

1. IDENTIFICATION

Product Name Potassium Peroxymonosulfate

Other Names Potassium hydrogen peroxymonosulphate; Potassium peroxymonosulfate sulfate

Uses Oxidising agents.

Chemical Family No Data Available

Chemical Formula H3K5O18S4

Chemical Name Contains: Pentapotassium bis(peroxymonosulphate) bis(sulphate); Dipotassium peroxodisulphate

Product Description No Data Available

Contact Details of the Supplier of this Safety Data Sheet

OrganisationLocationTelephoneRedox Ltd2 Swettenham Road
Minto NSW 2566
Australia+61-2-97333000

Redox Ltd 11 Mayo Road +64-9-2506222

Wiri Auckland 2104 New Zealand

Redox Inc. 3960 Paramount Boulevard +1-424-675-3200

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Lakewood CA 90712

USA

Redox Chemicals Sdn Bhd Level 2, No. 8, Jalan Sapir 33/7 +60-3-5614-2111

Seksyen 33, Shah Alam Premier Industrial Park

40400 Shah Alam Sengalor, Malaysia

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) Schedule 6



Globally Harmonised System

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of

Chemicals (GHS)

Hazard Categories Acute Toxicity (Oral) - Category 4

Skin Corrosion/Irritation - Category 1B Serious Eye Damage/Irritation - Category 1

Acute Hazard To The Aquatic Environment - Category 2
Long-term Hazard To The Aquatic Environment - Category 3

Pictograms





Signal Word Danger

Hazard Statements H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H401 Toxic to aquatic life.

H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements Prevention **P260** Do not breathe dusts or mists.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P273 Avoid release to the environment.

P270 Do not eat, drink or smoke when using this product.

Response P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

water or shower.

P310 Immediately call a POISON CENTER or doctor.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses,

if present and easy to do. Continue rinsing.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P363 Wash contaminated clothing before reuse.

P304 + P340 IF INHALED: Remove victim to fresh air and keep comfortable for breathing.

Storage **P405** Store locked up.

Disposal P501 Dispose of contents/container in accordance with local / regional / national /

international regulations.

National Transport Commission (Australia)

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

Dangerous Goods ClassificationDangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by

Road & Rail (ADG Code)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Pentapotassium bis(peroxymonosulphate) bis(sulphate)	H3K5O18S4	70693-62-8	>97 - 100 %
Dipotassium peroxodisulphate	K208S2	7727-21-1	0 - <3 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed IF SWALLOWED: Rinse mouth thoroughly with water. Do NOT induce vomiting. Keep respiratory tract clear. Immediately

call a Poison Centre or doctor/physician for advice. Never give anything by mouth to an unconscious person.

IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting Eye

> the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Immediately call a Poison Centre or doctor/physician for advice. Protect unharmed eye. Continue rinsing eyes during

transport to hospital.

Skin IF ON SKIN (or hair): Remove contaminated clothing and shoes immediately. Flush skin and hair with running water for at

> least 15 minutes. In case of gross contamination, drench contaminated clothing and skin with plenty of water before removing clothes. For minor skin contact, avoid spreading material on unaffected skin. Immediately call a Poison Centre

or doctor/physician for advice.

Inhaled IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a Poison

> Centre or doctor/physician for advice. Apply resuscitation if victim is not breathing - Do not use direct mouth-to-mouth method if victim ingested or inhaled the substance; use alternative respiratory method or proper respiratory device -

Administer oxygen if breathing is difficult.

Treat symptomatically and supportively. Symptoms of poisoning may appear several hours later. Do not leave the victim **Advice to Doctor**

unattended. Keep victim calm and warm - Obtain immediate medical care. Ensure that attending medical personnel are

aware of the identity and nature of the product(s) involved, and take precautions to protect themselves.

Exposure

Medical Conditions Aggravated by Contains Dipotassium peroxodisulphate: 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. Cool containers with water spray until well after fire is out.

Avoid getting water inside containers.

Flammability Conditions Non-combustible; Material itself does not burn.

Extinguishing Media If material is involved in a fire, use dry chemical, Carbon dioxide (CO2), alcohol-resistant foam or water spray for

extinction - Do not use water jets (may scatter and spread fire). Use extinguishing measures that are appropriate to local

circumstances and the surrounding environment.

