



SALES & SERVICES

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Safety Data Sheet

1. IDENTIFICATION OF THE PRODUCT AND THE SUPPLIER

1.1 Product identifiers

Product name : AMMONIUM PERSULPHATE

1.2 Other means of identification

Ammonium peroxodisulphate; Ammonium peroxydisulphate; Diammonium peroxodisulphate

1.3 Recommended use of the product and restrictions on use

Laboratory chemical, Manufacture of substances

1.4 Details of supplier of the safety data sheet

Company : AGent Sales & Services Pty Ltd

Street address : 38 May Holman Drive, Bassendean, Western Australia 6054

Telephone : (+61 8) 6270 4500

Fax : (+61 8) 6270 4544

1.5 Emergency telephone number

Telephone : 1300 883 844

2. HAZARDS IDENTIFICATION

2.1 GHS Classification

Oxidizing solids (Category 3)

Acute toxicity, Oral (Category 4)

Skin corrosion/irritation (Category 2)

Serious eye damage/eye irritation (Category 2)

Respiratory sensitisation (Category 1)

Skin sensitisation (Category 1)

Specific target organ toxicity - single exposure (Category 3), Respiratory system

GHS Label elements, including precautionary statements

Pictogram :



Signal word : Danger

Hazard statement(s)

H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.

Precautionary statement(s)

Prevention

P210	Keep away from heat / sparks / open flames / hot surfaces. No smoking.
P221	Take any precaution to avoid mixing with combustibles / incompatible materials.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash hands thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/ eye protection/ face protection.
 P285 In case of inadequate ventilation wear respiratory protection.

Response

P304 + P340 + P312 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
 P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
 P337 + P313 If eye irritation persists: Get medical advice/ attention.
 P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/ physician.
 P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
 P405 Store locked up.

Disposal

P501 Dispose of contents/ container to an approved waste disposal plant.

2.2 Other hazards

None.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	Classification	Concentration (%)
Ammonium persulphate	7727 – 54 – 0	Ox. Sol. 3; Acute Tox. 4; 2; Resp. Sens. 1; Skin Sens. 1; STOT SE3	≤ 100

For the full text of the H-Statements mentioned in this section, see Section 16

4. FIRST AID MEASURES

4.1 Description of First Aid measures

General advice

Contact the Poisons Information Centre (Phone: Australia 131 126; New Zealand 0800 764 766) or consult a doctor/physician. Show this safety data sheet to the doctor in attendance.

If inhaled

Remove victim from area of exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If patient finds breathing difficult and develops a bluish discolouration of the skin (which suggests a lack of oxygen in the blood - cyanosis), ensure airways are clear of any obstruction and have a qualified person give oxygen through a face mask. Apply artificial respiration if patient is not breathing. Seek immediate medical advice.

In case of skin contact

If skin or hair contact occurs, immediately remove any contaminated clothing and wash skin and hair thoroughly with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.

In case of eye contact

In case of eye contact, check for and remove any contact lenses. Immediately rinse thoroughly with plenty of running water for at least 15 minutes, keeping eyelids open. Consult a doctor/physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Seek immediate medical assistance.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in Section 2.2 and/or Section 11.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

4.4 First Aid facilities

Eye wash facilities and safety shower should be available.

5. FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical.

5.2 Special hazards arising from the chemical

Non-combustible material but will support combustion of other materials. Nitrogen oxides (NO_x), Sulphur oxides Container explosion may occur under fire conditions.

5.3 Special protective equipment and precautions for fire fighters

Wear self-contained breathing apparatus for firefighting if necessary. May intensify fire; oxidiser. Use water spray to cool unopened containers.

5.4 Hazchem code

1Z

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided. If contamination of sewers or waterways has occurred, advise local emergency services. Observe all local and national regulations.

6.3 Methods and materials for containment and cleaning up

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see Section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Take precautionary measures against static discharges. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition.

