

# SAFETY DATA SHEET

Issuing Date 29-Oct-2013

Revision Date 29-Oct-2013

Revision Number 0

## 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

### GHS product identifier

Product Name ALUMINUM BRIGHTENER / PANEL WASH

### Other means of identification

Product Code(s) SP-037-01 – SP-03701-55

UN-Number UN3264

Synonyms None

### Recommended use of the chemical and restrictions on use

Recommended Use Aluminum cleaning, brightening, etching

Uses advised against No information available

### Supplier's details

#### **Supplier Address**

Seattle Pump and Equipment Company  
2222 – 15<sup>th</sup> Avenue West  
Seattle, Washington 98119  
TEL: 1-800-683-7867

#### **Manufacturer Address**

Industrial Research Products  
2505 Frank Albert Road East  
Suite B120  
Fife, Washington 98424

### Emergency telephone number

Emergency Telephone Number 206-283-5252

## 2. HAZARDS IDENTIFICATION

### Classification

This chemical is considered hazardous according to the OSHA Hazard Communication Standard 2012 (29 CFR 1910.1200)

Acute Oral Toxicity	Category 3
Acute Dermal Toxicity	Category 1
Acute Inhalation Toxicity - Vapors	Category 3
Skin Corrosion/Irritation	Category 1 Subcategory 1A
Serious Eye Damage/Eye Irritation	Category 1
Carcinogenicity	Category 1A

### GHS Label elements, including precautionary statements

#### Emergency Overview

Signal Word	Danger
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**Hazard Statements**

- Toxic if swallowed
- Fatal in contact with skin
- Toxic if inhaled
- Causes severe skin burns and eye damage
- May cause cancer

**Appearance** Clear**Physical State** Liquid.**Odor** Sour**Precautionary Statements****Prevention**

- Do not get in eyes, on skin, or on clothing
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Use only outdoors or in a well-ventilated area
- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required
- Wear eye/face protection
- Do not breathe dust/fume/gas/mist/vapors/spray.

**General Advice**

- Specific treatment (see supplemental first aid instructions on this label)
- Immediately call a POISON CENTER or doctor/physician.

**Eyes**

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- Immediately call a POISON CENTER or doctor/physician.

**Skin**

- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
- Immediately call a POISON CENTER or doctor/physician
- Wash contaminated clothing before reuse.

**Inhalation**

- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- Call a POISON CENTER or doctor/physician.

**Ingestion**

- IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- Rinse mouth
- Do NOT induce vomiting.

**Storage**

- Store locked up
- Store in a well-ventilated place. Keep container tightly closed.

**Disposal**

- Dispose of contents/container to an approved waste disposal plant.

**Hazard Not Otherwise Classified (HNOC)**

Not applicable

## Other information

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS-No	Weight %	Trade secret
Sulfuric acid	7664-93-9	10-30	*
Hydrogen fluoride	7664-39-3	5-10	*

*\*The exact percentage (concentration) of composition has been withheld as a trade secret.*

**4. FIRST AID MEASURES****Description of necessary first-aid measures****Eye Contact**

Because of the ability of HF to penetrate deep into tissue, exposure of HF solution or vapor to the eye can produce more extensive damage than that of other acids in similar concentrations. For example, hydrochloric acid damages only the superficial structures of the eye because its penetration is limited by a precipitated protein barrier. In the case of HF, immediate action should be taken with initial flushing and then treatment with sterile 1% calcium gluconate solution.

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Rinse the eyes with a calcium gluconate 1% solution in physiological serum (10 ml of calcium gluconate 10% in 90 ml of physiological serum).

Seek immediate medical attention/advice. Ice water compresses may be applied to the eyes while transporting the victim.

**Skin Contact**

Immediately wash off the acid. This is the first priority. Wash all affected areas with water. While flushing with water be sure to remove all contaminated clothing or jewelry that could trap HF (remove goggles last, close eyes, face the flow of water and pull goggles over head).

While the victim is being rinsed with water, someone should call 911 and tell the dispatcher the following:

“There is a person that has been exposed to hydrofluoric acid and the victim is in this location. Please send an officer and ambulance.”

Rinsing may be limited to 5 minutes if Calcium Gluconate gel is available. Apply the gel as soon as the washing is done. If Calcium Gluconate gel is not available, continue flushing with water until medical treatment has arrived. Apply Calcium Gluconate gel freely and massage it into the affected site. Reapply Calcium Gluconate gel every 10-15 minutes, until pain and/or redness disappear or until emergency medical assistance is given. In order to prevent cross contamination, the victim should self-apply Calcium Gluconate gel. If the victim is unable to, anyone present can do it. Be extremely careful not to contaminate yourself by using Neoprene or Nitrile (22mil) gloves. Do not use latex gloves; they are not effective against HF.

