Infosafe No™ 1CHJN Issue Date :June 2011 -ISSUED by CHEMSUPP CS: 1.4.95

Product Name **MAGNESIUM Ribbon**

Not classified as hazardous according to criteria of NOHSC

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	MAGNESIUM Ribbon
Company Name	CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)
Address	50 Bedford Street GILLMAN SA 5013 Australia
Telephone/Fax Number	Tel: (08) 8440-2000 Fax: (08) 8440-2001
Recommended Use	Reducing agent, thermite reactions, photographic flashbulbs and laboratory reagent.

Other Names

Name	Product Code
MAGNESIUM Ribbon TG	MT032

Other Information

EMERGENCY CONTACT NUMBER: +61 08 8440 2000
Business hours: 8:30am to 5:00pm, Monday to Friday.

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. HAZARDS IDENTIFICATION

Hazard Classification	Not classified as hazardous according to criteria of NOHSC DANGEROUS GOODS. NON-HAZARDOUS SUBSTANCE. Dangerous goods classification according to the Australian Dangerous Goods Code. Hazard classification according to the criteria of NOHSC.
Risk Phrase(s)	Not classified as hazardous according to criteria of NOHSC R15 Contact with water liberates extremely flammable gases. R17 Spontaneously flammable in air.
Safety Phrase(s)	S43 In case of fire, use sand,never use water. S7/8 Keep container tightly closed and dry.
Irritancy of Product	Severe irritant. Vesicant.
Teratogenicity	No evidence of teratogenic effects.
Signs and Symptoms of Exposure	Symptoms include chills, fever, malaise, muscle and joint pain, rash, and anorexia. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.
Medical Conditions Generally Aggravated by Exposure	Existing wounds contaminated with magnesium are very slow to heal. Persons with pre-existing skin conditions, eye problems or impaired respiratory function may be more susceptible to the effects of this product.
Environmental Hazards	After reaction, harmful effect on aquatic organisms.
Other Information	Magnesium powder is entered in Class 4.3 as a substance dangerous when wet. Pyrophoric alloys are entered in Class 4.2.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Solid

Ingredients

Name	CAS	Proportion	Hazard Symbol	Risk Phrase

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Magnesium	7439-95-4	100 %	F	R15, R17

4. FIRST AID MEASURES

Inhalation Remove from exposure. Keep warm and at rest. Seek medical attention in severe cases.

Ingestion Rinse mouth thoroughly with water immediately. Give plenty of water to drink. Never give anything by mouth to an unconscious person. If swallowed, do NOT induce vomiting. Seek medical attention.

Skin Quickly but gently, wipe material off skin. Remove contaminated clothing and wash affected skin with soap and water. Contaminated clothing must be laundered before re-use Seek medical attention in severe cases.

Eye Remove contact lenses. Carefully remove particles with cotton applicator. Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Seek medical attention.

First Aid Facilities Maintain eyewash fountain and drench facilities in work area.

Advice to Doctor Treat symptomatically.

Other Information For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

5. FIRE FIGHTING MEASURES

Hazards from Combustion Products Emits toxic fumes under fire conditions.

Specific Methods DO NOT USE WATER OR FOAM.
Small fire: Use dry chemical, soda ash, lime or sand.
If safe to do so, move undamaged containers from fire area.
Large fire: Use DRY sand, dry chemical, soda ash or lime or withdraw and let fire burn.
Cool containers with flooding quantities of water until well after fire is out. Avoid getting water inside containers.

Sensitivity to Impact (Shock Sensitivity) Non-flammable in presence of shocks.

Specific Hazards Produce flammable substances on contact with water. May ignite on contact with water or moist air. May react vigorously or explosively on contact with water. May be ignited by heat, sparks or flame. May re-ignite after fire is extinguished. Some are kept in or under flammable liquids. Fire will produce irritating, poisonous and/or corrosive gases. Containers may explode when heated. Runoff may create multiple fire or explosion hazard.

Hazchem Code 1Z

Sensitivity to Static Discharge Highly flammable in presence of open flames and sparks, of heat.

Precautions in connection with Fire Wear SCBA and chemical splash suit. Structural firefighter's uniform may provide limited protection.

Unsuitable Extinguishing Media Water, foam and carbon dioxide.

