

Section 1. IDENTIFICATION

Product Name:	Aluminium Sulphate
Other Names:	Aluminium sulphate, 18-hydrate; Sulfuric acid, aluminium salt (3:2), octadecahydrate
Uses:	Water purification; Sewage treatment; Deodoriser and decolouring in petroleum refinery processes; Water proofing agent for concrete; Sizing paper and pH control; Clarifying agent for fats and oil.
Chemical Family:	Inorganic Salt
Chemical Formula:	Al ₂ (SO ₄) ₃ .14H ₂ O
Chemical Name:	Aluminium Sulfate, octadecahydrate
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 Schedule (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	

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Section 2. HAZARD IDENTIFICATION (Continued)

Signal Word	Warning
Hazard Statements	H319 Causes serious eye irritation.
Precautionary Statements Prevention	P280 Wear eye protection/face protection.
Response	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337 + P313 If eye irritation persists: Get medical advice/attention.

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%
Aluminium sulfate, octadecahydrate	Al ₂ (SO ₄) ₃ .14H ₂ O	7784-31-8	<=100 %

Section 4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	If swallowed: Rinse mouth, then drink 200 - 300 ml of water. Do NOT induce vomiting. Call a Poison Centre or doctor/physician if you feel unwell. Never give anything by mouth to an unconscious person.
Eye	Eye contact: 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. If eye irritation persists, get medical advice/attention.
Skin	Skin contact: Remove material from skin immediately. Flush skin with running water for at least 15 minutes and/or wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.
Inhaled	Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Apply resuscitation if victim is not breathing. Administer oxygen if breathing is difficult. Call a Poison Centre or doctor/physician if experiencing respiratory symptoms, or if you feel unwell.
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.

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Section 5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with flooding quantities of water until well after fire is out. Avoid getting water inside containers.
Flammability Conditions	Non-combustible. Material does not burn.
Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use dry chemical, Carbon dioxide, foam or water spray - Do NOT use water jets.
Fire and Explosion Hazard	No information available.
Hazardous Products of Combustion	Decomposes on heating, emitting toxic fumes including: Sulphur oxides and oxides of Aluminium.
Special Fire Fighting Instructions	Prevent fire extinguishing water from contaminating surface water or the ground water system.
Personal Protective Equipment	Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of decomposition.
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

Section 6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation - Ventilate enclosed spaces before entering. Do not touch or walk through spilled material. Wear protective equipment to avoid eye and skin contact. Avoid breathing dust.
Clean Up Procedures	Sweep up but avoid generating dust and airborne material. Collect and seal in properly labelled containers or drums for disposal. Take up dry - Avoid getting water inside containers.
Containment	Stop leak if safe to do so. Contain - Prevent entry into waterways, drains or confined areas.
Decontamination	Cleaned up material may be hazardous waste. Do NOT flush to surface water or sanitary sewer system.
Environmental Precautionary Measures	Prevent entry into waterways and drains.
Evacuation Criteria	Spill or leak area should be isolated immediately. Clear area of all unprotected personnel. Keep unauthorised personnel away.
Personal Precautionary Measures	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Section 7. HANDLING AND STORAGE

Handling	Eyewash fountains and safety showers should be provided within the immediate work area for emergency use. Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid breathing dust. Avoid contact with eyes and skin. Wear eye protection/face protection. Avoid handling which leads to dust formation.
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Section 7. HANDLING AND STORAGE (Continued)

Storage	Store under cover in a cool, dry and well-ventilated place. Keep containers tightly closed when not in use - Check regularly for spills. Avoid exposure to air/moisture. Store away from incompatible materials (water, strong bases).
Container	Keep in the original container.

Section 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	There is no exposure standard assigned for this specific material. COMPONENT: Aluminium, soluble salts (CAS No. 7429-90-5): -Safe Work Australia Exposure Standard: TWA = 2 mg/m ³ (as Al).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	Ensure ventilation is adequate and that air concentrations are controlled below quoted Workplace Exposure Standards. 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. Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
Personal Protection Equipment	Respiratory protection: If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Recommended filter type: P1 filter for solid particles. Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Chemical goggles. Hand protection: Wear impervious gloves. Recommended (Full/splash contact): Nitrile rubber (Glove thickness: 0.11 mm; Break through time: >480 min). Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substance handled. Recommended: Overalls; Safety shoes.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Powder or granules
Odour	Odourless
Colour	White to brownish
pH	>3 (1% sol. @27°C)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	770 °C (decomposes) ***Continued Over Page***

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Section 9. PHYSICAL AND CHEMICAL PROPERTIES (Continued)

Freezing Point	No Data Available
Solubility	Soluble in water - 87 g/100 ml water 27°C
Specific Gravity	No Data Available
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	920 kg/m ³ (Powder)
Corrosion Rate	No Data Available
Decomposition Temperature	770 °C
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	HYGROSCOPIC - Absorbs moisture/water from surrounding air.
Potential for Dust Explosion	No information available.
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	Decomposes on heating, emitting toxic fumes including: Sulphur oxides and oxides of Aluminium
Release of Invisible Flammable Vapours and Gases	No information available.

