

1. IDENTIFICATION

Product Name	Magnesium chloride
Other Names	Magnesium chloride, anhydrous (CAS No. 7786-30-3)
Uses	Used in making metal magnesium, disinfectants, freezing salt, ceramics, and for filling fabric, paper, etc.
Chemical Family	No Data Available
Chemical Formula	MgCl ₂ .6H ₂ O
Chemical Name	Magnesium chloride, hexahydrate
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

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not Scheduled

Globally Harmonised System

Hazard Classification NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Signal Word None

National Transport Commission (Australia)

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



Dangerous Goods Classification

NOT Dangerous 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
Magnesium chloride, hexahydrate	MgCl ₂ .6H ₂ O	7791-18-6	98 - 100 %

4. FIRST AID MEASURES**Description of necessary measures according to routes of exposure**

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Get medical advice/attention if a large amounts were swallowed or if you feel unwell.
Eye	IF IN EYES: 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: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs, get medical advice/attention.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing until recovered. If respiratory symptoms persist, get medical advice/attention.
Advice to Doctor	Treat symptomatically. Intravenous administration of calcium gluconate will partially reverse the effects of acute magnesium toxicity. Ventricular support with calcium chloride infusion and mannitol forced diuresis has also been successful.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool container with water spray until well after fire is out.
Flammability Conditions	Non-combustible; Material does not burn.
Extinguishing Media	If material is involved in a fire, use dry chemical, Carbon dioxide (CO ₂), foam or water spray for extinction. Use any means suitable for extinguishing surrounding fire.
Fire and Explosion Hazard	Not considered to be a fire and/or explosion hazard.
Hazardous Products of Combustion	Fire or heat will produce toxic and/or corrosive fumes, including Hydrochloric acid and Chlorine gas.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
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	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. Do not touch or walk through spilled material. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Collect material (sweep or vacuum up) and place it into suitable, properly labelled containers for reclamation or disposal (see SECTION 13); if appropriate, moisten first or cover with damp absorbent, to prevent dusting.
Containment	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas.
Decontamination	No information available.
Environmental Precautionary Measures	Prevent entry into drains and waterways. If environmental contamination has occurred, advise local emergency services.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

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. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing. Use personal protective equipment as required (see SECTION 8).
Storage	Store in a cool, dry and well-ventilated place. Keep container tightly closed. Protect from moisture (hygroscopic). Protect against physical damage. Keep away from incompatible materials (see SECTION 10).
Container	Keep in the original container. Emptied containers may retain product residues - observe all warning and precautions listed for the product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No value assigned for this specific material by Safe Work Australia. For dusts from solid substances without specific occupational exposure standards: - Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m ³ , measured as inhalable dust. - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m ³ (total); TWA = 3 mg/m ³ (respirable).
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: Wear respiratory protection in case of inadequate ventilation and/or exposure to dust or mist. Recommended: Dust mask/respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses or chemical-safety goggles. - Hand protection: Handle with gloves. Recommended: Impervious (protective) gloves. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Clean, body-covering clothing; Overalls, safety shoes.
Special Hazards Precautions	No information available.
Work Hygienic Practices	Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Flakes or crystals
Odour	Odourless
Colour	Colourless
pH	~7 (5 % in water)



Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	118 °C
Freezing Point	No Data Available
Solubility	Soluble in water - 167 g/100 ml water 20°C
Specific Gravity	1.57
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	No Data Available
Density	No Data Available
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	0 % (21°C)
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	No information available.
Fast or Intensely Burning Characteristics	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	Non-combustible; Material does not burn.
Reactions That Release Gases or Vapours	Decomposes on heating, emitting toxic and/or corrosive fumes, including Hydrochloric acid and Chlorine gas.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	The addition (at room temperature) of Magnesium chloride to furan-2-peroxycarboxylic acid will cause the acid to explode.
Chemical Stability	Stable under ordinary conditions of storage and use.
Conditions to Avoid	Avoid generating dust. Keep away from heat. Protect from moisture (hygroscopic).
Materials to Avoid	Incompatible/reactive with strong oxidising agents and 2-furan percarboxylic acid.
Hazardous Decomposition Products	Decomposes on heating, emitting toxic and/or corrosive fumes, including Hydrochloric acid and Chlorine gas.
Hazardous Polymerisation	Will not occur.