For precautions see Section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool place. Keep container tightly closed in a dry and well-ventilated place. Moisture sensitive. Storage class (TRGS 510): Oxidizing hazardous materials

This material is classified as a Dangerous Goods Class 5.1 Oxidising Agent by the criteria of the ADG Code and must be stored and handled in accordance with the relevant regulations.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limits

Chemical Name	Reference	TWA – Peak Limitation		STEL		Carcinogen Category	Notices
		ppm	mg/m ³	ppm	mg/m ³		
Ammonium persulphate (7727-54-0)	ASCC		0.01			-	Sen

As published in "Workplace Exposure Standards for Airborne Contaminants, December 2011" by SWA.

'Sen' Notice - Sensitiser. The substance can cause a specific immune response in some people. An affected individual may subsequently react to exposure to minute levels of that substance and should not be further exposed to the substance.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Biological Limits

None allocated for this product.

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Ensure ventilation is adequate to maintain air concentrations below 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. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements

Personal protective equipment (PPE)

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.

Eye/face protection

Face shield and safety glasses or safety goggles. See Australian Standards (AS/NZS 1336 & 1337).

Skin protection

Wear protective gloves, protective clothing and safety footwear (complete suit protecting against chemicals and rubber boots) appropriate for the risk of exposure. See Australian Standards (AS 2161 & 2919 and AS/NZS 2210). Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use. Wash and dry hands.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination or type ABEK respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. See Australian Standards (AS/NZS 1715 & 1716).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Form : Crystal Colour : White
Odour:	No data available
Odour Threshold:	No data available
pH:	4.0 @ 1% solution
Melting Point:	Decomposes before melting
Boiling Point/Range:	Decomposes
Decomposition Temperature:	120°C
Evaporation Rate:	No data available
Flash Point:	Not applicable
Flammability Limits:	No data available
Relative Density:	1.98 g/cm ³
Bulk Density:	900 kg/m ³
Vapour Density (air=1):	7.88
Vapour Pressure:	No data available

% Volatiles: No data available

Solubility in water: 228 g/L @ 20°C – completely soluble

10. STABILITY AND REACTIVITY

10.1 Reactivity

Product is hygroscopic. Reacts violently with acids. Reacts violently with reducing agents, alcohols, amines.

10.2 Chemical stability

May decompose on exposure to moist air or water. Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Keep away from heat and sources of ignition. Protect from moisture. Avoid dust generation. Avoid exposure to direct sunlight.

10.5 Incompatible materials

Incompatible with acids, alkalis, halides, combustible materials, heavy metal salts, oxidising agents, reducing agents, organic compounds, accelerators / promoters.

10.6 Hazardous decomposition products

Build-up of dangerous/toxic fumes possible in cases of fire/high temperature. Oxides of sulphur. Oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

LD₅₀ Oral, rat is 689 mg/kg

LD₅₀ Dermal, rat is > 2,000 mg/kg

Skin corrosion/irritation

Skin – Rabbit : Result : No skin irritation

Serious eye damage/eye irritation

Eyes – Rabbit : Result : Mild eye irritation (OECD Test Guideline 405)

Respiratory or skin sensitisation

– Guinea pig : Result : Causes sensitisation (OECD Test Guideline 406)

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available.

Specific target organ toxicity (STOT) - single exposure

May cause respiratory irritation

Specific target organ toxicity (STOT) - repeated exposure

No data available

Aspiration hazard

No data available

Health Effects

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Eye contact : An eye irritant.

Skin contact : Contact with skin will result in irritation. A skin sensitiser. Repeated or prolonged skin contact may lead to allergic contact dermatitis.

Ingestion : Swallowing can result in nausea, vomiting, diarrhoea and abdominal pain.

Inhalation : Material is irritant to the mucous membranes of the respiratory tract (airways). A respiratory sensitiser. Can cause possible allergic reactions, producing asthma-like symptoms.

