

# ALUBRITE

## SAFETY DATA SHEET

**Chemwatch Hazard Alert Code: 4**

Chemwatch: 28-2124

Issue Date: 25/12/2021

Version No: 2.1.1.1

Safety Data Sheet according to WHS and ADG requirements

S.GHS.AUS.EN

### SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

#### Product Identifier

Product name	Curran Chemicals - Alubrite
Synonyms	Aluminium Cleaner
Proper shipping name	CORROSIVE LIQUID, TOXIC, N.O.S. (contains hydrofluoric acid)
Other means of identification	Not Available

#### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Cleans and brightens aluminium surfaces.
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#### Details of the supplier of the safety data sheet

Registered company name	Curran Chemicals Pty Ltd
Address	1/1 Churchill Street, Williamstown, Vic 3016
Telephone	+61 3 93972122
Fax	+61 3 93972199
Website	<a href="https://www.currancleaningsupplies.com">https://www.currancleaningsupplies.com</a>
Email	sales@curranchemicals.com.au

#### Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available


### SECTION 2 HAZARDS IDENTIFICATION

#### Classification of the substance or mixture

**HAZARDOUS CHEMICAL. DANGEROUS GOODS.** According to the WHS Regulations and the ADG Code.

Poisons Schedule	S7
Classification <sup>[1]</sup>	Metal Corrosion Category 1, Acute Toxicity (Oral) Category 2, Acute Toxicity (Dermal) Category 1, Acute Toxicity (Inhalation) Category 1, Skin Corrosion/Irritation Category 1A, Serious Eye Damage Category 1
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

#### Label elements

GHS label elements	
SIGNAL WORD	<b>DANGER</b>

#### Hazard statement(s)

H290	May be corrosive to metals.
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H300	Fatal if swallowed.
H310	Fatal in contact with skin.
H330	Fatal if inhaled.
H314	Causes severe skin burns and eye damage.

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## Curran Chemicals - Alubrite

H318	Causes serious eye damage.
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## Precautionary statement(s) Prevention

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P262	Do not get in eyes, on skin, or on clothing.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.

## Precautionary statement(s) Response

P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
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 position comfortable for breathing.

## Precautionary statement(s) Storage

P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

## Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.
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## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

## Substances

See section below for composition of Mixtures

## Mixtures

CAS No	%[weight]	Name
7664-38-2	1-10	<u>phosphoric acid</u>
7664-39-3	1-10	<u>hydrofluoric acid</u>
Not Available	NotSpec.	surfactants
7732-18-5	>60	<u>water</u>

## SECTION 4 FIRST AID MEASURES

## Description of first aid measures

Eye Contact	<p><b>DO NOT delay.</b></p> <p>If this product or its vapours come in contact with the eyes,</p> <ul style="list-style-type: none"> <li>▶ <b>DO NOT DELAY: Immediately irrigate continuously by holding the eyelids apart and washing with fresh running water.</b></li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids ▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>▶ Transport to hospital, eye clinic or eye specialist, ophthalmologist without delay.</li> </ul>
Skin Contact	<p><b>DO NOT delay.</b></p> <p>If there is evidence of severe skin irritation or skin burns:</p> <ul style="list-style-type: none"> <li>▶ Avoid further contact. Immediately remove contaminated clothing, including footwear. ▶ Flush skin under running water for 15 minutes.</li> <li>▶ Avoiding contamination of the hands, massage <b>calcium gluconate gel</b> into affected areas, pay particular attention to creases in skin. ▶ Contact the Poisons Information Centre.</li> <li>▶ Continue gel application for at least 15 minutes after burning sensation ceases.</li> <li>▶ If pain recurs, repeat application of <b>calcium gluconate gel</b> or apply every 20 minutes.</li> <li>▶ If no gel is available, continue washing for at least 15 minutes, using soap if available. If patient is conscious, give six <b>calcium gluconate or calcium carbonate</b> tablets in water by mouth.</li> <li>▶ Transport to hospital, or doctor, urgently.</li> </ul>

