

AL 600

SDS Number: AC600A

Revision Date: 6/10/2021

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## PRODUCT AND COMPANY IDENTIFICATION

### Manufacturer

Wechem, Inc  
5734 Susitna Dr  
Harahan, LA 70123

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**Product Identifier:** AL 600  
**SDS Number:** AC600A  
**Product Code:** AC600  
**Revision Date:** 6/10/2021  
**Product Use:** High Acid Aluminum Brightener and Cleaner

Emergency Telephone Number:  
INFOTRAC  
1-800-535-5053

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## HAZARDS IDENTIFICATION

### Classification of the Substance or Mixture

#### GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Physical, Corrosive to Metals, 1  
Health, Aspiration hazard, 1  
Health, Skin corrosion/irritation, 1  
Health, Serious Eye Damage/Eye Irritation, 1  
Environmental, Hazards to the aquatic environment - Acute, 3

### GHS Label Elements, Including Precautionary Statements

**GHS Signal Word:** **DANGER**

**GHS Hazard Pictograms:**



**GHS Hazard Statements:**

H290 - May be corrosive to metals  
H304 - May be fatal if swallowed and enters airways  
H314 - Causes severe skin burns and eye damage  
H318 - Causes serious eye damage  
H402 - Harmful to aquatic life

**GHS Precautionary Statements:**

P101 - If medical advice is needed, have product container or label at hand.  
P102 - Keep out of reach of children.  
P103 - Read label before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P233 - Keep container tightly closed.  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
P262 - Do not get in eyes, on skin, or on clothing.  
P264 - Wash skin thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.

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P271 - Use only outdoors or in a well-ventilated area.  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
 P281 - Use personal protective equipment as required.  
 P284 Wear respiratory protection.  
 P301 + P330 + P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
 P302 + P350 - IF ON SKIN: Gently wash with plenty of soap and water.  
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do  
 Continue rinsing.  
 P310 - Immediately call a POISON CENTER/doctor/...  
 P330 - Rinse mouth.  
 P331 - Do NOT induce vomiting.  
 P362 + P364 - Take off contaminated clothing and wash it before reuse.  
 P403 - Store in a well-ventilated place.  
 P405 - Store locked up.  
 P501 - Dispose of contents/container: Treatment, storage, transportation and disposal must be in accordance with Federal, State/Provincial and Local Regulations, and product characteristics at time of disposal.

## Hazards not Otherwise Classified (HNOC) or not Covered by GHS

**Route of Entry:** Inhalation, ingestion, skin absorption, eye  
**Target Organs:** This product contains strong inorganic acids. Workers exposed to products containing inorganic acid mist showed a statistical increase in laryngeal cancer. This suggests a possible relationship between carcinogenesis and inhalation of inorganic acid mist. Repeated exposure of workers to the mist containing inorganic acids have increased incidence of chronic conjunctivitis, tracheobronchitis, stomatitis, and dermatitis, as well as dental erosion.  
**Inhalation:** Corrosive. May be harmful or fatal if inhaled. May cause severe irritation and burns of the nose, throat and respiratory tract.  
**Skin Contact:** Corrosive. Contains Hydrofluoric acid (HF). Splashes on the skin may cause mild to severe skin irritation or possible skin burns. Extended contact with concentrated material can be severely irritating to the skin and may result in redness, swelling, burns and severe skin damage.  
**Eye Contact:** Corrosive. Direct contact with the liquid or exposure to vapors or mists may cause stinging, tearing, redness, swelling, corneal damage and irreversible eye damage. Splashes in the eyes will cause severe burns. Contact lenses should not be worn when working with this chemical.  
**Ingestion:** Corrosive. May cause severe irritation and/or serious burns of the mouth esophagus or stomach. May be fatal if swallowed.

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## COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Ingredients:		
CAS#	%	Chemical Name:
7664-39-3	5-10%	Hydrofluoric acid
7664-38-2	5-10%	Phosphoric acid
7647-01-0	1-5%	Hydrochloric acid

\*Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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## FIRST AID MEASURES

**Inhalation:** Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial resuscitation. Keep person warm and at rest. Treat symptomatically and supportively. Seek medical attention immediately. Qualified medical personnel should consider administering oxygen.

