

# SAFETY DATA SHEET

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name:** Aluminium Brightener  
**Product Identifier:** Corrosive, Liquid, Toxic, N.O.S (Sulphuric Acid, Phosphoric Acid, Hydrofluoric Acid)

**Recommended Use:** Cleaning Aluminium surfaces and Aluminium products

**Supplier:** Midland Chemicals  
**ABN:** 91 622 018 986

**Street Address:** 18 Elliott Street  
Midvale  
Western Australia

**Telephone Number:** +61 08 9274 1992

**Facsimile:** +61 08 9250 1710

**Emergency Telephone:** **1 800 033 111 (ALL HOURS)**

## 2. HAZARDS IDENTIFICATION

Based on available information Classified as Hazardous according to the Globally Harmonised System of classification and labelling of chemicals (GHS) including Work, Health and Safety Regulations, Australia. Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. (7<sup>th</sup> edition)

### GHS Classification:

Acute Toxicity-Oral: Category 4  
Skin corrosion/irritation: Category 1B  
Eye damage/Irritation: Category 2A

### Hazard Statements:

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H319 Causes serious eye irritation  
H331 Toxic if Inhaled  
H290 May be corrosive to metals.  
H413 May cause long lasting harmful effects to aquatic life

### Hazard Pictograms:

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**Signal Word:** DANGER

## **Precautionary statements Prevention**

P260 Do not breathe dust/fumes/gas/mist/vapours/spray.

P264 Wash contaminated skin thoroughly after handling

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection

## **Precautionary Statements Response**

P301+P312 IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN(ORHAIR): 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 position comfortable for breathing

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if presented and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER or doctor/physician.

P321 Specific treatment (see information on this label)

P330 Rinse mouth

P337+P313 If eye irritation persists: Get medical advice/attention.

P363 Wash contaminated clothing before reuse.

## **Precautionary statement – Storage**

P405 store locked up

## **Precautionary Statement – Disposal**

P501 Dispose of contents/container to in accordance with local/regional/international regulations

**Road and Rail:** DANGEROUS GOODS.

**Poisons Schedule:** S6

**Packaging group number:** II

## **3. COMPOSITION/INFORMATION ON INGREDIENTS**

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<b>Components</b>	<b>CAS Number</b>	<b>Proportion</b>	<b>Risk Phrases</b>
Hydro Fluoric Acid	7664-39-3	<1%	
Sulphuric Acid	7664-93-9	<15%	
Phosphoric Acid	7664-38-2	<10%	
Water	7732-18-5	To 100%	

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## 4. FIRST AID MEASURES

For advice, contact a Poisons Information Centre (e.g. phone Australia 131 126; New Zealand 0800 764 766) or a doctor at once.

### **Inhalation:**

Remove victim from exposure – avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing is laboured and patient cyanotic (blue), ensure airways are clear and have qualified person give oxygen through a face mask. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. Seek medical advice.

### **Skin Contact:**

Avoid contact with this chemical. Immediately flush affected area with cool and gentle running water for at least 5 minutes. Under running water remove contaminated clothing. Immediately apply 2.5% Calcium Gluconate Gel to the affected area and leave and re-apply on the skin until 15 minutes after the pain has subsided. If no gel is available, continue washing using soap and water.

### **Eye Contact:**

Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 20 minutes, holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. Continue irrigation with normal saline or water until severe pain of burn is relieved. Seek medical attention.

**Ingestion:** Never give anything by mouth if victim is rapidly losing consciousness or is unconscious or convulsing. Rinse mouth thoroughly with cold water. DO NOT INDUCE VOMITING. Give large quantities of water to be taken slowly, followed by a drink of milk or milk of magnesia. Seek immediate medical attention. Take calcium carbonate tablets if available. (Read instructions for dosage).

### **Medical attention and special treatment:**

Treat symptomatically and as for exposure to highly corrosive.

### **First Aid Facilities:**

Eye wash. Hand wash basin. Shower.

Ensure that Calcium Gluconate Gel (within the expiry date) or Calcium Carbonate tablets are available. Water and washing facilities are in close proximity.

### **Advice to Doctor:**

Treat symptomatically and as for exposure to corrosive materials and hydrofluoric acid. Pulmonary oedema may result following inhalation.

### **Indication of immediate medical attention and special treatment needed if necessary:**

First Aiders should wear natural rubber or nitrile rubber gloves to protect themselves against possible hydrofluoric acid exposure when providing assistance. Make sure that the acid does not spread to other parts of the body or onto rescuers.

