



Infosafe No™	1CHA5	Issue Date : March 2019	RE-ISSUED by CHEMSUPP
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Product Name : **MAGNESIUM Powder**

Classified as hazardous

**1. Identification**

<b>GHS Product Identifier</b>	MAGNESIUM Powder	
<b>Company Name</b>	CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)	
<b>Address</b>	38 - 50 Bedford Street GILLMAN SA 5013 Australia	
<b>Telephone/Fax Number</b>	Tel: (08) 8440-2000 Fax: (08) 8440-2001	
<b>Emergency phone number</b>	CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)	
<b>Recommended use of the chemical and restrictions on use</b>	Pyrotechnics, signal flares, incendiary and tracer bullets, flash photography, reducing agent, optical mirrors, dry and wet batteries, antiknock gasoline additives, desulfurising iron in steel manufacture, magnesium compounds and Grignard syntheses, precision instruments and laboratory reagent.	
<b>Other Names</b>	<u>Name</u> MAGNESIUM Powder LR	<u>Product Code</u> ML031

**Other Information**

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

**2. Hazard Identification**

<b>GHS classification of the substance/mixture</b>	Flammable Solids: Category 1 Substances and Mixtures which, in contact with water, emit flammable gases: Category 2 Self Heating Substances and Mixtures: Category 1
<b>Signal Word (s)</b>	Danger
<b>Hazard Statement (s)</b>	H228 Flammable solid. H251 Self-heating; may catch fire. H261 In contact with water releases flammable gases.
<b>Pictogram (s)</b>	Flame



<b>Precautionary statement – Prevention</b>	P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking. P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire. P231+P232 Handle under inert gas. Protect from moisture. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting/.../equipment. P235+P410 Keep cool. Protect from sunlight. P280 Wear protective gloves/protective clothing/eye protection/face protection. P370+P378 In case of fire: Use sand or dry inert material for extinction.
<b>Precautionary statement – Response</b>	
<b>Precautionary statement – Storage</b>	P402+P404 Store in a dry place. Store in a closed container. P407 Maintain air gap between stacks/pallets. P413 Store bulk masses greater than ? kgs/ ? lbs at temperatures not exceeding ? °C/ ? °F.
<b>Precautionary statement – Disposal</b>	Dispose of contents/container to an approved waste disposal plant.



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**3. Composition/information on ingredients**

Chemical Solid

**Characterization****Ingredients****Name****CAS****Proportion****Hazard Symbol****Risk Phrase**

Magnesium powder

7439-95-4

100 %

**4. First-aid measures****Inhalation**

If inhaled, remove from contaminated area to fresh air immediately. If breathing is difficult, give oxygen. Apply artificial respiration with a respiratory medical device if not breathing. Do not use mouth to mouth resuscitation. Immediately medical attention is required.

**Ingestion**

Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek immediate medical advice.

**Skin**

Wash affected area thoroughly with soap and water. Remove contaminated clothing and wash before reuse or discard. If symptoms develop seek medical attention.

**Eye contact**

Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.

Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.

**First Aid Facilities**

Maintain eyewash fountain and safety shower in work area.

**Advice to Doctor**

Treat symptomatically based on judgement of doctor and individual reactions of the patient.

**Other Information**

For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

**5. Fire-fighting measures****Hazards from**

Emits toxic fumes of magnesium oxide under fire conditions.

**Combustion****Products****Specific Methods**

DO NOT USE WATER OR FOAM, carbon tetrachloride or carbon dioxide.

Use DRY sand, graphite powder or Met-L-X powder.

If safe to do so, move undamaged containers from the fire area. Avoid getting water inside the containers.

**Specific hazards arising from the chemical**

May ignite on contact with water or moist air. May react violently or explosively on contact with water.

**Hazchem Code**

4W

**Precautions in****connection with Fire**

Wear SCBA and chemical splash suit. Structural firefighter's uniform will provide limited protection.

Protect eyes and skin against flying particles. Avoid direct viewing of magnesium fires as eye injury may result.

**6. Accidental release measures****Spills & Disposal**

Eliminate all ignition sources (no smoking, flares, sparks or flame) within at least 25m. Do NOT touch or walk through spilled material. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas.

DO NOT GET WATER inside containers or in contact with substance.

Small spill: Cover with DRY earth, sand or other non-combustible material followed by a plastic sheet to minimize spreading or contact with rain.

Large Spill:

SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

**Personal****Precautions**

Evacuate the area of all non-essential personnel. Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.

**Personal Protection**

Wear protective clothing specified for normal operations (see Section 8)

**Clean-up Methods -****Small Spillages**

Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations.

**7. Handling and storage****Precautions for Safe****Handling**

Avoid generation or accumulation of dusts. Do not breathe dust. Do not get in eyes, on skin, on clothing.

Avoid prolonged or repeated exposure. Use in well ventilated areas away from all ignition sources. In case of insufficient ventilation, wear suitable respiratory equipment. Prevent all contact with water and with moist atmosphere. Take precautionary measures against static discharges.



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**Conditions for safe storage, including any incompatibilities** Store away from sources of heat or ignition. Store in a cool, dry place. Store away from acids. Keep containers closed at all times. Separate from incompatibles, combustibles, or other readily oxidizable materials.