11.2 Information on possible routes of exposure

The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

11.3 Additional Information

RTECS: SE0350000

12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity

Avoid contaminating waterways.

Toxicity to fish:

LC₅₀ (Oncorhynchus mykiss, rainbow trout) = 76 mg/L, 96h

Toxicity to daphnia & other aquatic invertebrates

EC₅₀ (Daphnia magna, water flea) = 120 mg/L, 48h

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Other adverse effects

Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS

13.1 Disposal methods and containers

Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.

13.3 Special precautions for landfill or incineration

Contact a specialist disposal company or the local waste regulator for advice.

14. TRANSPORT INFORMATION

Classified as a Dangerous Goods by the criteria of the ADG Code for transport by road or rail

Classified as a Dangerous Goods by the criteria of the IMDG Code for transport by sea

Classified as a Dangerous Goods by the criteria of the IATA Code for transport by air

14.1 UN number

ADG : 1444

IMDG : 1444

IATA : 1444

14.2 Proper shipping name

ADG : AMMONIUM PERSULPHATE

IMDG : AMMONIUM PERSULPHATE

IATA : AMMONIUM PERSULPHATE

14.3 Transport hazard class

ADG : 5.1 Oxidising Agent

IMDG : 5.1 Oxidising Agent

IATA : 5.1 Oxidising Agent

14.4 Packing group

ADG : III

IMDG : III

IATA : III

14.5 Environmental hazards

ADG : No

IMDG Marine Pollutant : No

IATA : No

14.6 Special precautions for users

No data

14.7 Hazchem code

ADG : 1Z

IMDG EMS : F-A, S-Q

14.8 Dangerous goods initial emergency response guide (SAA/SNZ HB76:2010)

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15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations

Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP)

Not listed

Carcinogen classification under WHS Regulations 2011, Schedule 10

Not listed

Notification status

AICS On the inventory, or in compliance with the inventory.

16. OTHER INFORMATION

Key / legend to abbreviations and acronyms used in the MSDS

ADG	Australian Dangerous Goods
ASCC	Australian Safety and Compensation Council
DEC	Department of Environment and Conservation
GHS	Globally Harmonised System of Classification & Labelling of Chemicals
NOHSC	National Occupational Health and Safety Commission
RTECS	Registry of Toxic Effects of Chemical Substances.
SUSDP	Standard for the Uniform Scheduling of Drugs and Poisons
Acute Tox.	Acute toxicity
Ox. Sol.	Oxidising solids
Resp. Sens.	Respiratory sensitisation
Skin Sens.	Skin sensitisation
STOT SE3	Specific target organ toxicity (single exposure) - Category 3
TWA	Time weighted average
STEL	Short term exposure level
SWA	Safe Work Australia
Peak Limitations	A ceiling concentration that should not be exceeded over a measurement period, which should be as short as possible, but not exceeding 15 minutes
LD ₅₀	Lethal dose 50. The single dose of a substance that causes the death of 50% of an animal population from exposure to the substance by any route other than inhalation
LC ₅₀	Lethal concentration that kills 50% of an animal population within a specified time
TD Lo	The lowest dose of a substance known to have produced signs of toxicity
RTECS	Registry of Toxic Effects of Chemical Substances
g/L	Grams per litre
g/cm ³	Grams per cubic centimetre
mg/m ³	Milligrams per cubic metre
mg/kg	Milligrams per kilogram
pH	Relates to hydrogen ion concentration - this value will relate to a scale of 0 - 14, where 0 is highly acidic and 14 is highly alkaline
WHS	Work Health and Safety

Literature references

"Workplace Exposure Standards for Airborne Contaminants, December 2011" by SWA Work Health and Safety Regulations 2011

"Registry of Toxic Effects of Chemical Substances". Ed. D. Sweet, US Dept. of Health & Human Services: Cincinnati, 2012.

Reason(s) for Issue:

Revised primary SDS

Alignment to GHS requirements

Disclaimer

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