### **Most important symptoms/effects, acute and delayed:**

No adverse health effects expected if the product is handled in accordance with this SDS and the product label.

### **Other Information:**

Burns caused by weak hydrofluoric acid may go unnoticed for several hours. Therefore, first aid procedures must be followed if any contact is suspected.

## 5. FIRE FIGHTING MEASURES

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**Hazards from combustion products:**

Non-combustible material

**Precautions for fire fighters and special protective equipment:**

Fire fighters to wear full body protective clothing with breathing apparatus. Consider evacuation

**Suitable Extinguishing Media:**

Use dry agent.

**Specific Hazards arising from the chemical**

FIRE EXTINGUISHING AGENTS Use dry agent if hydrofluoric acid is involved in a fire. FIRE FIGHTING PROCEDURES: HF itself is not flammable, but when stored in metal containers flammable hydrogen gas may be produced. Fire fighters to wear full body protective clothing, with breathing apparatus. Consider evacuation.

**Hazchem Code**

2X

## 6. ACCIDENTAL RELEASE MEASURES

**Emergency procedures:**

PRECAUTIONS: Restrict access to area. Provide adequate ventilation, protective clothing, and respirators. Only trained personnel should participate in cleanup operations. CLEANUP: Eliminate all ignition sources. Avoid contact with spilled material. Stop leak if without risk. Use water spray to reduce vapours. Do not get water inside containing vessels. Dike to prevent entry into waterways, sewers, basements or confined areas. Call for assistance on disposal . DISPOSAL: Review federal, state and local regulations prior to disposal. Consult the Waste Disposal Authorities for advice on disposal.

**Methods and materials for containment and clean up:**

Contain spillage using sand and earth and neutralise with Soda Ash, prevent runoff into drains. Use absorbent. Collect and seal in properly labelled drums

## 7. HANDLING AND STORAGE

This material must be stored, maintained and used in accordance with the relevant regulations.

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

Product may be stored in plastic (polyethylene or PVC) vessels. Protect storage containers from heat or direct sunlight. The storage area should have adequate ventilation. Handling Use extreme caution in all procedures involving hydrofluoric acid. When splash or inhalation exposure is possible, appropriate protective clothing must be worn. Not to be loaded with Class 1, 4.3, 5.1, 5.2, 6\*, 7, Foodstuff and foodstuff empties. (\*where the class 6 substance is cyanide and the class 8 substance is an acid).

**Precautions for safe handling:**

Avoid skin and eye contact and breathing in vapour, mists and aerosols.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure controls, personal Protection:**

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Avoid contact with skin and eyes. Wear eye protection and protective gloves when mixing or using. Avoid breathing vapour. Obtain a supply of calcium gluconate gel. Wash gloves thoroughly, immediately after use.

## Occupational Exposure Limits:

Substance	Regulations	Exposure duration	Exposure Limit	Units	Notes
Sulphuric acid		TWA	1	mg/m3	
Sulphuric Acid		STEL	3	mg/m3	
Hydrofluoric Acid		TWA	3	ppm	Peak limitation
Hydrofluoric Acid		TWA	2.6	mg/m3	Peak Limitation
Phosphoric Acid		TWA	1	mg/m3	
Phosphoric Acid		STEL	3	mg/m3	

## Other Exposure Information:

EXPOSURE CONTROL Note: Control of exposure to this material is dependent on how this material is used and on the extent of exposure. Use this general information to help develop specific control measures. Ensure that control systems are properly designed and maintained and comply with occupational, environmental, fire, and other applicable regulations.

## Engineering controls:

If used in enclosed area then provide adequate general (dilution) and local exhaust ventilation. Only use in a well ventilated area, to minimise exposure. Ensure ventilation is adequate to maintain air concentrations below exposure standards. Do not atomise this product.

## Personal Protective Equipment:

For hydrofluoric acid:

RESIRATOR: If engineering controls, work practices, and administrative controls are not effective in reducing the concentration of airborne contaminant below the recommended/legislated exposure limit, wear suitable, approved respirator fitted with an acid gas filter which complies with AS/NZS 1716.

EYE/FACE PROTECTION: Chemical safety goggles or a full face shield.