**8. Exposure controls/personal protection**

**Other Exposure Information** No exposure standards have been established for this product by Safe Work Australia, however, the TWA exposure standard for dusts/mists not otherwise specified is 10 mg/m<sup>3</sup>. All atmospheric contamination should be kept to as low a level as is workable.

**Appropriate engineering controls** In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. These methods should be used in preference to personal protective equipment.

**Respiratory Protection** Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

**Eye Protection** The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

**Hand Protection** Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments.

**Personal Protective Equipment** Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.

**Footwear** Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.

**Body Protection** Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

**Hygiene Measures** Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

**9. Physical and chemical properties**

**Form** Solid

**Appearance** Silvery-grey powder.

**Odour** Odourless.

**Melting Point** 651 °C

**Boiling Point** 1100 °C

**Solubility in Water** Insoluble in water.

**Specific Gravity** 1.74

**Vapour Pressure** 1 mm Hg (@ 621 °C)

**Flash Point** 500 °C

**Flammability** Highly flammable.

**Auto-Ignition Temperature** 510 °C

**Flammable Limits - Lower** 0.04%

**Molecular Weight** 24.31

**Other Information** Soluble in concentrated hydrogen fluoride and ammonium salts. Insoluble in chromium trioxides, mineral acids and alkalis.

**10. Stability and reactivity**

**Chemical Stability** Stable under ordinary conditions of use and storage. Oxidises on contact with air



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<b>Conditions to Avoid</b>	Sensitive to air. Sensitive to moisture. Exposure to moisture. Exposure to air. Dust generation. Heat, sources of ignition. Incompatibles.
<b>Incompatible Materials</b>	Acids, alkali hydroxides, alkali salts, alcohols, bases, carbonates, cyanides, halogens, halogenated hydrocarbons, hydrogen halides, iodine, metallic oxides, nitrates, non-metallic oxides, non-metals, oxidising compounds, perchlorates, peroxi compounds, sulfates, and water.
<b>Hazardous Decomposition Products</b>	Emits toxic fumes of magnesium oxide under fire conditions.
<b>Possibility of hazardous reactions</b>	Contact with water or acids liberates flammable hydrogen gas. Risk of dust explosion.
<b>Hazardous Polymerization</b>	Will not occur.

**11. Toxicological Information**

<b>Ingestion</b>	May be harmful if swallowed. May cause irritation to the gastrointestinal tract with symptoms including nausea, vomiting, abdominal pain and diarrhea. This may lead to a lack of appetite and weight loss.
<b>Inhalation</b>	May be harmful if inhaled. Inhalation of magnesium dust or fumes may irritate the respiratory tract (nose, throat, lungs). Symptoms include burning sensation, coughing, chest pain, fever, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting, and leukocytosis. Metal fume fever may result when the compound is heated, emitting magnesium fumes, with symptoms similar to the common cold, including chills and stiffness of the head as well as high temperatures, nausea, coughing and general weakness.
<b>Skin</b>	Powdered magnesium applied to abraded skin causes inflammatory reaction, where the absorption leads to slow wound healing. Particles embedded in skin may produce gaseous blebs with a protracted course, skin eruptions and skin burns.
<b>Eye</b>	Dust is irritating to eyes. Small particles may penetrate the eyes and slow down the healing process. High concentrations of dust may cause mechanical irritation. Watching a magnesium fire can cause eye injury.
<b>Carcinogenicity</b>	No evidence of carcinogenic properties.
<b>Chronic Effects</b>	Chronic nasopharyngitis, coldness of extremities with cyanosis and tremor have been reported. Magnesium fumes can cause metal fume fever. The central nervous system, kidneys and cardiovascular system are targeted. Existing wounds contaminated with magnesium are very slow to heal.
<b>Mutagenicity</b>	No evidence of mutagenic properties.
<b>Other Information</b>	Toxic levels of magnesium in the feed of broiler chicks resulted in poor growth, diarrhoea, and skeletal abnormalities. In drinking water magnesium appears to be the element most responsible for relationships between cardiovascular mortality and water hardness.

**12. Ecological information**

<b>Ecotoxicity</b>	No ecological data available for this product.
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**13. Disposal considerations**

<b>Disposal Considerations</b>	Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and disposed of according to relevant local, state and federal government regulations.
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**14. Transport information**

<b>Transport Information</b>	Dangerous goods of Class 4.3 (Dangerous When Wet) are incompatible in a placard load with any of the following: Class 1, Class 2.1, Class 5, Class 7, Class 8.
<b>U.N. Number</b>	1418
<b>UN proper shipping name</b>	MAGNESIUM ALLOYS POWDER
<b>Transport hazard class(es)</b>	4.3
<b>Sub.Risk</b>	4.2
<b>Hazchem Code</b>	4W
<b>Packing Group</b>	II
<b>EPG Number</b>	4A3
<b>IERG Number</b>	26



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**15. Regulatory information**

<b>Regulatory Information</b>	Listed in the Australian Inventory of Chemical Substances (AICS). Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
<b>Poisons Schedule</b>	Not Scheduled
<b>Hazard Category</b>	Extremely Flammable

**16. Other Information**

<b>Literature References</b>	'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia. Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007. Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010. Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'. Safe Work Australia, 'Hazardous Chemical Information System, 2005'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'. Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.
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**Contact****Person/Point**Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**

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**Empirical Formula & Mg****Structural Formula**

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