Safety Data Sheet AMMONIUM SULFATE

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SECTION 1: Identification

GHS Product identifier

Product name	AMMONIUM SULFATE

Recommended use of the chemical and restrictions on use

Fertilisers, water treatment, fermentation, fireproofing compositions, viscose rayon, tanning, food additive, manufacture of ammonium alum, galvanising iron, freezing mixtures, laboratory reagent.

Supplier's details

Name	ChemSupply Australia Pty Ltd
Address	38-50 Bedford Street 5013 Gillman South Australia Australia
Telephone	08 8440 2000
email	www.chemsupply.com.au

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Not classified as dangerous goods according to the Australian Dangerous Goods Code (ADG).

Classified as non-Hazardous according to the Globally Harmonised System of classification and labelling of Chemicals (GHS) including Work, Health and Safety regulations, Australia.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

Not a hazardous substance or mixture.

GHS label elements, including precautionary statements

Not a hazardous substance or mixture.

Other hazards which do not result in classification

Not a hazardous substance or mixture.

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 132.14

Components

Component	CAS no.	Concentration
Ammonium Sulfate (EC no.: 231-984-1)	**7783-20-2**	**98 - 100 % (weight)**
CLASSIFICATIONS: No data available. HAZARDS: No data available.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

If inhaled	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
In case of skin contact	Wash affected areas with copious quantities of water. Remove contaminated clothing and wash before re-use. If persistent irritation occurs, obtain medical attention.
In case of eye contact	mmediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open.In all cases of eye contamination it is a sensible precaution to seek medical advice.
If swallowed	Rinse mouth with water and then give plenty of water to drink. DO NOT induce vomiting and seek medical attention if large amounts ingested.

Most important symptoms/effects, acute and delayed
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically based on judgement of doctor and individual reactions of the patient.
For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media
Use fire extinguishing media appropriate for surrounding environment. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Specific hazards arising from the chemical
May evolve toxic fumes of nitrogen oxides and sulfur oxides in a fire.

Special protective actions for fire-fighters
Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.

Methods and materials for containment and cleaning up
Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

SECTION 7: Handling and storage

Precautions for safe handling
Avoid prolonged or repeated contact with skin, eyes and clothing . In case of insufficient ventilation,
wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities
Keep container tightly closed and in a cool, well-ventilated place Store away from oxidizing agents, incompatibles, direct sunlight, heat and sources of ignition.

SECTION 8: Exposure controls/personal protection

Appropriate engineering controls
In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection
The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection
Hand Protection: Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance.

Body protection
Body Protection: Wear suitable protective clothing and gloves to prevent skin contact. Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection
Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Solid
Appearance	Colourless to white, fine crystals.
Color	No data available.
Odor	Slight odour of ammonia.
Odor threshold	No data available.

Melting point/freezing point	230 - 280 °C (decomposition)
Boiling point or initial boiling point and boiling range	No data available.
Flammability	No data available.
Lower and upper explosion limit/flammability limit	No data available.
Flash point	No data available.
Explosive properties	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Oxidizing properties	No data available.
pH	~ 5 - 6 (50 g/l, H2O, 20 °C)
Kinematic viscosity	No data available.
Solubility	Solubility in Water: Very soluble (760 g/L @ 20 °C). Solubility in Organic Solvents: Insoluble in alcohol and acetone.
Partition coefficient n-octanol/water (log value)	-5.1
Vapor pressure	No data available.
Evaporation rate	No data available.
Density and/or relative density	Specific Gravity: 1.77
Relative vapor density	No data available.
Particle characteristics	No data available.

Supplemental information regarding physical hazard classes
No data available.

Further safety characteristics (supplemental)
No data available.

SECTION 10: Stability and reactivity

Reactivity
None under normal use conditions.

Reacts with incompatible materials

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
Ammonium sulfate reacts with alkali (zinc, copper bearing materials) releasing ammonia.

Conditions to avoid
Moisture. Light, heat, incompatibles.

Incompatible materials
Strong oxidisers, strong bases. Alkali salts (chlorates and nitrates) combined with heat and acids, alkali metals, nitrites, sodium hypochlorite, potassium ammonium nitrate, potassium chlorate, potassium nitrite, sodium-potassium powder plus ammonium nitrate, sodium potassium alloy + ammonium nitrate. Substances should not contact either zinc or copper bearing materials. Reacts with alkali to release ammonia.

Hazardous decomposition products
Ammonia and oxides of nitrogen, sulfur and carbon.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Oral: LD50 (rat): 2840 mg/kg (IUCLID)

Ingestion: Causes irritation to the gastrointestinal tract. It presents little toxicity unless large amounts are ingested resulting in ammonia poisoning, in which case, vomiting and diarrhea are likely along with nausea. Other symptoms include digestive tract irritation, spasms, narcotic conditions, respiratory paralysis, drop in blood pressure and CNS disorders.

Inhalation: Causes irritation to the respiratory tract. Symptoms may include coughing and shortness of breath.

Skin corrosion/irritation
Contact causes irritation. Symptoms include redness, itching and pain.

Serious eye damage/irritation
Eye contact with material causes irritation, redness and pain.

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
No data available.

Carcinogenicity
No data available.

Reproductive toxicity
No data available.

Summary of evaluation of the CMR properties
No data available.

Specific target organ toxicity (STOT) - single exposure
No data available.

Specific target organ toxicity (STOT) - repeated exposure
No data available.

Aspiration hazard
No data available.

Additional information
No data available.

SECTION 12: Ecological information

Toxicity
Fish: Brachydanio rerio LC50: 420 mg/l /96h (IUCLID)

Daphnia: Daphnia magna EC50: 129 mg/l /48h (IUCLID)

Persistence and degradability

No persistence/degradability data available for this product.

Bioaccumulative potential
No bioaccumulation is to be expected (log P(o/w) <1.0).

Other adverse effects
Do not allow product to enter drains, waterways or sewers.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Other disposal recommendations
Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)
Not dangerous goods

IMDG
Not dangerous goods

IATA
Not dangerous goods

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP
Poison Schedule: NS

SECTION 16: Other information

Further information/disclaimer
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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia
National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'
Safe Work Australia, 'National Code of Practice fot the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.
Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.
Safe Work Australia, Workplace Exposure Standards for Airbourne Contaminants, December 2019
Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au
IATA, Dangerous Goods Regulations (DGR)
IMO, International Maritime Dangerous Goods Code (IMDG)