Oxygen administration may be beneficial but should only be administered by personnel trained in its use. Calcium gluconate, 2.5% n normal saline may be given by nebulizer with oxygen.

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**Skin Contact:** Remove contaminated clothing and wash affected skin with soap and water. If persistent irritation occurs, obtain medical attention. When using high pressure equipment, injection of product under the skin can occur. If high pressure injuries occur, the casualty should be sent immediately to a hospital. Do not wait for symptoms to develop.

Application of 2.5% calcium gluconate gel to burn site if readily available after initial treatment is completed, or soaking of the affected area in iced 0.13% benzalkonium chloride solution may also be initiated.

**Eye Contact:** Flush eye with copious quantities of water. If persistent irritation occurs, obtain medical attention. If liquid solutions containing this product get into the eyes, flush eyes immediately with a directed stream of water for at least 30 minutes while forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. GET MEDICAL ATTENTION IMMEDIATELY. Contact lenses should not be worn when working with this chemical.

If available, apply sterile 1% calcium gluconate eye drops after the flushing.

**Ingestion:** Give large amounts of fresh water or milk immediately. Do not give anything by mouth if person is unconscious or otherwise unable to swallow. If vomiting occurs, keep head below hips to prevent aspiration. Treat symptomatically and supportively. Seek medical attention immediately.

**NOTE 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].

**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.

**REFERENCES:** 1. Brown, T.D. Treatment of Hydrofluoric Acid Burns 2. Sprout, W.L. et al Treatment of Severe Hydrofluoric Acid Exposures (Journal of American Occupational Medicine 25:12, 1993) 3. Bracken, W.M. et al Comparative Effectiveness of Topical Treatments for Hydrofluoric Acid Burns, University of Kansas (Journal of Occupational Medicine 27:10:1985) 4. Burke, W.J. , et al Systemic Fluoride Poisoning Resulting from A Fluoride Skin Burn (Journal of Occupational Medicine (5,39:1973). HF ANTIDOTE GEL: Distributed by Pharmascience Inc., 8400 Darnley Rd. Montreal, Canada. H4T 1M4, Phone: ( 514 ) 340 - 1114, Fax: ( 514 ) 342 - 7764, U.S. (Buffalo, NY) distributor: 1-800-207-4477.

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**FIRE FIGHTING MEASURES**

**Flammability:** Non flammable

**GENERAL FIRE HAZARDS:** May cause mild to severe irritation and possible chemical burns to tissue. Product is slippery when spilled. Emergency responders in the danger area should wear bunker gear and self-contained breathing apparatus for fires beyond the incipient stage (29CFR 1910.156). In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Contact with water may generate heat. Isolate damage area, keep unauthorized personnel out. If tank, railcar, or tank truck is involved in a fire, isolate for ½ mile in all directions. Consider initial evacuation for ½ mile in all directions. Stop spill/release if it can be done with minimal risk. Move undamaged containers from danger area if it can be done with minimal risk. Fires involving small amounts of combustibles may be

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smothered with suitable dry chemicals. Use water on combustibles burning but avoid using water directly on acid as it may result in evolution of heat and possible splattering.

**EXTINGUISHING MEDIA:** Fires involving small amount of combustibles may be smothered with suitable dry chemical, soda ash, lime, sand or CO<sub>2</sub>. Use water on combustibles burning in vicinity of this material but use care as water applied directly to this acid may result in evolution of heat and this may cause splattering.

**SPECIAL FIRE FIGHTING PROCEDURES:** Spilled product on ground may be slippery. Accordingly, safety precautions should be strictly observed when handling or cleaning it when spilled as the result of a fire.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Containers may explode from internal pressure if confined to fire. Cool with water spray.

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## ACCIDENTAL RELEASE MEASURES

**SPILL PROCEDURES:** Wear appropriate personal protective equipment before approaching spill site. For small spills, dilute with water to sewer if allowed by local and state regulations. If unable to wash product with water, absorb with inert material (sand or other approved material) and dispose of in accordance with applicable regulations.