Fire and Explosion Hazard Containers may explode when heated. Flammable gases and vapours can develop in case of fire/decomposition.

Hazardous Products of

Combustion

Fire or heat will produce irritating, toxic and/or corrosive gases.

Special Fire Fighting Instructions Contain runoff from fire control or dilution water - Runoff may be toxic and/or corrosive and may pollute waterways. Fire

residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Personal Protective Equipment Wear self-contained breathing apparatus (SCBA) and chemical splash suit. Fully-encapsulating, gas-tight suits should be

worn for maximum protection. Structural firefighter's uniform is NOT effective for this material.

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 2X

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure Ensure adequate ventilation - Ventilate enclosed spaces before entering. ELIMINATE all ignition sources. Do not touch or

walk through spilled material. Clear spills immediately. Avoid generating dust. Do not breathe dust and prevent contact

with eyes, skin and clothing.

Clean Up Procedures Use clean, non-sparking tools to collect material and place 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. Prevent dust cloud.

DecontaminationTo clean the floor and all objects contaminated by this material, use plenty of water.

Environmental Precautionary

Measures

Spillages and decontamination runoff should be prevented from entering drains and watercourses.

Evacuation Criteria Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher

ground.

Personal Precautionary Measures Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8).

Large spill: Wear SCBA and chemical splash suit.

7. HANDLING AND STORAGE

Handling Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure

adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Do not breathe dusts or mists and prevent contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection (see SECTION 8). Electrical installations/working

materials must comply with the technological safety standards.

Storage Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep containers tightly closed - Containers which are

opened must be carefully resealed and kept upright to prevent leakage. Protect from moisture/impurities. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10). Store locked

up.

Container Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Workers, Inhalation, Long-term systemic effects, 0.28 mg/m3

Workers, Inhalation, Acute systemic effects, 50 mg/m3 Workers, Inhalation, Long-term local effects 0.28 mg/m3 Workers, Inhalation, Acute local effects, 50 mg/m3

Workers, Skin contact, Long-term systemic effects, 20 mg/kg bw/day Workers, Skin contact, Acute systemic effects, 80 mg/kg bw/day Workers, Skin contact, Acute local effects, 0.449 mg/cm2

Exposure Limits No Data Available

Biological Limits No information available on biological limit values for this product.

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 RESPIRATOR: Wear Respirator with filter type ABEK (AS1715/1716).

EYES: Tightly fitting safety goggles/Face protection (AS1336/1337).

HANDS: Butyl rubber gloves (0.5mm/>=8hr break through time) (AS2161).

CLOTHING: Protective suit (AS3765/2210).

Remove and wash contaminated clothing before re-use.

Work Hygienic Practices Keep away from food and drink. When using do not eat or drink. When using do not smoke. Wash hands before breaks

and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical StateSolidAppearanceCrystallineOdourOdourlessColourWhitepH2.3 (10 g/l)

Vapour Pressure <0.001 hPa (@ 25 °C)
Relative Vapour Density No Data Available
Boiling Point No Data Available

Melting Point Decomposes below the melting point

Freezing Point No Data Available

Solubility Soluble in water (ca. 300 g/l) 20°C

Specific Gravity ca. 2.35

Flash Point

Auto Ignition Temp

No Data Available

Evaporation Rate

No Data Available

Bulk Density

ca. 1,100 kg/m3

Corrosion Rate

No Data Available

Decomposition Temperature >80 °C

Density ca. 2.35 q/cm3 **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

Additional Characteristics - Self-accelerating decomposition temperature (SADT): >80 °C [UN-Test H.4]

- No oxidising effect.

No Data Available

Potential for Dust Explosion Not explosive.

Fast or Intensely Burning

Characteristics

VOC Volume

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

 $\label{lem:non-combustible:material} \textbf{Non-combustible: Material itself does not burn.}$

Reactions That Release Gases or

Vapours

Fire/decomposition will produce irritating, toxic and/or corrosive gases.

Release of Invisible Flammable

Vapours and Gases

Flammable gases and vapours can develop in case of fire/decomposition.