11. TOXICOLOGICAL INFORMATION

General Information	Information on possible routes of exposure: - Ingestion: May cause abdominal pain/gastrointestinal irritation, nausea, vomiting and diarrhoea if swallowed. Magnesium salts are slowly absorbed; however, if elimination is blocked (due to bowel obstruction or other reasons), CNS depression, decreased reflexes, hypocalcemia may occur. - Eye contact: No adverse effects expected; dust may cause mechanical irritation. - Skin contact: No adverse effects expected; May cause minor skin irritation. - Inhalation: Breathing in dust may cause mild irritation to the mucous membranes of the respiratory tract. Chronic effects: No information available.
Acute	
Ingestion	Acute toxicity (Oral): - LD50, Rat: 8,100 mg/kg
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	No information available.
Persistence/Degradability	No information available.
Mobility	No information available.
Environmental Fate	Prevent entry into drains and waterways.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility and in accordance with local/regional/national regulations.
Special Precautions for Land Fill	Processing, use and/or contamination of this product may change the waste management options; Refer to waste management authority for advice.

14. TRANSPORT INFORMATION**Land Transport (Australia)**

ADG Code

Proper Shipping Name	Magnesium chloride
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available



Sea Transport

IMDG Code

Proper Shipping Name	Magnesium chloride
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No

Air Transport

IATA DGR

Proper Shipping Name	Magnesium chloride
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available

National Transport Commission (Australia)

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15. REGULATORY INFORMATION

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

National/Regional Inventories

Australia (AICS)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	Not Determined
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

MACHLF1000, MACHLF1001, MACHLF1030, MACHLF1500, MACHLF1540, MACHLF2000, MACHLF4000, MACHLF5000, MACHLF5200, MACHLO0100, MACHLO0101, MACHLO0200, MACHLO0300, MACHLO0400, MACHLO0600, MACHLO0601, MACHLO0602, MACHLO0603, MACHLO0604, MACHLO0605, MACHLO0606, MACHLO0607, MACHLO0700, MACHLO0701, MACHLO0800, MACHLO0900, MACHLO1007, MACHLO1008, MACHLO1009, MACHLO1010, MACHLO1012, MACHLO1015, MACHLO1016, MACHLO1018, MACHLO1200, MACHLO1300, MACHLO1350, MACHLO1375, MACHLO1400, MACHLO1500, MACHLO1501, MACHLO1502, MACHLO1503, MACHLO1504, MACHLO1550, MACHLO1555, MACHLO1558, MACHLO1600, MACHLO1601, MACHLO1602, MACHLO1610, MACHLO1611, MACHLO1615, MACHLO1650, MACHLO1700, MACHLO1701, MACHLO1800, MACHLO1803, MACHLO1900, MACHLO2000, MACHLO2001, MACHLO2100, MACHLO2200, MACHLO2300, MACHLO2400, MACHLO2500, MACHLO2600, MACHLO2700, MACHLO2800, MACHLO3000, MACHLO3001, MACHLO3100, MACHLO3200, MACHLO4000, MACHLO4001, MACHLO4100, MACHLO4101, MACHLO4102, MACHLO4105, MACHLO4200, MACHLO4503, MACHLO4504, MACHLO5100, MACHLO5200, MACHLO5300, MACHLO5500, MACHLO5501, MACHLO5504, MACHLO5505, MACHLO5600, MACHLO5700, MACHLO5900, MACHLO6000, MACHLO6100, MACHLO6101, MACHLO6200, MACHLO6300, MACHLO6400, MACHLO6401, MACHLO6410, MACHLO6411, MACHLO6500, MACHLO6501, MACHLO6502, MACHLO6800, MACHLO6850, MACHLO7000, MACHLO7400, MACHLO7500, MACHLO7600, MACHLO7700, MACHLO7800, MACHLO7900, MACHLO8000, MACHLO8100, MACHLO8200, MACHLO8300, MACHLO8400, MACHLO8500, MACHLO8501, MACHLO8502, MACHLO8600, MACHLO8800, MACHLO8900, MACHLO9100, MACHLO9200, MACHLO9400, MACHLO9500, MACHLO9600, MACHLO9700, MACHLO9800, MACHLO9900

Revision

3

Revision Date

05 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 insoluable 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

