Magnesia may be given for a soothing effect.

**SKIN CONTACT:** Flush effected area thoroughly with soap and water paying particular attention to skin under nails. Obtain medical attention immediately. Should this be delayed apply a magnesia paste (magnesium oxide/glycerin) or Milk of Magnesia. Alternatively, use 0.13% Zephiran Chloride solution for 30 to 60 minutes, or if unavailable, washing with a 3% solution of aqueous ammonia will be beneficial. As an alternate first aid treatment, 2.5% Calcium Gluconate gel may continuously massaged into burn area until the pail is removed. Change contaminated clothing and wash before re-use. Get medical attention if irritation develops or persists.

**AGGRAVATED MEDICAL CONDITIONS:** Pre-existing skin, eye or respiratory disorders may be aggravated by exposure to product.

**SUPPLEMENTAL HEALTH INFORMATION:** Hydrofluoric evolution will penetrate skin and attack underlying tissue and bone.

5. FIRE FIGHTING MEASURES:

**EXTINGUISHING MEDIA:** Use extinguishing media appropriate for surrounding fire.

**SPECIAL FIRE FIGHTING PROCEDURES:** Clear fire area of unprotected personnel. Wear full protective clothing and a NIOSH-approved self-contained breathing apparatus with full face piece operated in a pressure positive mode. Do not use water streams near ruptured containers or spills of acid. Acid can spatter onto personnel.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** None known.

**COMBUSTION PRODUCTS:** Oxides of Carbon

6. ACCIDENTAL RELEASE MEASURES:

**STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED:** WEAR FULL PROTECTIVE EQUIPMENT.

- Contain spills and cautiously dilute with a large excess of water. Carefully neutralize with alkali such as soda ash or lime.
- Provide ventilation. Flush residue in accordance with applicable disposal regulations. Keep un-neutralized product out of sewer.

7. HANDLING AND STORAGE:

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**

- Store in a cool dry area in a closed container above 35F and below 120F. Avoid freezing. Do not store in glass. Will dissolve glass, including tempered. Do not store near alkalis or alkaline or chlorinated (bleach containing) materials

**OTHER PRECAUTIONS:**

For industrial use only! Keep away from children. Keep containers closed while not in use. Personnel should be thoroughly trained in safety. Read entire SDS before using this product.

8. EXPOSURE CONTROL/PERSONAL PROTECTION:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>ACGIH STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROFLUORIC ACID</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SULFURIC ACID</td>
<td>PEL=1mg/M3 TLV=1mg/M3 STEL = 3 mg/M3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Procedures before using this product.

**PERSONAL PROTECTIVE EQUIPMENT**

**RESPIRATORY PROTECTION:** Wear a NIOSH/MSHA approved respirator appropriate for vapor concentration at point of use.

**PROTECTIVE GLOVES:** Rubber or other impervious material with gauntlets.

**VENTILATION:** Local exhaust sufficient to keep exposure below TLV. Mechanical: Explosion proof.

**WORK / HYgenic PRACTICES:** Use good personal hygiene when handling this product. Wash hands after use, before smoking, or using the toilet.

**ENGINEERING CONTROLS:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

**EYE PROTECTION:** Use chemical safety goggles and/or full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work areas.

**EXPOSURE PRECAUTIONS:** a 2.5% Calcium Gluconate gel should be readily at hand while using this product. (see section 4 First Aid)

**OTHER PROTECTIVE EQUIP:** Boots, apron, lab coat or coveralls of impervious material, safety shower, eyewash.
9. PHYSICAL AND CHEMICAL PROPERTIES:
INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES:

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Appearance</td>
<td>Colorless liquid</td>
</tr>
<tr>
<td>b) Odor</td>
<td>Pungent</td>
</tr>
<tr>
<td>d) pH</td>
<td>0 - 1.0</td>
</tr>
<tr>
<td>e) Melting point/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>f) Initial boiling point and boiling range</td>
<td>212 °F (100 °C)</td>
</tr>
<tr>
<td>g) Flash point</td>
<td>n/a</td>
</tr>
<tr>
<td>h) Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>i) Vapor pressure (mm/hg)</td>
<td>No data available</td>
</tr>
<tr>
<td>j) Upper/lower flammability or explosive limits</td>
<td>UEL: n/a, LEL: n/a</td>
</tr>
<tr>
<td>k) Vapor density (Air = 1)</td>
<td>No data available</td>
</tr>
<tr>
<td>l) Density (Specific Gravity)</td>
<td>1.1</td>
</tr>
<tr>
<td>m) Water solubility</td>
<td>Complete</td>
</tr>
<tr>
<td>n) Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>o) Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>p) Toxicity</td>
<td>3</td>
</tr>
<tr>
<td>q) Fire</td>
<td>0</td>
</tr>
<tr>
<td>r) Reactivity</td>
<td>1</td>
</tr>
<tr>
<td>s) Special</td>
<td>C</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY:
STABLE: Stable
CONDITIONS TO AVOID: None Known
INCOMPATIBILITY: Alkaline, oxidizing and/or chlorinated materials. Heat and/or toxic gases generated upon contact. This Product can etch glass and ceramics.
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Hydrogen, Sulfur dioxide, Sulfur trioxide, Hydrogen Fluoride
HAZARDOUS POLYMERIZATION: Will Not Occur

11. TOXICOLOGICAL INFORMATION: No data available

12. ECOLOGICAL INFORMATION: No data available

13. DISPOSAL CONSIDERATIONS: Dilute with large amounts of water and dispose to municipal or industrial waste treatment facility in accordance with applicable Local, State and Federal Regulations.

14. TRANSPORT INFORMATION:

<table>
<thead>
<tr>
<th>Regulation</th>
<th>UN No.</th>
<th>Proper Shipping Name</th>
<th>Transport Hazard Class(es)</th>
<th>Packing Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>US DOT</td>
<td>2922</td>
<td>Corrosive Liquid, Toxic, N.O.S. (Hydrofluoric Acid, Sulfuric Acid)</td>
<td>8, (6.1)</td>
<td>II</td>
</tr>
</tbody>
</table>

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15. REGULATORY INFORMATION: N/A

16. OTHER INFORMATION:
HMIS INFORMATION: HEALTH: 3 FLAMMABILITY: 0 PHYSICAL HAZARD: 1 PROTECTIVE: C
NFPA INFORMATION: TOXICITY: 3 FIRE: 0 REACTIVITY: 1 SPECIAL: C

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