**WASTE DISPOSAL:** Treatment, storage, transportation and disposal must be in accordance with Federal, State/Provincial and Local Regulations. Regulations may vary in different locations. Characterization and compliance with applicable laws are the responsibility solely of the generator. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

**RCRA STATUS:** If discarded in its purchased form, this product is considered a RCRA hazardous waste. It is the responsibility of the product user to determine at the time of disposal, whether a material containing the product should be classified as a hazardous waste. (40CFR261.20-24).

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## HANDLING AND STORAGE

**Handling Precautions:** Avoid contact with eyes, skin and clothing. Do not inhale vapors and fumes. Wash thoroughly after handling. Use only with adequate ventilation. Do not take internally. For industrial use only.

**Storage Requirements:** Keep in a tightly closed container, stored in a cool, dry, ventilated area below 44°C (110°F). Protect against physical damage. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product. Drum must not be washed out or used for other purposes.

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## EXPOSURE CONTROLS/PERSONAL PROTECTION

**Engineering Controls:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

**Personal Protective Equipment:** **RESPIRATORY PROTECTION:** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information. Self-Contained Breathing Apparatus may be required for use in confined or enclosed spaces.

Eye/face protection: Wear chemical goggles; face shield (if splashing is possible).

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Skin protection: Chemical resistant, impermeable gloves. Gloves should be tested to determine suitability for prolonged contact. Use of impervious apron or chemical suit and chemical resistant boots are recommended.

Avoid contact with the skin and avoid breathing vapors. Do not eat, drink, or smoke in work area. Wash hands before eating, drinking, or using restroom. Do NOT place food, coffee or other drinks in the area where dusting or splashing of solutions is possible. Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Safety shower and eye wash should be available close to work areas.

**Hydrofluoric acid cas#:(7664-39-3) [5-10%]****Components with workplace control parameters**

**STEL 6 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000**

**TWA 0.5 ppm USA. ACGIH Threshold Limit Values (TLV) Fluorosis Upper Respiratory Tract, Lower Respiratory Tract, skin & eye irritation Substances for which there is a Biological Exposure Index or Indices (see BEI section)**

**C 2 ppm USA. ACGIH Threshold Limit Values (TLV) Fluorosis Upper Respiratory Tract, Lower Respiratory Tract, skin & eye irritation Substances for which there is a Biological Exposure Index or Indices (see BEI section)**

**TWA 3 ppm USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000**

**TWA 3 ppm USA. Occupational Exposure Limits (OSHA) - Table Z2 Z37.28- 1969**

**TWA 2.5 mg/m<sup>3</sup> USA. Occupational Exposure Limits (OSHA) - Table Z- 1 Limits for Air Contaminants**

**TWA 2.5 mg/m<sup>3</sup> USA. Occupational Exposure Limits (OSHA) - Table Z- 1 Limits for Air Contaminants**

CAS number varies with compound

**TWA 3 ppm USA. NIOSH Recommended Exposure Limits  
2.5 mg/m<sup>3</sup>**

**C 6 ppm USA. NIOSH Recommended Exposure Limits  
5 mg/m<sup>3</sup>  
15 minute ceiling value  
See Table Z-2**

**Phosphoric acid cas#:(7664-38-2) [5-10%]****Components with workplace control parameters**

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**TWA** 1 mg/m<sup>3</sup> USA. ACGIH Threshold Limit Values  
(TLV)

Eye, skin, & Upper Respiratory Tract irritation

**STEL** 3 ppm USA. ACGIH Threshold Limit Values  
(TLV)

Eye, skin, & Upper Respiratory Tract irritation

**TWA** 1 mg/m<sup>3</sup> USA. Occupational Exposure Limits  
(OSHA) - Table Z-1 Limits for Air  
Contaminants

**TWA** 1 mg/m<sup>3</sup> USA. OSHA - TABLE Z-1 Limits for  
Air Contaminants - 1910.1000

**STEL** 3 mg/m<sup>3</sup> USA. OSHA - TABLE Z-1 Limits for  
Air Contaminants - 1910.1000

**TWA** 1 mg/m<sup>3</sup> USA. NIOSH Recommended  
Exposure Limits

**ST** 3 mg/m<sup>3</sup> USA. NIOSH Recommended  
Exposure Limits

Hydrochloric acid cas#:(7647-01-0) [1-5%]