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Section 10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal ambient and anticipated storage and handling conditions.
Conditions to Avoid	Avoid dust generation. Avoid exposure to water/moisture/air.
Materials to Avoid	Incompatible with water and strong bases. May react with some metals in the presence of moisture.
Hazardous Decomposition Products	Decomposes on heating, emitting toxic fumes including: Sulphur oxides and oxides of Aluminium. Reacts with moisture forming Sulphuric acid.
Hazardous Polymerisation	Will not occur.

Section 11. TOXICOLOGICAL INFORMATION

General Information	<p>Information on possible routes of exposure: Ingestion: Swallowing may result in nausea, vomiting, diarrhoea, and gastrointestinal irritation. Eye contact: Causes serious eye irritation. Skin contact: May cause skin irritation. Inhalation: Breathing in dust may result in coughing, respiratory irritation.</p> <p>Acute toxicity: Low toxicity (LD50: >2,000 mg/kg bw), based on rat and mouse studies [OECD Test Guideline 401]. No mortalities were found in studies involving dermal or inhalation exposure (of humans or animals) to various forms of aluminium.</p> <p>Skin corrosion/irritation: May cause skin irritation. Although sulphuric acid, aluminium salt (3:2) produced some skin irritation in most of the studies performed in accordance with OECD TG 404, the effects were not sufficient to warrant a hazard classification.</p> <p>Eye damage/irritation: Causes serious eye irritation - Lack of evidence of irreversible effects. Sulphuric acid, aluminium salt (3:2) and its hexa-, hepta- and octahydrates are classified as eye irritants based on available data and read-across. Three studies conducted in accordance with OECD TG 405 reported eye irritation. Two of the studies found conjunctival redness and swelling which was not reversible during the test periods (three and seven days). The third test reported conjunctivitis and purulent ophthalmitis which were reversible during the 21-day study.</p> <p>Respiratory/skin sensitisation: The available data do not provide any evidence of skin sensitisation. Germ cell mutagenicity: The weight of evidence does not support classification for genotoxicity.</p> <p>Carcinogenicity: The available data do not support classification as a carcinogen.</p> <p>Reproductive toxicity: No information available on the product itself. However, neurodevelopmental effects have been observed in rats and mice at doses of 103 – 330 mg Al/kg bw/day - This is equivalent to 652 - 2,090 mg sulphuric acid, aluminium salt (3:2).</p> <p>STOT - single exposure: No information available.</p> <p>STOT - repeated exposure: No information available on the product itself. However, results from human and animal studies investigating the toxicity of soluble and insoluble forms of aluminium suggest that the respiratory tract, particularly the lung, is a sensitive target of airborne aluminium toxicity. The lung effects observed in humans and animals are suggestive of dust overload. In addition, neurotoxicity is a well-documented effect of aluminium in orally-exposed mice and rats. Although the neurotoxicity of aluminium has not been established in humans with normal renal function, the available data establish that the human nervous system is susceptible to aluminium toxicity.</p> <p>Aspiration toxicity: No information available.</p>
Carcinogen Category	None

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Section 12. ECOLOGICAL INFORMATION

Ecotoxicity	Toxicity to fish:-LC50, Pimephales promelas (fathead minnow): 36.1 mg/l (96 h).
Persistence/Degradability	No information available.
Mobility	The product will likely be mobile in the environment due to its water solubility. Highly mobile in soils.
Environmental Fate	Prevent entry into waterways and drains.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

Section 13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container in accordance with local/regional/national regulations. Do NOT flush to surface water or sanitary sewer system.
Special Precautions for Land Fill	No information available.

Section 14. TRANSPORT INFORMATION

Land Transport (Australia):	ADG Code
Proper Shipping Name	ALUMINIUM SULPHATE
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
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
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 Data Available

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)
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Section 15. REGULATORY INFORMATION

General Information	No Data Available	
Poisons Schedule (Aust)	Not Scheduled	
National/Regional Inventories	Australia (AICS)	Listed

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:	3
SDS Revision Date:	02 JUNE 2016
Reason for issue:	Updated Information (Replaces SDS version 2 Dated 06/02/2016)

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
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).

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Section 16. OTHER INFORMATION (Continued)

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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