

Section 1. IDENTIFICATION

Product Name:	Aluminium Sulphate Solution
Other Names:	ALUM; Aluminium Sulfate, Solution; Liquid Aluminium Sulphate
Uses:	Flocculating Agent.
Chemical Family:	No Data Available
Chemical Formula:	Unspecified
Chemical Name:	Sulphuric Acid, Aluminium Salt, Solution
Product Description:	No Data Available


CONTACT DETAILS OF THE SUPPLIER OF THIS SAFETY DATA SHEET

Business:	Colonial Chemicals Australia		
Address:	Skewes Road, Bendemeer, NSW, AUSTRALIA, 2355		
Postal Address:	P.O Box 167 Moonbi, NSW, 2353		
Phone:	02 67 696 658	Mobile: 0427 696658	Fax: 02 57015137
Email:	admin@colonialchemicals.com.au		
Web Site:	www.colonialchemicals.com.au		

Emergency Contact Details -For emergencies only; DO NOT contact these companies for general product advice.

Poisons Information Centre -Westmead NSW	131126 or 1800-251525
Chemcall Australia	1800-127406

Section 2. HAZARD IDENTIFICATION

Poisons Shedule (Aust)	Not Scheduled	
Globally Harmonised System Hazard Classification	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)	
Hazard Categories	Serious Eye Damage/Irritation – Category 2A	
Pictograms		
Signal Word	Warning	
Hazard Statements	H319	Causes serious eye irritation.
Precautionary Statements: Prevention	P280	Wear eye protection/face protection.
	P264	Wash hands thoroughly after handling.
Response	P337 + P313 P305 + P351 + P338	If eye irritation persists: Get medical attention/advice IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing ***Continued Over Page***

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Section 2. HAZARD IDENTIFICATION (Continued)

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code).

Dangerous Goods Classification NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code).

Section 3. COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS

CHEMICAL ENTITY	FORMULA	CAS NUMBER	PROPORTION%
Water	H ₂ O	7732-18-5	40 – 70%
Aluminium Sulfate, hydrated (octadecahydrate)	Unspecified	7784-31-8	30 – 60%

Section 4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting. Call a Poison Centre or doctor/physician if you feel unwell. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Never give anything by mouth to an unconscious person.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Immediately call a Poison Centre or doctor/physician; Transport to hospital or doctor without delay. It is recommended that removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin	IF ON SKIN: Remove contaminated clothing and shoes immediately. Flush skin with running water for several minutes; Wash with plenty of soap and water, if available. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing before reuse.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if respiratory symptoms persist, or if you feel unwell. Apply resuscitation if victim is not breathing - Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved and take precautions to protect themselves.

Medical Conditions Aggravated by Exposure No information available.

Section 5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
Flammability Conditions	Non-combustible; Material does not burn.
Extinguishing Media	If material is involved in a fire, use dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction - Use extinguishing media suitable for surrounding area.
Fire and Explosion Hazard	Containers may explode when heated. Hazardous Products of Combustion Fire or heat may produce irritating, toxic and/or corrosive fumes, including oxides of Sulfur (SO _x).
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) and chemical splash suit; SCBA and structural firefighter's uniform may provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

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Section 6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Clean up all spills immediately. Ensure adequate ventilation. Do not touch or walk through spilled material - Slippery when spilt. Avoid breathing vapours and contact with eyes, skin and clothing.
Clean Up Procedures	Collect recoverable product into suitable, labelled containers for recycling; Absorb (non-recoverable spillage) with earth, sand or other non-combustible material and transfer to suitable, labelled containers for disposal (see SECTION 13).
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas.
Decontamination	Neutralise/decontaminate residue. Wash area and prevent runoff into drains. After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.
Environmental Precautionary Measures	Prevent entry into drains and waterways. If contamination of drains or waterways occurs, advise emergency services.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away; Keep upwind.
Personal Precautionary Measures	Use personal protective equipment as required; In case of inadequate ventilation or major spills, wear respiratory protection (see SECTION 8).

Section 7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Use only outdoors or in a well-ventilated area. Handle in accordance with good industrial hygiene and safety practice. Avoid breathing mist/vapours/aerosols and contact with eyes, skin and clothing. Use personal protective equipment as required; In case of inadequate ventilation, wear respiratory protection (see SECTION 8). Avoid contact with incompatible materials (alkalis/bases).
Storage	Store in a cool, dry and well-ventilated place. Keep container tightly closed - Check regularly for leaks. Avoid physical damage to containers. Keep away from incompatible materials (alkalis/bases).
Container	Keep in the original container, polyethylene or polypropylene container (as recommended by the manufacturer). Do NOT use aluminium, galvanised or tin-plated containers - Material is corrosive to aluminium and other metals, producing highly flammable hydrogen gas.

Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General:	COMPONENT: Aluminium, soluble salts (as Al): COMPONENT: Aluminium oxide (CAS No. 1344-28-1):	-Safe Work Australia Exposure Standard: TWA = 2 mg/m ³ . -New Zealand WES: TWA = 5 mg/m ³ . -Safe Work Australia Exposure Standard: TWA = 10 mg/m ³ . -New Zealand WES: TWA = 10 mg/m ³ .
Exposure Limits	No Data Available	
Biological Limits	No information available.	
Engineering Measures	General exhaust is adequate under normal operating conditions; Local exhaust ventilation may be required in special circumstances. Provide adequate ventilation in warehouses and enclosed storage areas.	
Personal Protection Equipment	Respiratory protection: In case of inadequate ventilation or if a risk of overexposure exists, wear respiratory protection. Recommended: Suitable mist respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection. Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side-shields or chemical goggles. Hand protection: Handle with gloves. Recommended: Impervious, chemical-protective gloves, e.g. PVC. Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Overalls and safety shoes/footwear, e.g. Rubber.	
Special Hazards Precautions	No information available.	
Work Hygienic Practices	When handling, DO NOT eat, drink or smoke. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Launder contaminated clothing before re-use.	

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Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Clear liquid
Odour	No information available.
Colour	Pale, straw coloured
pH	2.10 - 2.50 (as supplied) 3.4 - 3.7 (2 % solution)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	Miscible with water
Specific Gravity	1.315 - 1.318 (Water = 1)
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; Material does not burn.
Reactions That Release Gases or Vapours	Fire or heat may produce irritating, toxic and/or corrosive fumes, including oxides of Sulfur (SO _x).
Release of Invisible Flammable Vapours and Gases	Material is corrosive to aluminium and many other metals, producing highly flammable hydrogen gas.

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Section 10. STABILITY AND REACTIVITY

General Information	Reacts violently with bases and many other materials.
Chemical Stability	Product is considered stable; Unstable in the presence of incompatible materials.
Conditions to Avoid	Avoid contact with incompatible materials.
Materials to Avoid	Incompatible/reactive with alkalis/bases.
Hazardous Decomposition Products	Fire or heat may produce irritating, toxic and/or corrosive fumes, including oxides of Sulfur (SO _x). Material is corrosive to aluminium and many other metals, producing highly flammable hydrogen gas.
Hazardous Polymerisation	Will not occur.

Section 11. TOXICOLOGICAL INFORMATION

General Information	<p>Acute toxicity: May be harmful if swallowed; May cause gastrointestinal irritation, abdominal pain, burning sensation, nausea, vomiting. Skin corrosion/irritation: May cause skin irritation, redness, pain. Eye damage/irritation: Causes serious eye irritation; May be corrosive to eyes, causing redness to severe deep burns. Respiratory/skin sensitisation: No evidence of skin sensitisation. Germ cell mutagenicity: No information available. Carcinogenicity: No information available. Reproductive toxicity: No information available.</p> <p>STOT - single exposure: Inhalation may cause respiratory irritation, cough, shortness of breath, sore throat. STOT - repeated exposure: Systemic, long-term effects may include reproductive and developmental toxicity, neurotoxicity, impaired lung function, occupational asthma and pulmonary fibrosis. Aspiration toxicity: No information available.</p> <p>Acute Ingestion Acute toxicity (Oral): -LD50, Rat/Mouse: >2,000 mg/kg bw.</p>
Carcinogen Category	None

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity	<p>Aquatic toxicity:</p> <p>COMPONENT: Aluminium sulphate, hydrated (CAS No. 7784-31-8):</p> <ul style="list-style-type: none">-BCF, Fish: 0.264 mg/L (1,080 h) [US EPA, Ecotox database - Aquatic Toxicity Data].-LC50, Fish: 0.0028 mg/L (96 h) [US EPA, Ecotox database - Aquatic Toxicity Data].-NOEC, Fish: 0.004 mg/L (720 h) [US EPA, Ecotox database - Aquatic Toxicity Data].-EC50, Crustacea: 0.214 - 1.26 mg/L (48 h) [EU-ECHA Registered Substances, Ecotoxicological Information - Aquatic Toxicity].-EC50, Algae/other aquatic plants: 0.014 mg/L (48 h) [EU-ECHA Registered Substances, Ecotoxicological Information - Aquatic Toxicity].-EC50, Algae/other aquatic plants: 0.075 mg/L (72 h) [EU-ECHA Registered Substances, Ecotoxicological Information - Aquatic Toxicity].
Persistence/Degradability	<p>COMPONENT: Aluminium sulphate, hydrated (CAS No. 7784-31-8):</p> <ul style="list-style-type: none">-High persistence in water/soil; High persistence in air.
Mobility	<p>COMPONENT: Aluminium sulphate, hydrated (CAS No. 7784-31-8):</p> <ul style="list-style-type: none">-Low mobility in soil (KOC = 6.124).
Environmental Fate	Prevent entry into drains and waterways.
Bioaccumulation Potential	<p>COMPONENT: Aluminium sulphate, hydrated (CAS No. 7784-31-8):</p> <ul style="list-style-type: none">-Low bioaccumulative potential (LogKOW = -2.2002).
Environmental Impact	No Data Available