Components with workplace control parameters

**C** 2 ppm USA. ACGIH Threshold Limit Values  
(TLV)

Upper Respiratory Tract irritation

Not classifiable as a human carcinogen

**C** 5 ppm USA. Occupational Exposure Limits  
7 mg/m<sup>3</sup> (OSHA) - Table Z-1 Limits for Air  
Contaminants

The value in mg/m<sup>3</sup> is approximate.

Ceiling limit is to be determined from breathing-zone air samples.

**C** 5 ppm USA. OSHA - TABLE Z-1 Limits for  
7 mg/m<sup>3</sup> Air Contaminants - 1910.1000

**C** 5 ppm USA. NIOSH Recommended  
7 mg/m<sup>3</sup> Exposure Limits

Often used in an aqueous solution.

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<b>9</b>	<b>PHYSICAL AND CHEMICAL PROPERTIES</b>
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<b>Appearance:</b>	Clear to light amber	<b>Odor:</b>	Sharp Acidic
<b>Physical State:</b>	Liquid	<b>Solubility:</b>	100% Complete in water
<b>Spec Grav./Density:</b>	1.075-1.090	<b>Percent Volatile:</b>	8.96-9.09 Lbs/gal (including water)
<b>Boiling Point:</b>	220 F (104.4 C)	<b>Freezing/Melting Pt.:</b>	28 F (-2.2 C)
<b>Vapor Pressure:</b>	Not determined	<b>Octanol:</b>	NA
<b>pH:</b>	< 1	<b>Vapor Density:</b>	>1 (Air=1)
<b>Evap. Rate:</b>	Similar to water	<b>VOC:</b>	NA
		<b>Auto-Ignition Temp:</b>	No data available

<b>10</b>	<b>STABILITY AND REACTIVITY</b>
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<b>Chemical Stability:</b>	Stable.
<b>Conditions to Avoid:</b>	Contact with alkaline, glass, ceramic or other silica containing material, extreme heat or freezing.
<b>Materials to Avoid:</b>	Glass, leather, concrete, certain metals, natural rubber and many organic, silicon material, strong oxidizers Contact of acid with organic materials (such as chlorates, carbides, fulminates, and picrates), alkaline materials and water may cause fires and explosions. Contact of acid with metals may form toxic sulfur dioxide fumes and flammable hydrogen gas. Contact with hypochlorites (e.g., chlorine bleach), sulfides, or cyanides will produce toxic gases.
<b>Hazardous Decomposition:</b>	This mixture may react with many organic and inorganic chemicals.
<b>Hazardous Polymerization:</b>	Will not occur

<b>11</b>	<b>TOXICOLOGICAL INFORMATION</b>
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**THRESHOLD LIMIT VALUE:** .....1 mg/m<sub>3</sub>

**OSHA PEL:** .....1 mg/m<sub>3</sub>

**LISTED CARCINOGEN:**..... This product IS NOT listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest editions) or found to be a potential carcinogen by OSHA.

**MEDICAL CONDITION**

**AGGRAVATED:**.....Overexposure to inorganic acid mist may cause lung damage and aggravate pulmonary conditions. Contact of acids with skin may aggravate diseases such as eczema and contact dermatitis.

**ORAL**

**Product:** .....Corrosive. May cause severe irritation and/or serious burns of the mouth esophagus or stomach. May be fatal if swallowed.

**DERMAL**

**Product:** .....Corrosive. Splashes on the skin may cause mild to severe skin irritation or possible skin burns. Extended contact with concentrated material can be severely irritating to the skin and may result in redness, swelling, burns and severe skin damage.

**INHALATION**

**Product:** .....Corrosive. May be harmful or fatal if inhaled. May cause severe irritation and burns of the nose, throat and respiratory tract.

