



Safety Data Sheet
Ammonium persulphate
Revision 4, Date 18 Jan 2018

1. IDENTIFICATION

Product Name	Ammonium persulphate
Other Names	Ammonium peroxydisulfate
Uses	Oxidising agents; dyeing and printing; deodorising and bleaching; photography; Industrial use.
Chemical Family	No Data Available
Chemical Formula	(NH ₄) ₂ S ₂ O ₈
Chemical Name	Peroxydisulfuric acid, diammonium salt
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

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	Oxidising Solids - Category 3 Acute Toxicity (Oral) - Category 4 Skin Corrosion/Irritation - Category 2 Serious Eye Damage/Irritation - Category 2A Sensitisation (Respiratory) - Category 1 Sensitisation (Skin) - Category 1 Specific Target Organ Toxicity (Single Exposure) - Category 3

Pictograms	  
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Signal Word	Danger
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Hazard Statements	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 Statements	Prevention	P210	Keep away from heat.
		P221	Take any precaution to avoid mixing with combustibles/organic material.
		P261	Avoid breathing dust.
		P285	In case of inadequate ventilation wear respiratory protection.
		P280	Wear protective gloves/eye protection/face protection.
		P270	Do not eat, drink or smoke when using this product.
		P272	Contaminated work clothing should not be allowed out of the workplace.
		P271	Use only outdoors or in a well-ventilated area.
	Response	P370 + P378	In case of fire: Use water for extinction.
		P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
		P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
		P337 + P313	If eye irritation persists: Get medical advice/attention.
		P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
		P312	Call a POISON CENTER or doctor/physician if you feel unwell.
		P330	Rinse mouth.
		P362	Take off contaminated clothing and wash before reuse.
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
		P304 + P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
	Storage	P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
		P405	Store locked up.
	Disposal	P501	Dispose of contents/container in accordance with local / regional / national / international regulations.

Dangerous Goods Classification

Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications	Physical Hazards	5.1.1C	Oxidising substances that are liquids or solids: low hazard
	Health Hazards	6.1D	Substances that are acutely toxic - Harmful
		6.3A	Substances that are irritating to the skin
		6.4A	Substances that are irritating to the eye
		6.5A	Substances that are respiratory sensitisers
		6.5B	Substances that are contact sensitisers
		6.9B	Substances that are harmful to human target organs or systems
	Environmental Hazards	9.1D	Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action
		9.3C	Substances that are harmful to terrestrial vertebrates

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Ammonium persulfate	(NH ₄) ₂ S ₂ O ₈	7727-54-0	<=100 %

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 for advice. 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. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN (or hair): Remove contaminated clothing and shoes immediately. Flush skin and hair with running water for at least 15 minutes. If skin irritation or rash occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a Poison Centre or doctor/physician for advice. Apply resuscitation if victim is not breathing; Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically. Keep victim calm and warm - Obtain immediate medical care. Ensure that attending medical personnel are aware of identity and nature of the product(s) involved, and take precautions to protect themselves.
Medical Conditions Aggravated by Exposure	May cause allergy or asthma symptoms or breathing difficulties if inhaled; May cause an allergic skin reaction.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Do NOT move cargo if cargo has been exposed to heat. Cool containers with flooding quantities of water until well after fire is out - If impossible, withdraw from area and let fire burn.
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Flammability Conditions	OXIDISING SUBSTANCE: Will accelerate burning when involved in a fire.
Extinguishing Media	Use flooding quantities of water for extinction - Do NOT use dry chemicals, Carbon dioxide (CO ₂) or foam. For large fires: Flood fire area with water from a protected position.
Fire and Explosion Hazard	May explode from heating, shock, friction or contamination. May ignite combustibles. Containers may explode when heated. Runoff may create fire or explosion hazard.
Hazardous Products of Combustion	Fire may produce irritating, toxic and/or corrosive gases, including Sulphur oxides, Nitrogen oxides, Ammonia.
Special Fire Fighting Instructions	Contain/dam fire control water for later disposal - Runoff may pollute waterways; Runoff may create fire or explosion hazard.
Personal Protective Equipment	Wear self-contained breathing apparatus (SCBA) in combination with normal firefighting clothing (full fire kit).
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	1Z

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. Do not contaminate - Keep combustibles away from spilled material. Prevent exposure to heat. Avoid dust formation. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Use clean, non-sparking tools to collect material and place it into suitable containers for later disposal (see SECTION 13).
Containment	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas.
Decontamination	No information available.
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and waterways.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground. For large spills: Consider initial downwind evacuation of areas within at least 100 m.
Personal Precautionary Measures	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8).