Note: Clinical experience has shown that Calcium Gluconate 2.5% Gel is effective when used correctly in appropriate situations. After the treatment to the burned areas has begun, the victim should be examined to ensure there are no other burn sites which have been overlooked. Continue massaging Calcium Gluconate gel onto the skin, until the ambulance arrives and the victim is seen by a physician.

Take note and provide the following information to the EMS team, and or physician:

The concentration of the Hydrofluoric Acid and the MSDS sheet.

Date and time of exposure. Duration of exposure, and how it occurred.

The time when Calcium Gluconate gel was first applied to the contaminated area.

Body parts affected or exposed, and the percent body surface area affected.

<b>Inhalation</b>	<p>Move to fresh air. Keep victim warm and quiet. If not breathing, give artificial respiration. Make sure mouth and throat are free of foreign material.</p> <p>100% oxygen (10 to 12 L/min flow rate) should be administered as soon as possible by a trained individual. Continue oxygen while waiting for medical attention.</p> <p>A nebulized solution of 2.5% calcium gluconate may be administered with oxygen by inhalation. Do not give stimulants unless instructed to do so by a physician.</p> <p>The victim should be examined by a doctor and held under observation for at least 24 hours. Inhalation of HF fumes may cause swelling in the respiratory tract that may not show up for up to 24 hours after exposure. A person who has inhaled HF vapors may need prophylactic oxygen treatment.</p> <p>Vapor exposures can cause skin and mucous membrane burns as well as damage to pulmonary tissue. Vapor burns to the skin are treated the same as liquid HF burns.</p>
<b>Ingestion</b>	<p>Have the victim drink large amounts of water as quickly as possible to dilute the acid. Do NOT induce vomiting. Do not give emetics (vomit inducing agents) or baking soda. Never give anything by mouth to an unconscious person.</p> <p>Drink several glasses of milk or several ounces of Milk of Magnesia, Mylanta, Maalox or similar product, or eat up to 30 Tums, Caltrate or other antacid tablet. The calcium or magnesium in these compounds may act as an antidote.</p> <p>Immediate medical attention is required.</p>

**Most important symptoms/effects, acute and delayed****Most Important Symptoms/Effects** No information available.**Indication of immediate medical attention and special treatment needed, if necessary****Notes to Physician** Treat symptomatically.**5. FIRE-FIGHTING MEASURES****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable Extinguishing Media** CAUTION: Use of water spray when fighting fire may be inefficient.**Specific Hazards Arising from the Chemical**

No information available.

**Explosion Data****Sensitivity to Mechanical Impact** None.**Sensitivity to Static Discharge** None.**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures**

**Personal Precautions** Attention! Corrosive material Avoid contact with skin, eyes and clothing. Use personal protective equipment. Evacuate personnel to safe areas. Ensure adequate ventilation. In case of insufficient ventilation wear suitable respiratory equipment. Keep people away from and upwind of spill/leak.

**Environmental Precautions**

**Environmental Precautions** See Section 12 for additional Ecological Information. Prevent entry into waterways, sewers, basements or confined areas.

**Methods and materials for containment and cleaning up**

**Methods for Containment** Stop leak if you can do it without risk

**Methods for Cleaning Up** Neutralize with soda ash (sodium carbonate) or lime over area of spill. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly.

**7. HANDLING AND STORAGE****Precautions for safe handling**

**Handling** Handle in accordance with good industrial hygiene and safety practice. Prevent formation of aerosols or mists. Avoid breathing vapors or mists. Use only in area provided with appropriate exhaust ventilation. Wash thoroughly after handling. Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product.