**REPEATED DOSE TOXICITY**

**Product:** .....This product contains strong inorganic acids. Workers exposed to products containing inorganic acid mist showed a statistical increase in laryngeal cancer. This suggests a possible relationship between carcinogenesis and inhalation of inorganic acid mist.

**SKIN CORROSION / IRRITATION**

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**Product:** .....This product in concentrate can cause severe irritation of skin, including burns. The product in dilute form acts as a irritant due to acid properties.

**SERIOUS EYE DAMAGE / IRRITATION**

**Product:** .....Corrosive. Direct contact with the liquid or exposure to vapors or mists may cause stinging, tearing, redness, swelling, corneal damage and irreversible eye damage. Splashes in the eyes will cause severe burns. Contact lenses should not be worn when working with this chemical.

**RESPIRATORY OR SKIN SENSITIZATION**

**Product:** .....Repeated exposure of workers to the mist containing inorganic acids have increased incidence of chronic conjunctivitis, tracheobronchitis, stomatitis, and dermatitis, as well as dental erosion.

**MUTAGENICITY****IN VITRO**

**Product:** .....No Data Available

**IN VIVO**

**Product:** .....No Data Available

**Specified Substance(s) Information as provided by manufacturer** Hydrochloric, Phosphoric, Hydrofluoric Acid(s) No Data Available

**CARCINOGENICITY**

**Product:** .....Acids contained in this product have not been classified as a carcinogen. It is not known whether chronic or repeated exposure to hydrogen fluoride/hydrofluoric acid increases the risk of reproductive toxicity or developmental toxicity.

**REPRODUCTIVE TOXICITY**

**Product:** .....Based on available data the classification criteria are not met.

**SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE**

**Product:**..... **GENERAL:** This product contains acids that are corrosive and can cause severe and painful burns on contact with any part of the body or if taken internally. The mucous membranes of the eyes and the upper respiratory tract are especially susceptible to these irritating effects. **INHALATION:** Inhalation of excessive concentrations of mist or vapor can cause severe irritation of the upper respiratory tract, resulting in coughing, burning of the throat, and a choking sensation. If inhaled deeply, edema of the lungs may occur. **EYES:** Contact with this product, either in gas or in solution, can cause severe irritation and painful burns of the eyes and eyelids. The acid **MUST** be removed quickly with thorough irrigation with water or there may be prolonged or permanent visual impairment or total loss of sight. **SKIN:** Concentrated solutions are destructive to clothing and on contact with skin, can cause severe burns unless promptly washed off. **INGESTION:** This product, when swallowed, can cause severe burns of the mucous membranes of the mouth, esophagus and stomach.

**SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE**

**Product:** .....The effects of long-term, low-level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the avoidance of all effects from repetitive acute exposure. This product may aggravate existing eye, skin, and respiratory conditions.

**ASPIRATION HAZARD**

**Product:** .....Droplets of the product aspirated into the lungs through ingestion or vomiting may cause chemical pneumonia.

**OTHER ADVERSE EFFECTS**

**Product:** .....To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Handle in accordance with good industrial hygiene and safety practice.

Hydrofluoric acid cas#:(7664-39-3) [5-10%]

Information on toxicological effects

Acute toxicity:  
Oral LD50 no data available



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Inhalation LC50  
Dermal LD50  
Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: Eyes: no data available

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrofluoric acid)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):  
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):  
no data available

Aspiration hazard: no data available

Potential health effects: Inhalation Toxic if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. Ingestion May be fatal if swallowed. Skin May be fatal if absorbed through skin. Causes skin burns. Eyes Causes eye burns. Causes severe eye burns.

Signs and Symptoms of Exposure: Fluoride ion can reduce serum calcium levels possibly causing fatal hypocalcemia., Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., necrosis of the skin, Material can cause severe burns and blistering which may not be immediately painful or visible. The full extent of tissue damage may not exhibit itself for 12-24 hours after exposure.