10. STABILITY AND REACTIVITY

General Information Even small amounts of moisture or impurities can notably reduce the self-accelerating decomposition temperature

(SADT).

Chemical Stability Stable under recommended storage conditions.

Conditions to Avoid Avoid generating dust. Protect from moisture/impurities (risk of decomposition).

Materials to Avoid Incompatible/reactive with accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents,

moisture and impurities (e.g. rust, dust, ash).

Hazardous Decomposition

Products

Fire/decomposition will produce irritating, toxic, corrosive and/or flammable gases and vapours.

Hazardous Polymerisation No information available.

11. TOXICOLOGICAL INFORMATION

General Information

- Acute toxicity: Harmful if swallowed. PRODUCT: The substance or mixture has no acute inhalation toxicity [Expert judgement].
- Skin corrosion/irritation: Causes severe skin burns. PRODUCT: Causes burns; Extremely corrosive and destructive to tissue (Rabbit) [OECD TG 404].
- Eye damage/irritation: Causes serious eye damage. PRODUCT: Risk of serious damage to eyes; May cause irreversible eye damage (Rabbit) [OECD TG 405].
- Respiratory sensitisation: Not classified based on available information. PRODUCT: Inhalation does not cause respiratory sensitisation [Expert judgement]. COMPONENT: Dipotassium peroxodisulphate: May cause allergy or asthma symptoms or breathing difficulties if inhaled (dust/mist/fume).
- Skin sensitisation: Not classified based on available information. PRODUCT: Skin contact did not cause sensitisation on laboratory animals (Guinea pig) [OECD TG 406]. COMPONENT: Dipotassium peroxodisulphate: May cause an allergic skin reaction
- Germ cell mutagenicity: Not classified based on available information.
- Carcinogenicity: Not classified based on available information.
- Reproductive toxicity: Not classified based on available information.
- STOT (single exposure): Not classified based on available information. PRODUCT: The substance or mixture is not classified as specific target organ toxicant, single exposure. COMPONENT: Dipotassium peroxodisulphate: May cause respiratory irritation.
- STOT (repeated exposure): Not classified based on available information.
- Aspiration toxicity: Not classified based on available information.

Acute

Ingestion Acute toxicity (Oral):

- LD50, Rat: 500 mg/kg [OECD TG 423].

COMPONENT: Pentapotassium bis(peroxymonosulphate) bis(sulphate):

- LD50, Rat: 500 mg/kg [OECD TG 423].
 COMPONENT: Dipotassium peroxodisulphate:
 - LD50, Rat (male/female): 742 mg/kg [OECD TG 401].

Inhalation Acute toxicity (Inhalation):

- LCO, Rat: >5 mg/l (4 h) dust/mist [OECD TG 403].

COMPONENT: Pentapotassium bis(peroxymonosulphate) bis(sulphate):

LCO, Rat: >5 mg/l (4 h) dust/mist [OECD TG 403].
 COMPONENT: Dipotassium peroxodisulphate:
 LC50, Rat: >5.1 mg/l (4 h dust/mist [OECD TG 403].

Other Acute toxicity (Dermal):

- LD50, Rat: >5,000 mg/kg [OECD TG 402].

 ${\bf COMPONENT: Pentapotassium\ bis (peroxymonosulphate)\ bis (sulphate):}$

- LD50, Rat: >5,000 mg/kg [OECD TG 402]. COMPONENT: Dipotassium peroxodisulphate:

- LD50, Rat: >2,000 mg/kg

Carcinogen Category None

12. ECOLOGICAL INFORMATION

Ecotoxicity Aquatic toxicity:

- LC50, Fish (Oncorhynchus mykiss): 53 mg/l (96 h) [OECD TG 203]. - EC50, Crustacea (Daphnia magna): 3.5 mg/l (48 h) [OECD TG 202].

- ErC50, Algae (Pseudokirchneriella subcapitata): >1 mg/l (72 h) [OECD TG 201].

- NOEC, Fish: 0.5 mg/l (37 d) [Chronic toxicity].

Persistence/Degradability Biodegradability: The methods for determining the biological degradability are not applicable to inorganic substances.

Mobility No information available.