**Conditions for safe storage, including any incompatibilities**

**Storage** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use.

**Incompatible Products** Bases. Organic material. Amines. Metals. Strong oxidizing agents. Acids. Ammonia.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****Control parameters****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m <sup>3</sup> thoracic fraction	TWA: 1 mg/m <sup>3</sup> (vacated) TWA: 1 mg/m <sup>3</sup>	IDLH: 15 mg/m <sup>3</sup> TWA: 1 mg/m <sup>3</sup>
Hydrogen fluoride 7664-39-3	TWA: 0.5 ppm F S* Ceiling: 2 ppm F	TWA: 3 ppm F (vacated) TWA: 3 ppm F (vacated) STEL: 6 ppm F	IDLH: 30 ppm Ceiling: 6 ppm 15 min Ceiling: 5 mg/m <sup>3</sup> 15 min TWA: 3 ppm TWA: 2.5 mg/m <sup>3</sup>

**Appropriate engineering controls**

**Engineering Measures** Showers  
Eyewash stations  
Ventilation systems

**Individual protection measures, such as personal protective equipment**

**Eye/Face Protection** Chemical splash goggles. Face-shield.  
**Skin and Body Protection** Neoprene gloves. Impervious clothing. Boots. Apron.  
**Respiratory Protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid	<b>Appearance</b>	Clear
<b>Odor</b>	Sour	<b>Odor Threshold</b>	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks/ - Method</u>
<b>pH</b>	< 5.0	None known
<b>Melting Point/Range</b>	No data available	None known
<b>Boiling Point/Boiling Range</b>	115 °C	None known
<b>Flash Point</b>	No data available	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limits in Air</b>		
upper flammability limit	No data available	
lower flammability limit	No data available	
<b>Vapor Pressure</b>	No data available	None known
<b>Vapor Density</b>	No data available	None known
<b>Relative Density</b>	No data available	None known
<b>Specific Gravity</b>	1.14@20°C	None known
<b>Water Solubility</b>	Completely soluble	None known
<b>Solubility in other solvents</b>	No data available	None known
<b>Partition coefficient: n-octanol/water</b>	No data available	None known
<b>Autoignition Temperature</b>	No data available	None known
<b>Decomposition Temperature</b>	No data available	None known
<b>Viscosity</b>	1.35@20°C	None known

**Flammable Properties** Not flammable

**Explosive Properties** No data available  
**Oxidizing Properties** No data available

**Other information**

**VOC Content (%)** No data available

**10. STABILITY AND REACTIVITY****Reactivity**

No data available.

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

None under normal processing.

**Conditions to avoid**

Incompatible products.

**Incompatible materials**

Bases. Organic material. Amines. Metals. Strong oxidizing agents. Acids. Ammonia.

**Hazardous decomposition products**

Sulfur oxides. Hydrogen fluoride.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Product Information

<b>Inhalation</b>	Toxic if inhaled.
<b>Eye Contact</b>	Causes serious eye damage. Corrosive to the eyes and may cause severe damage including blindness.
<b>Skin Contact</b>	Corrosive. Causes severe skin burns.
<b>Ingestion</b>	Toxic if swallowed.

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sulfuric acid	= 2140 mg/kg ( Rat )	-	= 510 mg/m <sup>3</sup> ( Rat ) 2 h = 347 ppm ( Rat ) 1 h
Hydrogen fluoride	-	-	= 850 mg/m <sup>3</sup> ( Rat ) 1 h = 1276 ppm ( Rat ) 1 h

### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** No information available.

### Delayed and immediate effects and also chronic effects from short and long term exposure

**Sensitization** No information available.  
**Mutagenic Effects** No information available.  
**Carcinogenicity** May cause cancer. The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid	A2	Group 1	Known	X

#### **ACGIH: (American Conference of Governmental Industrial Hygienists)**

A2 - Suspected Human Carcinogen

#### **IARC: (International Agency for Research on Cancer)**

Group 1 - Carcinogenic to Humans

#### **NTP: (National Toxicity Program)**

Known - Known Carcinogen

#### **OSHA: (Occupational Safety & Health Administration)**

X - Present

**Reproductive Toxicity** No information available.  
**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Aspiration Hazard** No information available.

### Numerical measures of toxicity - Product

*The following values are calculated based on chapter 3.1 of the GHS document:*

**LD50 Oral** 51 mg/kg; Acute toxicity estimate  
**LD50 Dermal** 43 mg/kg; Acute toxicity estimate  
**Inhalation**  
**Vapor** 2.4 mg/L; Acute toxicity estimate

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Sulfuric acid 7664-93-9		LC50 96 h: > 500 mg/L static (Brachydanio rerio)		EC50 24 h: = 29 mg/L (Daphnia magna)

Hydrogen fluoride 7664-39-3		LC50 48 h: = 660 mg/L (Leuciscus idus)		EC50 48 h: = 270 mg/L (Daphnia species)
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**Persistence and Degradability** No information available.