Synergistic effects: no data available

Additional Information:

RTECS: Not available

Phosphoric acid cas#:(7664-38-2) [5-10%]

Information on toxicological effects

Acute toxicity: no data available

Inhalation: no data available

Dermal: no data available

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

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Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Specific target organ toxicity - single exposure: no data available

Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available

Additional Information:

RTECS: Not available

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Stomach - Irregularities - Based on Human Evidence

Stomach - Irregularities - Based on Human Evidence (Phosphoric acid)

Hydrochloric acid cas#:(7647-01-0) [1-5%]

Information on toxicological effects

Acute toxicity:

no data available (Hydrochloric acid)

Inhalation: no data available (Hydrochloric acid)

Dermal: no data available (Hydrochloric acid)

Skin corrosion/irritation: Skin - rabbit Result: Causes burns.

Serious eye damage/eye irritation: Eyes - rabbit (Hydrochloric acid) Result: Corrosive to eyes

Respiratory or skin sensitisation: no data available (Hydrochloric acid)

Germ cell mutagenicity: no data available (Hydrochloric acid)

Carcinogenicity:

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. (Hydrochloric acid)

IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Hydrochloric acid)

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available (Hydrochloric acid)

Specific target organ toxicity - single exposure: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation. (Hydrochloric acid)

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Specific target organ toxicity - repeated exposure: no data available

Aspiration hazard: no data available (Hydrochloric acid)

Additional Information:

RTECS: MW4025000

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. (Hydrochloric acid)

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## ECOLOGICAL INFORMATION

May cause long-term adverse effects in the aquatic environment.

### 12 - ECOLOGICAL INFORMATION

#### ACUTE TOXICITY

##### FISH

**Product:** .....Bluegill/Sunfish: 49 mg/L; 48 Hr; TLm (tap water @ 20°C), Bluegill/Sunfish: 24.5 ppm; 48 Hr; TLm (sulfuric acid in fresh water). Fishes, Salmo gairdneri, LC50, 96 h, 51 mg/l (Fluorides).

##### AQUATIC INVERTEBRATES

**Product:** .....Daphnia magna, exposure time: 24 h, EC50: 29 mg/L (IUCLID), sulfuric acid. Crustaceans, Daphnia magna, EC50, 48 h, 97 mg/l (Fluorides).

#### CHRONIC TOXICITY

##### FISH

**Product:** .....Fishes, Salmo gairdneri, LC50, 21 Days, 2.7 - 4.7 mg/l (Fluorides), Crustaceans, Daphnia magna, NOEC, 21 Days, 3.7 mg/l (Fluorides), Algae, Scenedesmus sp., EC50, 96 h, 43 mg/l (Fluorides).

##### AQUATIC INVERTEBRATES

**Product:** .....This material has exhibited moderate toxicity to aquatic organisms.

#### TOXICITY TO AQUATIC PLANTS

**Product:** .....Harmful to aquatic organisms.

#### PERSISTENCE AND DEGRADABILITY

##### BIODEGRADATION

**Product:** .....This product contains organic and non-organic ingredients. Biodegradability for organic ingredients under aerobic static laboratory conditions is high (BOD20 or BOD28 / THOD greater than 80%). Phosphoric Acid degrades to Phosphous. (Fluorides) Result: possible accumulation into vegetable leafs.

##### BIOLOGICAL OXYGEN DEMAND

**Product:** .....The methods for determining the biological degradability are not applicable to predominately inorganic substances.

##### CHEMICAL OXYGEN DEMAND

**Product:** .....No data available

##### BOD / COD RATIO

**Product:** .....No data available

##### BIOACCUMULATIVE POTENTIAL

**Product:** .....The acids in this product all dissociate readily in water and no potential for bioaccumulation is

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predicted. Bioaccumulative potential: log Pow Result: not applicable - (Fluorides). Surfactants in this product biodegrade and do not bioaccumulate.

#### MOBILITY IN SOIL

**Product:** .....Acid / Water solutions are soluble in water and have high mobility in soil. During transport through the soil, acid solutions will dissolve some of the soil material; in particular, the carbonate based materials. The acid will be neutralized to some degree with adsorption of the proton also occurring on clay materials. However, significant amounts of acid are expected to remain for transport down towards the ground water table. Upon reaching the ground water table, the acid will continue to move, now in the direction of the ground water flow. Lime addition may be required to rectify low pH resulting from acid solution spillages.