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Section 13. DISPOSAL CONSIDERATIONS

General Information	This material may be recycled if unused or if it has not been contaminated so as to make it unsuitable for its intended use. If it has been contaminated, it may be possible to reclaim the product by filtration, distillation or some other means. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate. Recycle wherever possible or dispose of by burial in a landfill specifically licensed to accept chemical and/or pharmaceutical wastes or incinerate in a licensed apparatus (after admixture with suitable combustible material) and in accordance with local/regional/national regulations.
Special Precautions for Land Fill	Contaminated packaging: Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

Section 14. TRANSPORT INFORMATION

Land Transport (Australia):	ADG Code
Proper Shipping Name	ALUMINIUM SULPHATE, SOLUTION
Class	No Data Available
Subsidiary Risk(s)	No Data Available
EPG	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Air	IATA
Proper Shipping Name	ALUMINIUM SULPHATE, SOLUTION
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

Sea	IMDG
Proper Shipping Name	ALUMINIUM SULPHATE, SOLUTION
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No

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Dangerous Goods Classification NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Section 15. REGULATORY INFORMATION

General Information	No Data Available
Poisons Schedule (Aust)	Not Scheduled
Australia (AICS)	Listed

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Section 16. OTHER INFORMATION

Always use product as directed. Please read all labels carefully before using product. Further information may be obtained by contacting the Technical Officer on 0267 696 658. Supplied by Colonial Chemicals Australia.

SDS Revision Number: 4
SDS Revision Date: 09.06.2016
Reason for issue: Updated SDS (Replaces SDS version 3 Dated 24/07/2013)
In any event, the review and, if necessary, the re-issue of a SDS shall be no longer than 5 years after the last date of issue.

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product.

Key legend/Abbreviations/Acronyms that may be used in this S.D.S.:

<	Less Than
>	Greater Than
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail (7th edition)
AICS	Australian Inventory of Chemical Substances
atm	Atmosphere
CAS	Chemical Abstracts Service (Registry Number)
cm ²	Square Centimetres
CO ₂	Carbon Dioxide
COD	Chemical Oxygen Demand
deg C (°C)	Degrees Celcius
deg F (°F)	Degrees Farenheit
EPA (New Zealand)	Environmental Protection Authority of New Zealand
g	Grams
g/cm ³	Grams per Cubic Centimetre
g/l	Grams per Litre
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially
firefighters HSNO	Hazardous Substance and New Organism
IDLH	Immediately Dangerous to Life and Health
immiscible	Liquids are insoluble in each other. inHg
	Inch of Mercury
inH ₂ O	Inch of Water
K	Kelvin
kg	Kilogram
kg/m ³	Kilograms per Cubic Metre
lb	Pound
LC	stands for lethal concentration.
LC50	is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD	stands for Lethal Dose.
LD50	is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
ltr or L	Litre
m ³	Cubic Metre
mbar	Millibar
mg	Milligram
mg/24H	Milligrams per 24 Hours
mg/kg	Milligrams per Kilogram
mg/m ³	Milligrams per Cubic Metre
Misc or Miscible	Liquids form one homogeneous liquid phase regardless of the amount of either component present
mm	Millimetre
mmH ₂ O	Millimetres of Water
mPa.s	Millipascals per Second
N/A	Not Applicable
NIOSH	National Institute for Occupational Safety and Health
NOHSC	National Occupational Health and Safety Commission
OECD	Organisation for Economic Co-operation and Development
Oz	Ounce
Pa	Pascal
PEL	Permissible Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppb	Parts per Billion
ppm	Parts per Million
ppm/2h	Parts per Million per 2 Hours
ppm/6h	Parts per Million per 6 Hours
psi	Pounds per Square Inch
R	Rankine
RCP	Reciprocal Calculation Procedure
SDS	Safety Data Sheet
STEL	Short Term Exposure Limit
TLV	Threshold Limit Value
tne	Tonne
TWA	Time Weighted Average (TWA/ES - Time Weighted Average or Exposure Standard)
Ug/24	Micrograms per 24 Hours
UN	United Nations
Wt	Weight

END OF SDS

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