Inhalation	<p>For massive exposures:</p> <ul style="list-style-type: none"> <li>▶ If dusts, vapours, aerosols, fumes or combustion products are inhaled, remove from contaminated area. ▶ Lay patient down.</li> <li>▶ Keep warm and rested.</li> <li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as train. Perform CPR if necessary.</li> <li>▶ If victim is conscious, give six <b>calcium gluconate or calcium carbonate</b> tablets in water by mouth.</li> <li>▶ Transport to hospital, or doctor, urgently.</li> </ul>
Ingestion	<p><b>DO NOT delay.</b> Rinse mouth out with plenty of water. Transport to hospital or doctor and seek immediate medical attention. <b>DO NOT INDUCE vomiting.</b> If patient is conscious, give six <b>calcium gluconate or calcium carbonate</b> tablets dissolved in water, by mouth.</p>

Indication of any immediate medical attention and special treatment needed

Following acute or short term repeated exposure to hydrofluoric acid:

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- ▶ Subcutaneous injections of Calcium Gluconate may be necessary around the burnt area. Continued application of Calcium Gluconate Gel or subcutaneous Calcium Gluconate should then continue for 3-4 days at a frequency of 4-6 times per day. If a "burning" sensation recurs, apply more frequently.
- ▶ Systemic effects of extensive hydrofluoric acid burns include renal damage, hypocalcaemia and consequent cardiac arrhythmias. Monitor haematological, respiratory, renal, cardiac and electrolyte status at least daily. Tests should include FBE, blood gases, chest X-ray, creatinine and electrolytes, urine output, Ca ions, Mg ions and phosphate ions. Continuous ECG monitoring may be required.
- ▶ Where serum calcium is low, or clinical, or ECG signs of hypocalcaemia develop, infusions of calcium gluconate, or if less serious, oral Sandocal, should be given. Hydrocortisone 500 mg in a four to six hourly infusion may help.
- ▶ Antibiotics should not be given as a routine, but only when indicated.
- ▶ Eye contact pain may be excruciating and 2-3 drops of 0.05% pentocaine hydrochloride may be instilled, followed by further irrigation

#### BIOLOGICAL EXPOSURE INDEX - BEI

These represent the determinants observed in specimens collected from a healthy worker exposed at the Exposure Standard (ES or TLV):

Determinant	Index	Sampling Time	Comments
1. Methaemoglobin in blood	1.5% of haemoglobin	During or end of shift	B, NS, SQ
B: Background levels occur in specimens collected from subjects NOT exposed.			

NS: Non-specific determinant; Also seen after exposure to other materials

SQ: Semi-quantitative determinant - Interpretation may be ambiguous; should be used as a screening test or confirmatory test.

## SECTION 5 FIREFIGHTING MEASURES

### Extinguishing media

- ▶ Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit).
- ▶ Carbon dioxide.

### Special hazards arising from the substrate or mixture

Fire Incompatibility	<ul style="list-style-type: none"> <li>▶ Avoid any contamination of this material as it is very reactive and any contamination is potentially hazardous</li> <li>Avoid storage with glass, cement, concrete and other silicon materials; reaction produces toxic silicon tetrafluoride gas; which may pressurise and/or rupture containers. Avoid reaction with organic materials / compounds, powdered metals, reducing agents and hydrogen sulfide (H<sub>2</sub>S) as ignition may result ▶ Reacts with mild steel, galvanised steel / zinc producing hydrogen gas which may form an explosive mixture with air.</li> </ul>
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### Advice for firefighters

