



Ammonium Sulphate (Technical Grade)

Section 1 - Identification of Material and Supplier

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Trade Name:	Ammonium Sulphate
Synonyms:	Diammonium Sulphate, Sulphuric acid diammonium salt, SOA
Product Use:	Fertiliser (soil nutrient), water treatment.
Revision Date:	August 2009

Section 2 - Hazards Identification

NOT CLASSIFIED AS HAZARDOUS ACCORDING TO THE CRITERIA OF ASCC

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE

UN Number: None allocated

Hazchem Code: None Allocated

SUSDP Classification: None allocated.

Risk Phrases: Not Hazardous according to criteria of ASCC

Safety Phrases: Not Hazardous according to criteria of ASCC

Emergency Overview

Physical Description & colour: White/Off white crystals

Odour: No odour

Major Health Hazards: No significant risk factors have been found for this product in normal use.

Potential Health Effects

Inhalation: If product in high concentrations of airborne dust, prolonged contact may cause irritation to the nose and throat

Skin Contact: Mildly irritating to skin. Frequent & prolonged contact can cause dermatitis or skin irritation

Eye Contact: Moderately irritating to eyes

Ingestion: Can cause considerable gastric upset, ulceration or haemorrhage of the G.I. tract, diarrhoea. Systemic ammonia poisoning possible if large quantities ingested.

Carcinogen Status:

ASCC: No significant ingredient is classified as carcinogenic by ASCC

NTP: No significant ingredient is classified as carcinogenic by NTP.

IARC: No significant ingredient is classified as carcinogenic by IARC.

Section 3 - Composition/Information on Ingredients

Ingredients	CAS No	Conc.%	TWA (mg/m3)	STEL (mg/m3)
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Ammonium Sulphate	7783-20-2	100	not set	not set
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This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly

Section 4 - First Aid Measures

General Information:

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia and is available at all times. Have this MSDS with you when you call.

Inhalation: Remove victim to fresh air. Recovery is rapid after removal from exposure. Seek medical attention if irritation persists or breathing difficulties arise



Skin Contact: Remove contaminated clothing and wash thoroughly with soap and water.

Eye Contact: Hold eye open and flush gently with copious amounts of water for 15 minutes and seek medical attention.

Ingestion: If swallowed, immediately rinse mouth out with water. Give water to drink. Contact Poisons Information Centre or doctor immediately. Induce vomiting if directed to do so.

Advice to Doctor: Treat symptomatically

Section 5 - Fire Fighting Measures

Fire and Explosion Hazards: There is no risk of an explosion from this product under normal circumstances if it is involved in a fire.

Fire decomposition (above 282°C) will result in ammonia and sulphur trioxides

Extinguishing Media: Not Flammable. Use extinguishing media suited to burning materials.

Fire Fighting: If a significant quantity of this product is involved in a fire, call the fire brigade.

Flash point: Non Flammable

Upper Flammability Limit: Not applicable

Lower Flammability Limit: Not applicable

Auto ignition temperature: Not applicable - does not burn.

Flammability Class: Does not burn.

Hazchem Code: None Allocated

Section 6 - Accidental Release Measures

Spillage: Minor spills do not normally need any special cleanup measures. In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Stop leak if safe to do so, and contain spill. Sweep up and shovel or collect recovered product into labelled containers for recycling or salvage, and dispose of promptly. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. This material may be suitable for approved landfill. Ensure legality of disposal by consulting regulations prior to disposal. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.

Section 7 - Handling and Storage

Handling: Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

Storage: Store in cool, dry area removed from foodstuffs, combustible materials, herbicides and fungicides. Ensure containers are labelled, protected from physical damage and sealed when not in use. Keep from extreme heat and open flames and make sure that the product does not come into contact with substances listed under "Materials to avoid" in Section 10. Bagged fertilisers should be stored under cover and out of direct sunlight (which degrades polywoven bags) If stored in the open, do so for short periods only and cover with a tarpaulin. If stacking is necessary, bulk bags should be stored in a stable manner, preferably in a pyramidal style. Bulk bags should not be stacked more than two high for bags containing 1000 kg or more, or more than four high for bags containing up to 500kg. The pallet Capacity Rating (Design Weight) should not be exceeded on the bottom tier for other packs.

Section 8 - Exposure Controls and Personal Protection

The following Australian Standards will provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Industrial Clothing: **AS2919**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

Exposure Limits	TWA (mg/m ³)	STEL (mg/m ³)	ADI (mg/Kg/day)	NOEL (mg/Kg/day)
Ammonium Sulphate	not set	not set	not set	not set

Exposure limits have not been set for other ingredients in product. The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. A TWA has not been established by Worksafe Australia for any of the

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major ingredients in this product. There is a blanket limit of 10mg/m³ for dusts or mists when limits have not otherwise been established. The nature of this product makes it unlikely that this level will be approached in normal use. ADI means Acceptable Daily Intake and NOEL means No-observable-effect-level. Values taken from Australian ADI List, Dec 2003.