**Bioaccumulation** No information available.

Chemical Name	Log Pow
Hydrogen fluoride	-1.4

**Other Adverse Effects**

No information available.

### 13. DISPOSAL CONSIDERATIONS

**Waste Disposal Methods** Dispose of in accordance with federal, state, and local regulations

**Contaminated Packaging** Do not re-use empty containers.

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Hydrogen fluoride - 7664-39-3	U134			U134

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid	Toxic Corrosive

### 14. TRANSPORT INFORMATION

**DOT**

**UN-Number** UN3264  
**Proper shipping name** Corrosive liquid, acidic, inorganic, n.o.s.  
**Hazard Class** 8  
**Packing Group** II  
**Reportable Quantity (RQ)** Hydrogen fluoride: RQ kg= 465.59, Sulfuric acid: RQ kg= 2994.92  
**Description** UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid, Hydrogen fluoride), 8, II, RQ  
**Emergency Response Guide Number** 154

**TDG**

**UN-Number** UN3264  
**Proper Shipping Name** Corrosive liquid, acidic, inorganic, n.o.s.  
**Hazard Class** 8  
**Packing Group** II  
**Description** UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid, Hydrogen fluoride), 8, II

**MEX**

**UN-Number** UN3264  
**Proper Shipping Name** Corrosive liquid, acidic, inorganic, n.o.s.  
**Hazard Class** 8  
**Packing Group** II  
**Description** UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid, Hydrogen fluoride), 8, II

**ICAO**

**UN-Number** UN3264  
**Proper shipping name** Corrosive liquid, acidic, inorganic, n.o.s.  
**Hazard Class** 8  
**Packing Group** II  
**Description** UN3264, Corrosive liquid, acidic, inorganic, n.o.s., 8, II



**IATA**

UN-Number UN3264  
 Proper Shipping Name Corrosive liquid, acidic, inorganic, n.o.s.  
 Hazard Class 8  
 Packing Group II  
 ERG Code 8L  
 Description UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid, Hydrogen fluoride), 8, II

**IMDG/IMO**

UN-Number UN3264  
 Proper Shipping Name Corrosive liquid, acidic, inorganic, n.o.s.  
 Hazard Class 8  
 Packing Group II  
 EmS No. F-A, S-B  
 Description UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid, Hydrogen fluoride), 8, II

**RID**

UN-Number UN3264  
 Proper Shipping Name Corrosive liquid, acidic, inorganic, n.o.s.  
 Hazard Class 8  
 Packing Group II  
 Classification Code C1  
 Description UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid, Hydrogen fluoride), 8, II

**ADR**

UN-Number UN3264  
 Proper Shipping Name Corrosive liquid, acidic, inorganic, n.o.s.  
 Hazard Class 8  
 Packing Group II  
 Classification Code C1  
 Tunnel Restriction Code (E)  
 Description UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid, Hydrogen fluoride), 8, II, (E)  
 ADR/RID-Labels 8

**ADN**

Proper Shipping Name Corrosive liquid, acidic, inorganic, n.o.s.  
 Hazard Class 8  
 Packing Group II  
 Classification Code C1  
 Special Provisions 274  
 Description UN3264, Corrosive liquid, acidic, inorganic, n.o.s. (Sulfuric acid, Hydrogen fluoride), 8, II  
 Limited Quantity 1 L

**15. REGULATORY INFORMATION**

**International Inventories**

**Legend**

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory  
 DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

**U.S. Federal Regulations**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Sulfuric acid	7664-93-9	10-30	1.0
Hydrogen fluoride	7664-39-3	5-10	1.0

**SARA 311/312 Hazard Categories**

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**Clean Water Act**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid	1000 lb			X
Hydrogen fluoride	100 lb			X

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ
Hydrogen fluoride	100 lb	100 lb	RQ 100 lb final RQ RQ 45.4 kg final RQ

**U.S. State Regulations****California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Sulfuric acid	7664-93-9	Carcinogen

**U.S. State Right-to-Know Regulations**

"X" designates that the ingredients are listed on the state right to know list.

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Sulfuric acid	X	X	X	X	X
Hydrogen fluoride	X	X	X	X	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. OTHER INFORMATION**

<b>NFPA</b>	Health Hazard 3	Flammability 0	Instability 0	Physical and Chemical Hazards -
<b>HMIS</b>	Health Hazard 3	Flammability 0	Physical Hazard 0	Personal Protection X

Prepared By Product Stewardship  
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**General Disclaimer**

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

**End of Safety Data Sheet**