SKIN PROTECTION: Protective clothing (nitrile rubber or natural rubber gloves, coveralls, boots, etc.), as required. Sleeve protectors are recommended. Wash gloves thoroughly, immediately after use. Have a supply of calcium gluconate gel.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical state:** Liquid

**Colour:** Green

**Solubility:** Miscible in water.

**Specific Gravity:** 1.07

**Relative Vapour Density (air=1):** Not available

**Vapour Pressure (20 °C):** Not available

**Flash Point (°C):** Not applicable

**Flammability Limits (%):** Not flammable

**Auto Ignition Temperature (°C):** Not applicable

**Boiling Point/Range (°C):** 100°C

**pH:** <1 @ 10% Solution

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## 10. STABILITY AND REACTIVITY

- Chemical stability:** Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
- Conditions to avoid:** Store in a cool place and out of direct sunlight, away from alkali's, foodstuffs and oxidising materials. Normal good handling and storage procedures apply.
- Incompatible materials:** MAT'LS to Avoid bases (e.g. caustic soda) – can react violently. The acid will dissolve glass, ceramics, metals containing silica, natural gum rubber and leather. Arsenic trioxide – reaction can be extremely hot. HAZARDOUS POLYMERIZATION Polymerization not considered hazardous. CORROSIVITY TO METALS Can dissolve metals containing silica. Wax, lead and platinum are not corroded. Most other metals are corroded to some degree.

## 11. TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

- Ingestion:** Severe burning and/or perforation of the digestive system which may lead to death.
- Eye contact:** Contact with eyes even for short periods can cause blindness. Hydrogen fluoride vapours can dissolve in the moisture on the surface of the eyes and cause a burning sensation, redness and secretions. Contact with eyes even for short periods can cause blindness.
- Skin contact:** Highly corrosive. Hydrogen fluoride can cause deep and excruciatingly painful skin burns. Burns from this product may not be felt or visible for several hours. Serious skin splashes of concentrated hydrofluoric acid (70%) have cause death.
- Inhalation:** Weak vapour concentrations of a few ppm can produce irritation of the nose, throat and respiratory tract. High vapour concentrations can cause severe burns to the lips, mouth, throat, eye and lungs. Fluid accumulation in the lungs may occur and can lead to death
- Short term Effects:** Short term effects by all routes is considered to be toxic. Risk of Calcium Depletion and Skin Burns. Toxic by inhalation, contact with skin, or Swallowed
- Chronic Effects:** Health effects – the major health hazards of exposure to hydrogen fluoride which is generated by the active ingredients, are related to its irritant and corrosive properties during short-term (acute) exposures. There is less risk associated with its possible long-term exposure effects.  
Fluorosis: Fluoride tends to accumulate in the bones and excessive amounts will produce weakening and degeneration of the bone structure (osteosclerosis). There may also be heart, nerve, and intestinal problems. The disease is called fluorosis. Fluorosis may be slowly and partially reversible.  
Carcinogenicity - no specific data available. There is no evidence of an association between human cancer and exposure to inorganic fluorides.

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Teratogenicity and embryotoxicity – there is inconclusive data from animal studies suggesting possible reproductive effects. There are no reports of effects on humans.

Toxicological synergistic materials insufficient information mutagenicity insufficient data potential for accumulation Fluoride is stored in the bone, but may be eliminated over a number of years. Not classed as a category I, II or III Carcinogen by Worksafe Aust.

**Toxicological Data:** Animal toxicity data of hydrofluoric acid: LC50 (rat, 5min): 4,970 ppm LC50 (rat, 5min): 18,200 ppm LC50 (rat, 1 hour): 1310 ppm LC50 (rat, 1 hour): 1,108 ppm LC50 (mice, 5 min): 6,247 ppm LC50 (guinea pigs, 15min): 4,320 ppm LC50 (monkey, 1 hour): 1,774 ppm Extremely corrosive on contact with any body tissue. Liver and kidney damage in rats and rabbits after acute exposure.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Avoid contaminating waterways. Pollutant. Contain.

## 13. DISPOSAL CONSIDERATIONS

**Disposal methods:** Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.

## 14. TRANSPORT INFORMATION

### Transport Information:

This material is a Class 8 Corrosive Substance according to the Australian Code for Transport of Dangerous Goods by Road and Rail.