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 place. Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation. Avoid breathing dust and contact with eyes, skin and clothing. Wear protective gloves/eye protection/face protection; In case of inadequate ventilation, wear respiratory protection (see SECTION 8). Keep away from heat. Take any precaution to avoid mixing with combustibles. Take precautionary measures against static discharge. Never pour product residue back into storage container.
Storage	Store in a cool, dry and well-ventilated place. Keep container tightly closed - Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from heat. Protect from moisture. Keep/store away from combustible materials. Keep away from incompatible materials (see SECTION 10). Store locked up.
Container	Keep in the original, properly labelled containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	For Ammonium persulphate (CAS No. 7727-54-0): - Safe Work Australia Exposure Standard: TWA = 0.1 mg/m ³ Peak limitation; Respiratory and/or skin sensitiser (Sen).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local

exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Protection Equipment	- Respiratory protection: In case of inadequate ventilation, wear respiratory protection. Recommended: Dust mask/respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Chemical goggles. - Hand protection: Wear protective gloves. Recommended: Impervious gloves. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Long-sleeved clothing; Coveralls, safety shoes.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Take off contaminated clothing and wash before storage or reuse. Contaminated work clothing should not be allowed out of the workplace.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystals, powder
Odour	Slight
Colour	White
pH	3.2 (10 % solution) - 4.0 (1 % solution)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	120 °C
Freezing Point	No Data Available
Solubility	Soluble in water
Specific Gravity	1.98
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	>120 °C
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	228.19
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	No information available.
Fast or Intensely Burning Characteristics	May explode from heating, shock, friction or contamination.
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	OXIDISING SUBSTANCE: Will accelerate burning when involved in a fire. May ignite combustibles.
Reactions That Release Gases or Vapours	Fire may produce irritating, toxic and/or corrosive gases, including Sulphur oxides, Nitrogen oxides, Ammonia.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	OXIDISING SUBSTANCE: Will accelerate burning when involved in a fire. May ignite combustibles. May explode from heating, shock, friction or contamination.
Chemical Stability	Stable under recommended conditions.
Conditions to Avoid	Avoid dust formation. Keep away from heat. Do not contaminate - Keep/store away from combustible materials. Protect from moisture.
Materials to Avoid	Incompatible/reactive with acids, alkalis, halides, combustible materials, heavy metals, oxidising agents, reducing agents, organic compounds, accelerators/promoters.
Hazardous Decomposition Products	Fire may produce irritating, toxic and/or corrosive gases, including Sulphur oxides, Nitrogen oxides, Ammonia.
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	<ul style="list-style-type: none"> - Acute toxicity: Harmful if swallowed. - Skin corrosion/irritation: Causes skin irritation. - Eye damage/irritation: Causes serious eye irritation. - Respiratory/skin sensitisation: May cause allergy or asthma symptoms or breathing difficulties if inhaled; May cause an allergic skin reaction. - Germ cell mutagenicity: Not mutagenic. - Carcinogenicity: No evidence of carcinogenicity of persulfate salts. - Reproductive toxicity: Not toxic to reproduction or development. - STOT (single exposure): May cause respiratory irritation. - STOT (repeated exposure): Persulfates have low repeat dose toxicity. - Aspiration toxicity: No information available.
Acute	
Ingestion	Acute toxicity (Oral): - LD50, Rats: 495 - 820 mg/kg bw.
Inhalation	Acute toxicity (Inhalation): - LC50, Rats: >2.95 mg/l (maximum attainable concentration).
Other	Acute toxicity (Dermal): - LD50, Rats: >2,000 mg/kg bw.
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - LC50, Fish: 86.3 mg/l (96 h). - EC50, Daphnia: 120 mg/l (48 h). - EC50, Bacteria: 83.7 mg/l (72 h).
Persistence/Degradability	No information available.
Mobility	Will likely be mobile in the environment due to its water solubility.
Environmental Fate	Slightly water endangering - Prevent entry into drains and waterways.

Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container in accordance with local/regional/national regulations.
Special Precautions for Land Fill	No information available.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	AMMONIUM PERSULPHATE
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	No Data Available
EPG	31 Oxidizing Substances
UN Number	1444
Hazchem	1Z
Pack Group	III
Special Provision	No Data Available

Land Transport (Malaysia)

ADR Code

Proper Shipping Name	AMMONIUM PERSULPHATE
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	No Data Available
EPG	31 Oxidizing Substances
UN Number	1444
Hazchem	1Z
Pack Group	III
Special Provision	No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping Name	AMMONIUM PERSULPHATE
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	No Data Available
EPG	31 Oxidizing Substances
UN Number	1444
Hazchem	1Z
Pack Group	III
Special Provision	No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name	AMMONIUM PERSULPHATE
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	No Data Available
ERG	140 Oxidizers
UN Number	1444
Hazchem	1Z
Pack Group	III
Special Provision	No Data Available

Sea Transport

IMDG Code

Proper Shipping Name	AMMONIUM PERSULPHATE
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	No Data Available
UN Number	1444
Hazchem	1Z
Pack Group	III
Special Provision	No Data Available
EMS	F-A, S-Q
Marine Pollutant	No

Air Transport

IATA DGR

Proper Shipping Name	AMMONIUM PERSULPHATE
Class	5.1 Oxidising Substances
Subsidiary Risk(s)	No Data Available
UN Number	1444
Hazchem	1Z
Pack Group	III
Special Provision	No Data Available

National Transport Commission (Australia)

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

Dangerous Goods Classification	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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15. REGULATORY INFORMATION

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

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code HSR001311

National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	231-786-5
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

Related Product Codes AMPERS1000, AMPERS1001, AMPERS1002, AMPERS1003, AMPERS1004, AMPERS1005, AMPERS1006, AMPERS1007, AMPERS1008, AMPERS1009, AMPERS1010, AMPERS1011, AMPERS1012, AMPERS1013, AMPERS1014, AMPERS1015, AMPERS1016, AMPERS1017, AMPERS1018, AMPERS1019, AMPERS2000, AMPERS2001, AMPERS2002, AMPERS2003, AMPERS2004, AMPERS2005, AMPERS2500, AMPERS3000, AMPERS3500, AMPERS3501, AMPERS3502, AMPERS3503, AMPERS3504, AMPERS3505, AMPERS3506, AMPERS3507, AMPERS3508, AMPERS3509, AMPERS3510, AMPERS3511, AMPERS3512, AMPERS3513, AMPERS3514, AMPERS3515, AMPERS3516, AMPERS3517, AMPERS3518, AMPERS3519, AMPERS3520, AMPERS3521, AMPERS3522, AMPERS3523, AMPERS3524, AMPERS3525, AMPERS3526, AMPERS3527, AMPERS3528, AMPERS3529, AMPERS3530, AMPERS3531, AMPERS3532, AMPERS3533, AMPERS3534, AMPERS3600, AMPERS3601, AMPERS3800, AMPERS4000, AMPERS4001, AMPERS5000, AMPERS6000, AMPERS6500, AMPERS7000, AMPERS7200, AMPERS7500, AMPERS7501, AMPERS7600, AMPERS8000, AMPERS9000, AMPERS9100, AMPERS9200, AMPERS9300, AMPERS9500

Revision 4

Revision Date 18 Jan 2018

Key/Legend < Less Than
> Greater Than
AICS Australian Inventory of Chemical Substances
atm Atmosphere
CAS Chemical Abstracts Service (Registry Number)
cm² Square Centimetres
CO2 Carbon Dioxide
COD Chemical Oxygen Demand
deg C (°C) Degrees Celcius
EPA (New Zealand) Environmental Protection Authority of New Zealand
deg F (°F) Degrees Farenheit

g Grams
g/cm³ Grams per Cubic Centimetre
g/l Grams per Litre
HSNO Hazardous Substance and New Organism
IDLH Immediately Dangerous to Life and Health
immiscible Liquids are insoluble in each other.
inHg Inch of Mercury
inH₂O Inch of Water
K Kelvin
kg Kilogram
kg/m³ Kilograms per Cubic Metre
lb Pound
LC50 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.
LD50 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
m³ Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m³ Milligrams per Cubic Metre
Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH₂O 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
PEL Permissible Exposure Limit
Pa Pascal
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
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight