



SAFETY DATA SHEET

Revision date: 29-Apr-2024

Revision Number 8

Section 1: Identification

Product identifier

Product Name ALUMINIUM SULFATE SOLUTION

Product Code(s) 000034422701

Other means of identification

Synonyms Aluminium Sulphate Solution; Aluminium sulfate liquid; Liquid alum; Profloc AS; ALUSUL08.

Recommended use of the chemical and restrictions on use

Recommended use Water treatment chemical.

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier

Ixom Operations Pty Ltd (Incorporated in Australia)
NZBN: 9429041465226 Address: 166 Totara Street
Mt Maunganui South
New Zealand

Telephone Number: +64 9 368 2700

Facsimile: +64 9 368 2710

Emergency telephone number

Emergency Telephone 0 800 734 607 (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.

Section 2: Hazard identification

Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

Classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

GHS Classification

Corrosive to metals	Category 1
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

Label elements



Signal word
Danger

Hazard statements H290 - May be corrosive to metals
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements - Prevention

Keep only in original packaging.
Wash face, hands and any exposed skin thoroughly after handling.
Wash eyes thoroughly after handling.
Wear protective gloves/clothing and eye/face protection.
Avoid release to the environment.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Skin

IF ON SKIN: Wash with plenty of soap and water.
Call a POISON CENTER or doctor/physician if you feel unwell.

Ingestion

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Spill

Absorb spillage to prevent material damage.
Collect spillage.

Precautionary Statements - Storage

Store in corrosion resistant container with a resistant inner liner.

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

No information available.

Section 3: Composition/information on ingredients

Chemical name	CAS No.	Weight-%
Aluminium sulfate	10043-01-3	ca. 28%
Non hazardous component(s)	-	to 100%

Section 4: First-aid measures

Description of first aid measures

General advice	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.
Inhalation	Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. (Call a physician if symptoms occur).
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	IF ON SKIN: Wash with plenty of soap and water. Get medical attention if symptoms occur.
Ingestion	Clean mouth with water. Do NOT induce vomiting. Drink 1 or 2 glasses of water. Get immediate medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms	Irritation. May cause redness and tearing of the eyes. Erythema (skin redness).
Effects of Exposure	No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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Section 5: Fire-fighting measures

Hazchem code	2X.
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Suitable Extinguishing Media

Suitable Extinguishing Media	Dry chemical, CO2, water spray or regular foam.
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Unsuitable extinguishing media	No information available.
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Specific hazards arising from the chemical

Specific hazards arising from the chemical	Environmentally hazardous. Non-combustible.
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Special protective actions for fire-fighters

Special protective equipment and precautions for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear.
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Section 6: Accidental release measures**Personal precautions, protective equipment and emergency procedures**

Personal precautions	Avoid contact with skin, eyes or clothing. Do not touch or walk through spilled material. Evacuate personnel to safe areas. Use personal protective equipment as required. Wash thoroughly after handling.
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For emergency responders	Use personal protection recommended in Section 8.
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Environmental precautions

Environmental precautions Local authorities should be advised if significant spillages cannot be contained.

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.

Precautions to prevent secondary hazards

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

Section 7: Handling and storage

Precautions for safe handling

Advice on safe handling Avoid contact with skin and eyes. 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.

Packaging materials Do not store in aluminium containers. Do not store in unlined mild steel containers.

Incompatible materials Alkalis. Aluminium. Mild steel.

Section 8: Exposure controls/personal protection

Control parameters

Exposure Limits No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority.

Chemical name	New Zealand	Australia	ACGIH TLV	United Kingdom
Aluminium sulfate 10043-01-3	-	TWA: 2 mg/m ³	-	TWA: 2 mg/m ³ STEL: 6 mg/m ³

Appropriate engineering controls

Engineering controls Ensure adequate ventilation, especially in confined areas.

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

Goggles.

Hand protection

Impervious gloves.

Skin and body protection

Overalls. Boots. Apron.

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.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	No information available
Color	Off-white to Light Grey
Odor	Negligible.
Odor threshold	No information available

Property	Values	Remarks • Method
pH	1.8-2.4	None known
Melting point / freezing point	-15°C	None known
Boiling point / boiling range	102 °C	None known
Flash point	Not applicable	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	Not applicable	
Lower flammability or explosive limits	Not applicable	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	1.31-1.33 @20°C	None known
Water solubility	Miscible in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Particle characteristics

Section 10: Stability and reactivity

Reactivity

Reactivity Reacts with strong alkalis. Corrosive to metals.

Chemical stability

Stability Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

Hazardous polymerization Hazardous polymerization does not occur.

Possibility of hazardous reactions None under normal processing.

Conditions to avoid

Conditions to avoid Contact with incompatible materials.

Incompatible materials

Incompatible materials Alkalis. Aluminium. Mild steel.

Hazardous decomposition products

Hazardous decomposition products Aluminium oxides. Oxides of sulfur.

Section 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 Causes serious eye irritation.