No special equipment is usually needed when occasionally handling small quantities. The following instructions are for bulk handling or where regular exposure in an occupational setting occurs without proper containment systems.

Ventilation: Avoid high dust concentration and provide local exhaust ventilation where necessary.

Eye Protection: Eye protection such as protective glasses or goggles is recommended when using this product.

Skin Protection: Wear gloves or gauntlets and long sleeves when using this product to protect against skin irritation

Respirator: Use P2 type canister respirator where high concentrations of airborne dust is present

Provision of eye wash facilities and safety shower recommended.

Wash hands before eating, drinking, smoking or going to toilet, launder protective clothing before re-use.

Section 9 - Physical and Chemical Properties:

Physical Description & colour:	White to off white crystals
Odour:	No odour
Melting Point:	No data
Decomposition Temperature:	282°C
Flash Point:	Non-flammable
Vapour Pressure:	N/A
Specific Gravity	1.77
Water Solubility:	Soluble
pH:	4.2 - 7
Auto ignition temp:	Not applicable

Section 10 - Stability and Reactivity

Reactivity: This product is unlikely to react or decompose under normal storage conditions.

Conditions to Avoid: Heat, flames.

Incompatibilities: Sodium hypochlorite, potassium plus ammonium nitrate, potassium chlorate, potassium nitrite, and sodium-potassium powder plus ammonium nitrate, and other strong oxidizers.

Fire Decomposition Products: Ammonia & sulphur trioxides

Polymerisation: This product is unlikely to undergo polymerisation processes.

Section 11 - Toxicological Information

Toxicity to Animals: Oral rat LD50: 2840 mg/kg

Chronic Effects on Humans: Can cause damage to gastro-intestinal tract

Section 12 - Ecological Information

Environment: Avoid contamination of waterways.

Aquatic organisms: No data available, but high levels will produce toxic salting effects.

Flora: No data available, but levels below $\approx 100 \text{ kg/m}^2$ (10 g/m^2) on soil are beneficial to plant growth.
Higher levels may produce toxic salting effects

Bees: Not toxic.

Long term:

Ozone effects: None recorded.

Persistence/degradation: Will persist for weeks in soil, but is a plant nutrient.

Mobility: Readily leaches, especially the nitrate component.

Bioaccumulative potential: Unknown but probably low. Plants assimilate it readily, but convert this to protein



Section 13 - Disposal Considerations

Disposal: There are many pieces of legislation covering waste disposal and they differ in each state and territory, so each user must refer to laws operating in their area. In some areas, certain wastes must be tracked. The Hierarchy of Controls seems to be common - the user should investigate: Reduce, Reuse, and Recycle and only if all else fails should disposal be considered. Special help is available for the disposal of Agricultural Chemicals. The product label will give general advice regarding disposal of small quantities, and how to cleanse containers. However, for help with the collection of unwanted rural chemicals, contact ChemClear 1800 008 182 <http://www.chemclear.com.au/> and for help with the disposal of empty drums, contact DrumMuster <http://www.drummuster.com.au/>

Section 14 - Transport Information

ADG Code: This product is not classified as a Dangerous Good. No special transport conditions are necessary unless required by other regulations.

Section 15 - Regulatory Information

Poison Schedule: A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP)

AICS: All of the significant ingredients in this formulation are to be found in the public AICS Database.

Section 16 - Other Information

This MSDS contains only safety-related information. For other data see product literature.

Acronyms:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail
AICS	Australian Inventory of Chemical Substances
ASCC	Office of the Australian Safety and Compensation Council
CAS number	Chemical Abstracts Service Registry Number
Hazchem Number	Emergency action code of numbers and letters that provide information to emergency services especially fire fighters
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program (USA)
SUSDP	Standard for the Uniform Scheduling of Drugs & Poisons
UN Number	United Nations Number

THIS MSDS SUMMARISES OUR BEST KNOWLEDGE OF THE HEALTH AND SAFETY HAZARD INFORMATION OF THE PRODUCT AND HOW TO SAFELY HANDLE AND USE THE PRODUCT IN THE WORKPLACE. EACH USER MUST REVIEW THIS MSDS IN THE CONTEXT OF HOW THE PRODUCT WILL BE HANDLED AND USED IN THE WORKPLACE.

IF CLARIFICATION OR FURTHER INFORMATION IS NEEDED TO ENSURE THAT AN APPROPRIATE RISK ASSESSMENT CAN BE MADE, THE USER SHOULD CONTACT THIS COMPANY SO WE CAN ATTEMPT TO OBTAIN ADDITIONAL INFORMATION FROM OUR SUPPLIERS. OUR RESPONSIBILITY FOR PRODUCTS SOLD IS SUBJECT TO OUR STANDARD TERMS AND CONDITIONS, A COPY OF WHICH IS SENT TO OUR CUSTOMERS AND IS ALSO AVAILABLE ON REQUEST.

Please read all labels carefully before using product. This MSDS is prepared in accord with the ASCC document "National Code of Practice for the Preparation of Material Safety Data Sheets" 2nd Edition [NOHSC:2011(2003)]

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