Fire Fighting	<ul style="list-style-type: none"> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear full body protective clothing with breathing apparatus.</li> <li>▶ Consider evacuation (or protect in place).</li> <li>▶ Use water delivered as a fine spray to control fire and cool adjacent area.</li> </ul>
Fire/Explosion Hazard	<ul style="list-style-type: none"> <li>▶ Non combustible.</li> <li>▶ Not considered to be a significant fire risk.</li> <li>▶ Acids may react with metals to produce hydrogen, a highly flammable and explosive gas.</li> <li>▶ Heating may cause expansion or decomposition leading to violent rupture of containers.</li> </ul> <p>Other decomposition products include: carbon dioxide (CO<sub>2</sub>), hydrogen fluoride, phosphorus oxides (PO<sub>x</sub>)</p>

## SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures See section 8

Environmental precautions See section 12

Methods and material for containment and cleaning up

Minor Spills	<ul style="list-style-type: none"> <li>▶ <b>DO NOT touch the spill material</b></li> <li>Clean up all spills immediately.</li> <li>Avoid breathing vapours and contact with skin and eyes.</li> <li>Wear impervious gloves and safety glasses.</li> <li>Use soda ash or slaked lime to neutralise.</li> <li>Trowel up/scrape up.</li> <li>Place spilled material in clean, dry, sealable, labelled container.</li> <li>Flush spill area with water.</li> </ul>
Major Spills	<ul style="list-style-type: none"> <li>▶ Clear area of personnel and move upwind.</li> <li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▶ Wear full body protective clothing with breathing apparatus.</li> <li>▶ Prevent, by any means available, spillage from entering drains or water course.</li> </ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS.

## SECTION 7 HANDLING AND STORAGE

### Precautions for safe handling

Safe handling	<ul style="list-style-type: none"> <li>▶ <b>DO NOT allow clothing wet with material to stay in contact with skin</b></li> <li>Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS.</li> <li>▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.</li> </ul>
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	<p>Avoid all personal contact, including inhalation Wear protective clothing when risk of exposure occurs. Avoid contact with incompatible materials. <b>WARNING:</b> To avoid violent reaction, ALWAYS add material to water and NEVER water to material. ▶ Handle and open container with care <b>When handling, DO NOT eat, drink or smoke.</b> Keep containers securely sealed when not in use Avoid physical damage to containers. Wash hands with soap and water after handling. Work clothes should be laundered separately: NOT at home.</p>
Other information	<ul style="list-style-type: none"> <li>▶ Keep containers securely sealed</li> <li>Store in a cool, dry and well-ventilated area.</li> <li>▶ Store away from incompatible materials.</li> </ul> <p>Floors should be covered or coated with acid resistant material. <b>DO NOT stack on wooden pallets.</b> ▶ <b>DO NOT store in pits, depressions, basements or areas where vapours may be trapped</b> Protect containers against physical damage ▶ Check regularly for spills and leaks</p>

### Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none"> <li>▶ Polyethylene or polypropylene container.</li> <li>▶ Packing as recommended by manufacturer.</li> <li>▶ Check all containers are clearly labelled and free from leaks.</li> </ul>
Storage incompatibility	<p>Avoid storage with glass, cement, concrete and other silicon materials; reaction produces toxic silicon tetrafluoride gas; which may pressurise and/or rupture containers.</p> <ul style="list-style-type: none"> <li>▶ <b>DO NOT use unlined steel containers</b></li> <li>▶ <b>DO NOT use aluminium, galvanised or tin-plated containers</b></li> <li>▶ Segregate from alkalis, oxidising agents and chemicals readily decomposed by acids, i.e. cyanides, sulfides, carbonates.</li> </ul> <p>, combustible materials and metal oxides</p>

## SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters

#### OCCUPATIONAL EXPOSURE LIMITS (OEL)

#### INGREDIENT DATA


Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	phosphoric acid	Phosphoric acid	1 mg/m3	3 mg/m3	Not Available	Not Available
Australia Exposure Standards	hydrofluoric acid	Hydrogen fluoride (as F)	Not Available	Not Available	2.6 mg/m3 / 3 ppm	Not Available

#### EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
phosphoric acid	Phosphoric acid	Not Available	Not Available	Not Available

hydrofluoric acid	Hydrogen fluoride; (Hydrofluoric acid)	Not Available	Not Available	Not Available
Ingredient	Original IDLH	Revised IDLH		
phosphoric acid	10,000 mg/m3	1,000 mg/m3		
hydrofluoric acid	30 ppm	30 [Unch] ppm		
surfactants	Not Available	Not Available		
water	Not Available	Not Available		

**Exposure controls**

Appropriate engineering controls	<p>Use in a well-ventilated area</p> <p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.</p>
Personal protection	
Eye and face protection	<ul style="list-style-type: none"> <li>▶ Chemical goggles.</li> <li>▶ Full face shield may be required for supplementary but never for primary protection of eyes.</li> <li>▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.</li> </ul>
Skin protection	See Hand protection below

Hands/feet protection	<ul style="list-style-type: none"> <li>▶ Barrier cream and</li> <li>▶ Neoprene rubber gloves</li> </ul> or <ul style="list-style-type: none"> <li>▶ Nitrile rubber gloves</li> <li>▶ Elbow length PVC gloves ▶</li> <li>Rubber boots</li> <li>▶ PVC safety gumboots</li> </ul>
Body protection	See Other protection below
Other protection	<ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ PVC Apron.</li> <li>▶ PVC protective suit may be required if exposure severe. ▶</li> <li>Eyewash unit.</li> </ul> Always ensure that a supply, is on hand, of calcium gluconate gel for treatment of burns and calcium carbonate tablets for accidental ingestion.
Thermal hazards	Not Available

## Recommended material(s)

## GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the "Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the computergenerated selection: NV Chemicals Alum-Bright

Material	CPI
##hydrofluoric	acid
NEOPRENE	A
BUTYL	C
BUTYL/NEOPRENE	C
NAT+NEOPR+NITRILE	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE/NATURAL	C
NITRILE	C
NITRILE+PVC	C
PE	C
PVA	C
PVC	C
SARANEX-23	C

\* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

VITON	C
VITON/NEOPRENE	C

\* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

## Respiratory protection

Type B-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	B-AUS P2	-	B-PAPR-AUS / Class 1 P2
up to 50 x ES	-	B-AUS / Class 1 P2	-
up to 100 x ES	-	B-2 P2	B-PAPR-2 P2 ^

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB =

Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

## Information on basic physical and chemical properties

Appearance	Clear green acidic liquid; mixes with water to form a foaming solution.		
Physical state	Liquid	Relative density (Water = 1)	1.14
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	-1	Decomposition temperature	Not Available

Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point and boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available

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### NV Chemicals Alum-Bright

Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Miscible	pH as a solution (1%)	~2
Vapour density (Air = 1)	Not available.	VOC g/L	Not Available

### SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"> <li>▶ Presence of heat source</li> <li>▶ Unstable in the presence of incompatible materials.</li> <li>▶ Product is considered stable.</li> <li>▶ Hazardous polymerisation will not occur.</li> </ul>
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

