

# SAFETY DATA SHEET



Revision date: 16-Nov-2022

Revision Number 9

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### Product identifier

**Product Name** ALUMINIUM SULFATE SOLUTION  
**Product Code(s)** 000000017523  
**Synonyms** Aluminium Sulphate Solution; Aluminium sulfate liquid; Liquid alum; Profloc AS.  
**Recommended use** Water treatment chemical.

### Supplier

Ixom Central Pacific Ltd  
Company Number: 1030  
Street Address: Lots 3&4 Wailada Industrial Estate  
Lami  
Fiji  
Telephone Number: +67 9 336 1144  
Facsimile: +67 9 336 1500

**Emergency telephone number** **+61 3 9663 2130 (International, Australia, All Hours)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## 2. HAZARDS IDENTIFICATION

### GHS Classification

Not classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG)

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

<b>Skin corrosion/irritation</b>	Category 2
<b>Serious eye damage/eye irritation</b>	Category 1

### **SIGNAL WORD**

Danger

### Label elements

Corrosion



### **Hazard statements**

H315 - Causes skin irritation  
H318 - Causes serious eye damage

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
 Do not eat, drink or smoke when using this product  
 Wear protective gloves / protective clothing / eye protection / face protection

**Precautionary Statements - Response**

Specific treatment (see First aid on this SDS)  
 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  
 IF ON SKIN: Wash with plenty of soap and water  
 If skin irritation occurs: Get medical advice/attention  
 Take off contaminated clothing and wash before reuse

**Precautionary Statements - Storage**

No storage statements

**Precautionary Statements - Disposal**

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

**Other hazards which do not result in classification**

**Poisons Schedule (SUSMP)** None allocated

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

Chemical name	CAS No.	Weight-%
Aluminium sulfate	10043-01-3	25.7-26.8% (50.0-52.3% as Al <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> .18H <sub>2</sub> O)
Sulfuric acid	7664-93-9	Trace
Non hazardous component(s)	-	to 100

**4. FIRST AID MEASURES****Description of first aid measures**

<b>General advice</b>	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor. Show this safety data sheet to the doctor in attendance.
<b>Inhalation</b>	Remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms occur.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash skin with soap and water. Get medical attention immediately if symptoms occur.
<b>Ingestion</b>	Clean mouth with water. Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention if symptoms occur.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness).

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically. Can cause corneal burns.

**5. FIRE FIGHTING MEASURES**

**Suitable Extinguishing Media****Suitable Extinguishing Media** Dry chemical, CO2, water spray or regular foam.**Unsuitable extinguishing media** No information available.**Specific hazards arising from the chemical****Specific hazards arising from the chemical** Non-combustible.**Special protective actions for fire-fighters****Special protective equipment for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.**6. ACCIDENTAL RELEASE MEASURES****Personal precautions, protective equipment and emergency procedures****Personal precautions** Avoid contact with skin, eyes and inhalation of vapors. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Evacuate personnel to safe areas. Use personal protective equipment as required. Wash thoroughly after handling.**For emergency responders** Use personal protection recommended in Section 8.**Environmental precautions****Environmental precautions** See Section 12 for additional Ecological Information.**Methods and material for containment and cleaning up****Methods for containment** Prevent further leakage or spillage if safe to do so.**Methods for cleaning up** Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.**7. HANDLING AND STORAGE****Precautions for safe handling****Advice on safe handling** Avoid contact with skin and eyes. Avoid breathing vapors or mists. Do not eat, drink or smoke when using this product. Use personal protection equipment. Wash thoroughly after handling.**Conditions for safe storage, including any incompatibilities****Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container closed when not in use.**Incompatible materials** Alkalis. Metals.**Poisons Schedule (SUSMP)** None allocated

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Limits

No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Aluminium, soluble salts (as Al): 8hr TWA = 2 mg/m<sup>3</sup>  
Sulfuric acid: 8hr TWA = 1 mg/m<sup>3</sup>, 15 min STEL = 3 mg/m<sup>3</sup>

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

STEL (Short Term Exposure Limit) - the airborne concentration of a particular substance calculated as a time-weighted average over 15 minutes, which should not be exceeded at any time during a normal eight hour work day. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

### Appropriate engineering controls

#### Engineering controls

Eyewash stations. Apply technical measures to comply with the occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

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

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES.



#### Eye/face protection

Tight sealing safety goggles.

#### Skin and body protection

Boots. Impervious clothing. Overalls.

#### Hand protection

Impervious gloves.

#### Respiratory protection

If determined by a risk assessment an inhalation risk exists, wear a suitable mist respirator

meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

**Environmental exposure controls** No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

**Physical state** Liquid  
**Appearance** No information available.  
**Color** Pale Straw  
**Odor** Odourless  
**Odor threshold** No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	2.3-2.8	None known
<b>pH (as aqueous solution)</b>	No data available	None known
<b>Melting point / freezing point</b>	No data available	None known
<b>Boiling point / boiling range</b>	>100°C	None known
<b>Flash point</b>	Not applicable	None known
<b>Evaporation rate</b>	No data available	None known
<b>Flammability (solid, gas)</b>	No data available	None known
<b>Flammability Limit in Air</b>		None known
<b>Upper flammability or explosive limits</b>	Not applicable	
<b>Lower flammability or explosive limits</b>	Not applicable	
<b>Vapor pressure</b>	No data available	None known
<b>Vapor density</b>	No data available	None known
<b>Relative density</b>	ca. 1.3	None known
<b>Water solubility</b>	Miscible in water	None known
<b>Solubility(ies)</b>	No data available	None known
<b>Partition coefficient</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>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	No data available	None known

### Other information

## 10. STABILITY AND REACTIVITY

### Reactivity

**Reactivity** Reacts with metals.

### Chemical stability

**Stability** Stable under normal conditions.

### Explosion data

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

### Possibility of hazardous reactions

**Possibility of hazardous reactions** None under normal processing.

**Hazardous polymerization** Hazardous polymerization does not occur.

**Conditions to avoid**

**Conditions to avoid** Do not contaminate food or feed stuffs. Extremes of temperature and direct sunlight.

**Incompatible materials**

**Incompatible materials** Alkalis. Metals.

**Hazardous decomposition products**

**Hazardous decomposition products** Aluminium oxides. Oxides of sulfur.

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

**Information on likely routes of exposure**

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

**Inhalation** May cause irritation.

**Eye contact** Severely irritating to eyes. Causes serious eye damage.

**Skin contact** Irritating to skin.

**Ingestion** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

**Symptoms** Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness).

**Numerical measures of toxicity - Product Information**

Refer to component information below.

**Numerical measures of toxicity - Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Aluminium sulfate	= 1930 mg/kg ( Rat )	-	-
Sulfuric acid	= 2140 mg/kg ( Rat )	-	85 - 103 mg/m <sup>3</sup> ( Rat ) 1 h

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** Irritating to skin.

**Serious eye damage/eye irritation** Causes serious eye damage.

**Respiratory or skin sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity** Keep out of waterways.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Aluminium sulfate	-	LC50: =27.9mg/L (96h, Pimephales promelas) LC50: =100mg/L (96h, Carassius auratus) LC50: =37mg/L (96h, Gambusia affinis)	-	EC50: =136mg/L (15min, Daphnia magna)
Sulfuric acid	-	LC50: >500mg/L (96h, Brachydanio rerio)	-	EC50: =29mg/L (24h, Daphnia magna)

### Persistence and degradability

**Persistence and degradability** No information available.

### Bioaccumulative potential

**Bioaccumulation** No information available.

### Mobility

**Mobility in soil** No information available.

### Other adverse effects

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14. TRANSPORT INFORMATION

### ADG

Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

**IATA**

Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

**IMDG**

Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.

**15. REGULATORY INFORMATION****Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****Australia**

Not classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG)

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

See section 8 for national exposure control parameters

**Poisons Schedule (SUSMP)**                      None allocated

**International Inventories****AIIC**

All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals.

**Legend:**

**AIIC - Australian Inventory of Industrial Chemicals**

**International Regulations**

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

**16. OTHER INFORMATION**

**Reason(s) For Issue:** Revised Primary SDS  
Updated Formulation

**Issuing Date:**                                      16-Nov-2022

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

**Revision Note:**

The symbol (\*) in the margin of this SDS indicates that this line has been revised.

**Key or legend to abbreviations and acronyms used in the safety data sheet**



Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

**Key literature references and sources for data used to compile the SDS**

EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGL(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australian Industrial Chemicals Introduction Scheme (AICIS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 RTECS (Registry of Toxic Effects of Chemical Substances)  
 World Health Organization

**Disclaimer**

**This SDS 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. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.**

**If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.**

**Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.**

**End of Safety Data Sheet**