#### RESULTS OF PBT AND mPvB ASSESSMENT

**Product:** .....Not fulfilling PBT (persistent/bio accumulative/toxic) criteria. Not fulfilling vPvB (very persistent, very bio accumulative) criteria.

#### OTHER ADVERSE EFFECTS

**Product:** .....No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential or global warming potential) are expected from this product.

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### DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL:** .....Treatment, storage, transportation and disposal must be in accordance with Federal, State/Provincial and Local Regulations. Regulations may vary in different locations. Characterization and compliance with applicable laws are the responsibility solely of the generator. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

**RCRA STATUS:**.....If discarded in its purchased form, this product is considered a RCRA hazardous waste. It is the responsibility of the product user to determine at the time of disposal, whether a material containing the product should be classified as a hazardous waste. (40CFR261.20-24).

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### TRANSPORT INFORMATION

*Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods*

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expert for information specific to your situation.

**UN/NA NUMBER:** .....1760

**PROPER SHIPPING NAME:**..... Corrosive Liquid, n.o.s., Contains (Hydrochloric Acid, Phosphoric Acid and Hydrofluoric Acid)

**HAZARD CLASS:**.....8

**PACKAGING GROUP :** .....II

**LETTER:** .....C (Corrosive substances)

**ENVIRONMENTAL HAZARD:** .....At environmentally relevant pH's, the acids are totally dissociated and are totally miscible with water. The removal in all water systems and by sewage treatment plants is thus highly effective. In addition, emissions to the atmosphere are controlled in industrial/professional settings by air-emission abatement.

**REPORTABLE QUANTITY:** .....292 pounds (132.5 kilograms) based on Hydrofluoric Acid CAS# 7664-39-3, Hydrochloric Acid CAS# 7647-01-0, Phosphoric Acid CAS# 7664-38-2 in mixture.



<b>15</b>	<b>REGULATORY INFORMATION</b>
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[%] RQ (CAS#) Substance - Reg Codes

[5-10%] RQ(100LBS), Hydrofluoric acid (7664-39-3) CERCLA, CSWHS, EHS302, EPCRAWPC, HAP, MASS, NJEHS, NJHS, OSHAPSM, OSHAWAC, PA, SARA313, TOXICRCRA, TSCA, TXAIR, TXHWL

[5-10%] Phosphoric acid (7664-38-2) CERCLA, CSWHS, EPCRAWPC, MASS, NJHS, OSHAWAC, SARA313, TSCA, TXAIR

[1-5%] RQ(5000LBS), Hydrochloric acid (7647-01-0) CERCLA, CSWHS, EHS302, EPCRAWPC, HAP, MASS, NJEHS, NJHS, OSHAPSM, OSHAWAC, PA, SARA313, TSCA, TXAIR

This product does not contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

**Regulatory Code Legend**

- RQ = Reportable Quantity
- CERCLA = Superfund clean up substance
- CSWHS = Clean Water Act Hazardous substances
- EHS302 = Extremely Hazardous Substance
- EPCRAWPC = EPCRA Water Priority Chemicals
- HAP = Hazardous Air Pollutants
- MASS = MA Massachusetts Hazardous Substances List
- NJEHS = NJ Extraordinarily Hazardous Substances
- NJHS = NJ Right-to-Know Hazardous Substances
- OSHAPSM = OSHA Chemicals Requiring process safety management
- OSHAWAC = OSHA Workplace Air Contaminants
- PA = PA Right-To-Know List of Hazardous Substances
- SARA313 = SARA 313 Title III Toxic Chemicals
- TOXICRCRA = RCRA Toxic Hazardous Wastes (U-List)

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TSCA = Toxic Substances Control Act  
TXAIR = TX Air Contaminants with Health Effects Screening Level  
TXHWL = TX Hazardous Waste List

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**OTHER INFORMATION**

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. \*\* Chemical listed as carcinogen or potential carcinogen. [a] NTP [b] IARC Monograph [c] OSHA [d] Not listed [e] Animal Data only  
N/A = Not available N/D = Not determined

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