Class 8 – Corrosive Substances are incompatible in a placard load with any of the following:

- Class 1, Explosives,
- Class 4.3, Dangerous When wet substances,
- Class 5.1, Oxidising Agents & Class 5.2 – Organic Peroxides,
- Class 6, Toxic Substances (where the toxic substances are cyanides and the corrosives are acids),
- Class 7, Radioactive Substances
- Class 8, Corrosive Substances (concentrated strong acid is to be segregated from strong alkali), and are incompatible with food and food packaging in any quantity

**UN No:** 2922 N.O.S

**Class-Primary:** 8 corrosive

**Packing Group:** II

**Proper Shipping Name:** Corrosive, Liquid, Toxic, N.O.S (Sulphuric Acid, Phosphoric Acid, Hydrofluoric Acid)

**Hazchem Code:** 2X

## 15. REGULATORY INFORMATION

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**Classification:** Classified as Hazardous according to criteria of GHS

**Hazard Category:** C: Corrosive

**Poisons Schedule:** S6

**GHS Classification:**

Acute Toxicity-Oral: Category 4

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Eye damage/Irritation: Category 2A

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**Road and Rail:** DANGEROUS GOODS.

**Packaging group number:** II

## 16. OTHER INFORMATION

This material safety data sheet has been prepared by Midland Chemicals

This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. No liability is accepted whether direct or indirect from its application since the conditions of final use are outside Midland Chemicals control. The end user is obliged to conform to relevant government regulations and/or patent laws applicable in their respective States of Countries.

**CALCIUM GLUCONATE GEL** and calcium carbonate tablets are available from Ajax chemicals Ph: (02) 9735 8000 and first aid supply companies.

Or the following Distributors

	Telephone No.	Facsimile No.
<b>N.S.W</b>		
Aust. Scientific Pty Ltd	1800 021083	(02) 4956 2525
Bacto Laboratories Pty Ltd	612 8784 7000	612 9601 8293
Crown Scientific Pty Ltd	1300 727 696	1300 135 123
Selby Scientific Ltd	163 9263 4300	
<b>VIC</b>		
Crown Scientific Pty Ltd	(03) 9764 4722	(03) 9764 4733
Laboratory Supply Pty Ltd	(03) 9558 4477	(03) 9558 4566
Science Supply Associates Pty Ltd	(03) 9543 7144	(03) 9544 7214
Selby Scientific Ltd	13 29 91	T/F 1800 067 639
<b>TAS</b>		
Crown Scientific Pty Ltd	(03) 6229 7437	(03) 6229 2748
Selby Scientific Ltd	13 29 91	T/F 1800 067 639
<b>QLD</b>		
Crown Scientific Pty Ltd	1300 727 696	1300 135 123
Laboratory Supply Pty Ltd	(07) 3394 2000	(07) 3397 0588
North QLD	(077) 71 4144	(077) 71 4177
Selby Scientific Ltd (North QLD)	13 29 91	T/F 1800 067 639

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## SA

Crown Scientific Pty Ltd	1300 727 696	1300 135 123
Laboratory Supply Pty Ltd	(08) 8277 4344	(08) 8276 5592
Selby Scientific Ltd (North QLD)	13 29 91	T/F 1800 067 639

## NT

Medical & Laboratory Supplies Pty Ltd	(08) 8947 2226	(08) 8984 3114
Selby Scientific Ltd	13 29 91	T/F 1800 067 639

## WA

Crown Scientific Pty Ltd	1300 727 696	1300 135 123
Rowe Scientific Pty Ltd	(08) 9302 1911	(08) 9302 1905
Selby Scientific Ltd	613 9263 4300	

### Calcium Gluconate Gel (2.5 calcium gluconate)

Can be obtained from:

1. Pharmacies, in each State or Territory, who have an account with Fauldings Health Care.
2. Ajax chemicals or their distributors in each State or Territory (see attached listing).

### Calcium Gluconate Tablets

Can be obtained from:

1. Pharmacies, in each State or Territory, who have an account with Fauldings Health Care. Brand names "Bioglam" or "Vitrage" – 500mg calcium.
2. Pharmacies, in each State or Territory, who have an account with Novartis (formerly Sandoz) Brand name 1000mg calcium
3. Pharmacies – "Natures Own" brand 500mg calcium

### CALCIUM GLUCONATE IV (B.P.)

Available from David Bull (Fauldings) 10ml ampoules

### Other Sources of Calcium

Available from Pharmacies or Health Stores

- Calcium Carbonate tablets in 200mg or 600mg dose
- Calcium phosphate – 600mg dose

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