Environmental Fate Toxic to aquatic life/Harmful to aquatic life with long lasting effects - Avoid release to the environment. An environmental

hazard cannot be excluded in the event of unprofessional handling or disposal.

Bioaccumulation Potential No information available.

Environmental Impact No Data Available

13. DISPOSAL CONSIDERATIONS

General Information Dispose of contents/container at an approved waste disposal facility and in accordance with local/regional/national

regulations.

Special Precautions for Land Fill Contaminated packaging: Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping NameCORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Potassium peroxymonosulfate)

Class 8 Corrosive Substances
Subsidiary Risk(s) No Data Available

EPG 37 Toxic And/Or Corrosive Substances Non-Combustible

 UN Number
 3260

 Hazchem
 2X

 Pack Group
 II

Special Provision No Data Available

Land Transport (Malaysia)

ADR Code

Proper Shipping Name CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Potassium peroxymonosulfate)

Class 8 Corrosive Substances
Subsidiary Risk(s) No Data Available

EPG 37 Toxic And/Or Corrosive Substances Non-Combustible

 UN Number
 3260

 Hazchem
 2X

 Pack Group
 II

Special Provision No Data Available

Land Transport (New Zealand)

NZS5433

Proper Shipping NameCORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Potassium peroxymonosulfate)

Class 8 Corrosive Substances

Subsidiary Risk(s) No Data Available

EPG 37 Toxic And/Or Corrosive Substances Non-Combustible

 UN Number
 3260

 Hazchem
 2X

 Pack Group
 II

Special Provision No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Potassium peroxymonosulfate)

Class 8 Corrosive Substances
Subsidiary Risk(s) No Data Available

ERG 154 Substances - Toxic and/or Corrosive (Non-Combustible)

 UN Number
 3260

 Hazchem
 2X

 Pack Group
 II

Special Provision No Data Available

Sea Transport

IMDG Code

Proper Shipping Name CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Potassium peroxymonosulfate)

Class 8 Corrosive Substances

Subsidiary Risk(s) No Data Available

 UN Number
 3260

 Hazchem
 2X

 Pack Group
 II

Special Provision No Data Available

EMS F-A, S-B
Marine Pollutant No

Air Transport

IATA DGR

Proper Shipping Name CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Potassium peroxymonosulfate)

Class 8 Corrosive Substances
Subsidiary Risk(s) No Data Available

UN Number 3260 Hazchem 2X Pack Group II

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)

15. REGULATORY INFORMATION

General Information POTASSIUM PEROXOMONOSULFATE TRIPLE SALT

Poisons Schedule (Aust) Schedule 6

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code Additives Process Chemicals and Raw Materials Corrosive Group Standard 2020 HSR002491

*HSR003754 (Revoked)

National/Regional Inventories

Australia (AIIC) Listed

Canada (DSL) Listed

Canada (NDSL) Not Determined

China (IECSC) Listed

Europe (EINECS) Listed

Europe (REACh) Not Determined

Japan (ENCS/METI) Listed

Korea (KECI) Listed

Malaysia (EHS Register) Not Determined

New Zealand (NZIoC) Listed

Philippines (PICCS) Listed

Switzerland (Giftliste 1) Not Determined

Switzerland (Inventory of Notified

Substances)

Not Determined

Taiwan (NCSR) Listed

USA (TSCA) Listed

16. OTHER INFORMATION

Related Product Codes POPEOX8800, POPEOX9600, POPEOX9900

Revision 3

15 Jan 2020 **Revision Date** Reason for Issue SDS Updated Key/Legend < Less Than

AICS Australian Inventory of Chemical Substances

atm Atmosphere

> Greater Than

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/I Grams per Litre

HSNO Hazardous Substance and New Organism **IDLH** Immediately Dangerous to Life and Health immiscible Liquids are insoluable in each other.

inHg Inch of Mercury inH20 Inch of Water

K Kelvin kg Kilogram

kg/m³ Kilograms per Cubic Metre

Ib 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.

Itr 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

mmH20 Millimetres of Water mPa.s Millipascals per Second

N/A Not Applicable

NIOSH National Institute for Occupational Safety and Health NOHSC National Occupational Heath 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