Skin contact Causes skin irritation.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

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

Acute toxicity

Numerical measures of toxicity
No information available

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Aluminium sulfate	= 1930 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	-

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

Skin corrosion/irritation	Causes skin irritation. Classification is based on mixture calculation methods based on component data.
Serious eye damage/eye irritation	Causes serious eye irritation. Classification is based on mixture calculation methods based on component data.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.
Data used to identify the health effects	Refer to Section 16 for Key literature references and sources for data used to compile the SDS.

Section 12: Ecological information**Ecotoxicity**

Aquatic ecotoxicity Keep out of waterways. Toxic to aquatic life with long lasting effects.
96hr LC50 (static) (*Salvelinus fontinalis*): 3.6 mg/L.

Chemical name	Algae/aquatic plants	Fish	Crustacea
Aluminium sulfate	-	LC50: =27.9mg/L (96h, Pimephales promelas)	-

Terrestrial ecotoxicity There is no data for this product.

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation There is no data for this product.

Mobility in soil**Mobility** No information available.**Other adverse effects**

No information available.

Section 13: Disposal considerations**Waste treatment methods****Waste from residues/unused products**

Dispose of product in packaging/container in a way that is consistent with the Hazardous Substances (Disposal) Notice 2017 and the Act, and Hazardous Substances (Amendments and Revocations) Notice 2020.

Treat the chemical using a method that changes the characteristics or composition of the chemical so that the chemical is no longer a hazardous chemical; or export the chemical from New Zealand as waste.

Class 6 and 8 chemicals – may be discharged into the environment if a tolerable exposure limit has been set for the substance (or a component of that chemical); and the discharge does not, after reasonable mixing, result in the concentration of the substance in an environmental medium exceeding the tolerable exposure limit. If there is not tolerable exposure limit for the substance, then it may only be discharged into the environment if the substance is very rapidly converted to substances that are not hazardous substances..

Contaminated packaging

For packages that have been in direct contact with hazardous substances, the person must ensure that the package is rendered incapable of containing any substance. It must be disposed of in a manner that is consistent with the requirements for disposal of the substance that it contained, taking into account the material the package is manufactured from.

Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous chemical (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the chemical to be classified as hazardous (class 6, 8, or 9 chemical)..

Section 14: Transport information**ROAD AND RAIL TRANSPORT**

Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

UN number or ID number
Proper shipping name
Transport hazard class(es)
Packing group
Hazchem code
IATA

3264
CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS ALUMINIUM SULFATE)
8
III
2X
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN number
UN proper shipping name
Transport hazard class(es)
Packing group

3264
CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS ALUMINIUM SULPHATE)
8
III

IMDG

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN number

3264

UN proper shipping name	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (CONTAINS ALUMINIUM SULFATE)
Transport hazard class(es)	8
Packing group	III
IMDG EMS Fire	F-A
IMDG EMS Spill	S-B
Marine pollutant	P

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No information available

Special precautions for user

Please refer to the applicable dangerous goods regulations for additional information

Section 15: Regulatory information**Safety, health and environmental regulations/legislation specific for the substance or mixture**

EPA New Zealand HSNO approval code or group standard HSR002681 - Water Treatment Chemicals (Corrosive)

National regulations There are no applicable tolerable exposure limits or environmental exposure limits according to the EPA Controls for Hazardous Substances

Certified handlers, tracking and controlled substance license requirements Certified handlers are required for some substances. This includes substances requiring a controlled substance license, and most explosives, vertebrates toxic agents, and certain fumigants. Acutely toxic substances which are a Category 1 or 2, such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information

Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information

Controlled substance licenses are required to possess certain explosives, vertebrate toxic agents and fumigants. See Part 7 of the Health and Safety at Work Regulation 2017 for more information

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

International Inventories

NZIoC	All the constituents of this material are listed on the New Zealand Inventory of Chemicals.
TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	Contact supplier for inventory compliance status.
TCSI	Contact supplier for inventory compliance status.

Legend:

NZIoC - New Zealand Inventory of Chemicals

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC- Australian Inventory of Industrial Chemicals
TCSI - Taiwan Chemical Substance Inventory

Section 16: Other information

Prepared By This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).
Revision date: 29-Apr-2024
Reason(s) For Issue: 5 Yearly Revised Primary SDS
 Change in Hazardous Chemical Classification

Revision Note:

***Indicates updated data since last publication.

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

Legend

SVHC: Substances of Very High Concern for Authorization:
 PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
 vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances
 STOT: Specific Target Organ Toxicity
 ATE: Acute Toxicity Estimate
 LC50: 50% Lethal Concentration
 LD50: 50% Lethal Dose

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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

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

Agency for Toxic Substances and Disease Registry (ATSDR)
 U.S. Environmental Protection Agency ChemView Database
 European Food Safety Authority (EFSA)
 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)
 National Institute of Technology and Evaluation (NITE)
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
 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)
 U.S. 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
 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