### SECTION 11 TOXICOLOGICAL INFORMATION

#### Information on toxicological effects

Inhaled	<p>The material can cause respiratory irritation in some persons. The body's response to such irritation can cause further lung damage. Corrosive acids can cause irritation of the respiratory tract, with coughing, choking and mucous membrane damage. There may be dizziness, headache, nausea and weakness.</p> <p>Inhalation hazard is increased at higher temperatures.</p> <p>Acute effects of fluoride inhalation include irritation of nose and throat, coughing and chest discomfort. A single acute over-exposure may even cause nose bleed.</p> <p>Acute inhalation exposures to hydrogen fluoride (hydrofluoric acid) vapours produce severe eye, nose, and throat irritation; delayed fever, cyanosis, and pulmonary edema; and may cause death.</p> <p>Even fairly low airborne concentrations of hydrogen fluoride produce rapid onset of eye, nose, and throat irritation. Hydrogen fluoride has a strong irritating odor that is discernible at concentrations of about 0.04 ppm. Higher concentrations of the vapour/ mist may cause corrosion of the throat, nose and lungs, leading to severe inflammation, pulmonary oedema or possible hypocalcaemia.</p> <p>Inhalation of aerosols (mists, fumes), generated by the material during the course of normal handling, may produce severely toxic effects. Relatively small amounts absorbed from the lungs may prove fatal.</p>
Ingestion	<p><b>Severely toxic effects</b> may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 5 g may be fatal or may produce serious damage to the health of the individual.</p> <p>Ingestion of acidic corrosives may produce burns around and in the mouth, the throat and oesophagus. Immediate pain and difficulties in swallowing and speaking may also be evident.</p> <p>Fluoride causes severe loss of calcium in the blood, with symptoms appearing several hours later including painful and rigid muscle contractions of the limbs.</p> <p>Cardiovascular collapse can occur and may cause death with increased heart rate and other heart rhythm irregularities.</p>
Skin Contact	<p>Skin contact with the material may produce severely toxic effects; systemic effects may result following absorption and these may be fatal.</p> <p>Skin contact with acidic corrosives may result in pain and burns; these may be deep with distinct edges and may heal slowly with the formation of scar tissue. Fluorides are easily absorbed through the skin and cause death of soft tissue and erode bone. Healing is delayed and dead tissue may continue to spread beneath skin.</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Contact of the skin with liquid hydrofluoric acid (hydrogen fluoride) may cause severe burns, erythema, and swelling, vesiculation, and sequestering. With more serious burns, ulceration, blue-gray discoloration, and necrosis may occur. Solutions of hydrofluoric acid, as dilute as 5% may cause severe skin burns. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p>

Continued...

Eye	Direct eye contact with acid corrosives may produce pain, tears, sensitivity to light and burns. Mild burns of the epithelia generally recover rapidly and completely. Experiments in which a 20-percent aqueous solution of hydrofluoric acid (hydrogen fluoride) was instilled into the eyes of rabbits caused immediate damage in the form of total corneal opacification and conjunctival ischemia; within an hour, corneal stroma edema occurred, followed by necrosis of anterior ocular structures.								
Chronic	Repeated or prolonged exposure to acids may result in the erosion of teeth, swelling and/or ulceration of mouth lining. Irritation of airways, lung, with cough, and inflammation of lung tissue often occurs. Long-term exposure to respiratory irritants may result in disease of the airways involving difficult breathing and related systemic problems. Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. Extended exposure to inorganic fluorides causes fluorosis, which includes signs of joint pain and stiffness, tooth discoloration, nausea and vomiting, loss of appetite, diarrhoea or constipation, weight loss, anaemia, weakness and general unwellness. There may also be frequent urination and thirst. Hydrogen fluoride easily penetrates the skin and causes destruction and corrosion of the bone and underlying tissue. Ingestion causes severe pains and burns in the mouth and throat and blood calcium levels are dangerously reduced.								
NV Chemicals Alum-Bright	<table border="1"> <thead> <tr> <th>TOXICITY</th> <th>IRRITATION</th> </tr> </thead> <tbody> <tr> <td>Not Available</td> <td>Not Available</td> </tr> </tbody> </table>	TOXICITY	IRRITATION	Not Available	Not Available				
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NV Chemicals Alum-Bright

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Oral (rat) LD50: >90000 mg/kg <sup>[2]</sup>	Not Available						
Legend:	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances						

PHOSPHORIC ACID	for acid mists, aerosols, vapours Data from assays for genotoxic activity in vitro suggest that eukaryotic cells are susceptible to genetic damage when the pH falls to about 4. Cells from the respiratory tract have not been examined in this respect. Mucous secretion may protect the cells of the airways from direct exposure to inhaled acidic mists, just as mucous plays an important role in protecting the gastric epithelium from its auto-secreted hydrochloric acid. In considering whether phosphoric acid induces genotoxic events in vivo in the respiratory system, comparison should be made with the human stomach, in which gastric juice has a pH 1-2 under fasting or nocturnal conditions, and with the human urinary bladder, in which the pH of urine can range from <5 to > 7 and normally averages 6.2. The material may cause severe skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin. Repeated exposures may produce severe ulceration. phosphoric acid ( 85%)
HYDROFLUORIC ACID	The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function. (liver and kidney damage) [Manufacturer] for hydrogen fluoride (as vapour)
PHOSPHORIC ACID & HYDROFLUORIC ACID & WATER	No significant acute toxicological data identified in literature search.
PHOSPHORIC ACID & HYDROFLUORIC ACID	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
PHOSPHORIC ACID & HYDROFLUORIC ACID	Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergen condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS.
Acute Toxicity	Carcinogenicity



Skin Irritation/Corrosion		Reproductivity	
Serious Eye Damage/Irritation	✓	STOT - Single Exposure	⊘
Respiratory or Skin sensitisation	⊘	STOT - Repeated Exposure	⊘
Mutagenicity	⊘	Aspiration Hazard	⊘

Legend: ✗ - Data available but does not fill the criteria for classification

✓ - Data required to make classification available

⊘ - Data Not Available to make classification

## SECTION 12 ECOLOGICAL INFORMATION

### Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
phosphoric acid	LC50	96	Fish	75.1mg/L	2
phosphoric acid	EC50	48	Crustacea	>100mg/L	2
phosphoric acid	EC50	72	Algae or other aquatic plants	>100mg/L	2
phosphoric acid	EC50	72	Algae or other aquatic plants	77.9mg/L	2
phosphoric acid	NOEC	72	Algae or other aquatic plants	<7.5mg/L	2
hydrofluoric acid	LC50	96	Fish	51mg/L	2
hydrofluoric acid	EC50	48	Crustacea	97mg/L	2
hydrofluoric acid	EC50	96	Crustacea	10.5mg/L	2
hydrofluoric acid	NOEC	504	Crustacea	3.7mg/L	2
hydrofluoric acid	EC50	96	Algae or other aquatic plants	43mg/L	2
water	EC50	384	Crustacea	199.179mg/L	3
water	EC50	96	Algae or other aquatic plants	8768.874mg/L	3
water	LC50	96	Fish	897.520mg/L	3

#### Legend:

Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data

**DO NOT discharge into sewer or waterways.**

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**Persistence and degradability**

Ingredient	Persistence: Water/Soil	Persistence: Air
phosphoric acid	HIGH	HIGH
water	LOW	LOW

**Bioaccumulative potential**

Ingredient	Bioaccumulation
phosphoric acid	LOW (LogKOW = -0.7699)
water	LOW (LogKOW = -1.38)

**Mobility in soil**

Ingredient	Mobility
phosphoric acid	HIGH (KOC = 1)
water	LOW (KOC = 14.3)

**SECTION 13 DISPOSAL CONSIDERATIONS****Waste treatment methods**

Product / Packaging disposal	
	<ul style="list-style-type: none"> <li>▶ Recycle wherever possible or consult manufacturer for recycling options.</li> <li>▶ Consult State Land Waste Management Authority for disposal.</li> <li>▶ Treat and neutralise at an effluent treatment plant.</li> <li>▶ Use soda ash or slaked lime to neutralise.</li> </ul>

**SECTION 14 TRANSPORT INFORMATION****Labels Required**

	 
Marine Pollutant	NO
HAZCHEM	2X

**Land transport (ADG)**

UN number	2922				
UN proper shipping name	CORROSIVE LIQUID, TOXIC, N.O.S. (contains hydrofluoric acid)				
Transport hazard class(es)	<table border="1"> <tr> <td>Class</td> <td>8</td> </tr> <tr> <td>Subrisk</td> <td>6.1</td> </tr> </table>	Class	8	Subrisk	6.1
Class	8				
Subrisk	6.1				
Packing group	II				
Environmental hazard	Not Applicable				
Special precautions for user	<table border="1"> <tr> <td>Special provisions</td> <td>274</td> </tr> <tr> <td>Limited quantity</td> <td>1 L</td> </tr> </table>	Special provisions	274	Limited quantity	1 L
Special provisions	274				
Limited quantity	1 L				

**Air transport (ICAO-IATA / DGR)**

UN number	2922						
UN proper shipping name	Corrosive liquid, toxic, n.o.s. * (contains hydrofluoric acid)						
Transport hazard class(es)	<table border="1"> <tr> <td>ICAO/IATA Class</td> <td>8</td> </tr> <tr> <td>ICAO / IATA Subrisk</td> <td>6.1</td> </tr> <tr> <td>ERG Code</td> <td>8P</td> </tr> </table>	ICAO/IATA Class	8	ICAO / IATA Subrisk	6.1	ERG Code	8P
ICAO/IATA Class	8						
ICAO / IATA Subrisk	6.1						
ERG Code	8P						
Packing group	II						
Environmental hazard	Not Applicable						

Continued...

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Special precautions for user	Special provisions	A3A803
	Cargo Only Packing Instructions	855
	Cargo Only Maximum Qty / Pack	30 L
	Passenger and Cargo Packing Instructions	851
	Passenger and Cargo Maximum Qty / Pack	1 L
	Passenger and Cargo Limited Quantity Packing Instructions-Y840 Passenger and Cargo Limited Maximum Qty / Pack	0.5 L
<b>Sea transport (IMDG-Code / GGVSee)</b>		
UN number	2922	
UN proper shipping name	CORROSIVE LIQUID, TOXIC, N.O.S. (contains hydrofluoric acid)	
Transport hazard class(es)	IMDG Class	8
	IMDG Subrisk	6.1
Packing group	II	
Environmental hazard	Not Applicable	
Special precautions for user	EMS Number	F-A, S-B
	Special provisions	274
	Limited Quantities	1 L

Transport in bulk according to Annex II of MARPOL and the IBC code Not Applicable

## SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

**PHOSPHORIC ACID(7664-38-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

**HYDROFLUORIC ACID(7664-39-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Exposure Standards

Australia Inventory of Chemical Substances (AICS)

Australia Hazardous Substances Information System - Consolidated Lists

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs

**WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS**

Australia Inventory of Chemical Substances (AICS)

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (phosphoric acid; water; hydrofluoric acid)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (water)
Korea - KECI	Y
New Zealand - NZIoC	Y
Philippines - PICCS	Y
USA - TSCA	Y
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

## SECTION 16 OTHER INFORMATION

Other information

Ingredients with multiple cas numbers

Continued...

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Name	CAS No
phosphoric acid	7664-38-2, 16271-20-8
hydrofluoric acid	7664-39-3, 790596-14-4

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:  
[www.chemwatch.net](http://www.chemwatch.net)

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

#### Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average  
PC—STEL: Permissible Concentration-Short Term Exposure  
Limit IARC: International Agency for Research on Cancer  
ACGIH: American Conference of Governmental Industrial Hygienists  
STEL: Short Term Exposure Limit  
TEEL: Temporary Emergency Exposure Limit.  
IDLH: Immediately Dangerous to Life or Health Concentrations  
OSF: Odour Safety Factor  
NOAEL :No Observed Adverse Effect Level  
LOAEL: Lowest Observed Adverse Effect  
Level TLV: Threshold Limit Value  
LOD: Limit Of Detection  
OTV: Odour Threshold  
Value  
BCF: BioConcentration Factors  
BEI: Biological Exposure Index