6. ACCIDENTAL RELEASE MEASURES

Spills & Disposal ELIMINATE all ignition sources (no smoking, flares, sparks or flames) within at least 25m. Do not touch or walk through spilled material. Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Water spray may be used to knock down vapours or divert vapour clouds. 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 plastic sheet to minimize spreading or contact with rain.
Large Spill
SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

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

7. HANDLING AND STORAGE

Conditions for Safe Storage	Store away from sources of heat or ignition. Store away from oxidizing agents. Store away from acids. Keep containers closed at all times. Store at room temperature (15 - 25 °C). Keep dry and protect from direct sunlight.
Corrosiveness	Non-corrosive in presence of glass. Magnesium is anodic to all other structural metals. Magnesium develops a corrosion-inhibiting film upon exposure to clean atmospheres and freshwater. However, the film breaks down in the presence of chlorides, sulphates and other media. It is rapidly attacked by mineral acids, except for chromic and hydrofluoric acids. It is however, resistant to dilute alkalies, aliphatic and aromatic hydrocarbons, particular alcohols, and dry bromine, chlorine and fluorine gases. Anodising magnesium improves its corrosion resistance.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Other Exposure Information	A time weighted average (TWA) concentration for an 8 hour day, and 5 day week has not been established by NOHSC Australia for this product. There is a blanket limit of 10 mg/m³ for dusts when limits have not otherwise been established.
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.
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	Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. Recommendation: Plastic or rubber gloves.
Body Protection	Flame retardant protective clothing. 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 white metal strips.
Odour	Odourless.
Melting Point	651 °C
Boiling Point	1100 °C
Solubility in Water	Insoluble in cold water. Very slightly soluble with decomposition in hot water.
Solubility in Organic Solvents	Soluble in ammonium salts.
Specific Gravity	1.738
Vapour Pressure	1 mm Hg @ 621 °C
Volatile Component	0%
Flash Point	636 °C.
Flammability	Flammable solid. Contact with moisture or water liberates flammable gases.
Auto-Ignition Temperature	473 - 510 °C.

Flammable Limits - Lower	0.04%
Explosion Properties	Water used on molten magnesium will produce hydrogen gas and may cause an explosion. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Minimum explosible concentration 0.030 grams/litre.
Molecular Weight	24.31
Solubility in other solvents (kg/m3)	Insoluble in chromium trioxides, and mineral acids, alkalies. Soluble in concentrated hydrogen fluoride.
Burning Characteristics	Ignites readily, burns with an intense white light and heat.

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under ordinary conditions of use and storage. Slowly oxidizes in moist air.
Conditions to Avoid	Heat, flames, ignition sources, water or moisture, moist air, air and incompatibles.
Incompatible Materials	Water and acids will release hydrogen; reacts violently with halogens, chloromethane, carbonates, cyanides, chlorinated hydrocarbons, sulfates, and other metals. Incompatible with oxidizing agents, acid chlorides, bases and alcohols. Sensitive to air.
Hazardous Decomposition Products	Magnesium oxide, some metallic oxides. When exposed to acids and water, hydrogen will be produced.
Hazardous Reactions	Violent chemical reaction with oxidizing agents. Reacts with water to create hydrogen gas and heat. Must be kept dry. Reacts with acids to form hydrogen gas which is highly flammable and explosive. Reacts violently with halogens, chlorinated solvents, chloromethane. Magnesium forms hazardous or explosive mixtures with aluminium and potassium perchlorate; ammonium nitrate; barium nitrate, barium dioxide and zinc; beryllium oxide; boron phosphodiiodide; bromobenzyl trifluoride; cadmium cyanide; cadmium oxide; calcium carbide; carbonates; carbon tetrachloride; chlorine; chlorine trifluoride; chloroform; cobalt cyanide; copper cyanide; copper sulfate(anhydrous), ammonium nitrate, potassium chlorate and water; cupric oxide; cupric sulfate; fluorine; gold cyanide; hydrogen and calcium carbonate; hydrogen iodide; hydrogen peroxide; iodine; lead cyanide; mercuric oxide; mercury cyanide; methyl chloride; molybdenum trioxide; nickel cyanide; nitric acid; nitrogen dioxide; oxygen (liquid); performic acid; phosphates; potassium chlorate; potassium perchlorate; silver nitrate; silver oxide; sodium perchlorate; sodium peroxide; sodium peroxide and carbon dioxide; stannic oxide; sulfates; trichloroethylene; zinc cyanide; zinc oxide.
Hazardous Polymerization	Will not occur.

11. TOXICOLOGICAL INFORMATION

Inhalation	Inhalation of dusts or fumes may irritate the respiratory tract and may cause metal fume fever. Symptoms may include coughing, chest pain, fever, and leukocytosis.
Ingestion	Magnesium metal does not have well-characterized toxicity. May cause abdominal pain and diarrhoea.
Skin	Particles embedded in the skin may cause eruptions. Molten magnesium may cause serious skin burns.
Eye	High concentrations of dust may cause mechanical irritation. Watching a magnesium fire can cause eye injury.
Mutagenicity	No evidence of mutagenic properties.
Carcinogenicity	Not listed in the IARC Monographs.

12. ECOLOGICAL INFORMATION

Ecological Information	After reaction, harmful effect on aquatic organisms.
Acute Toxicity - Fish	The following applies to magnesium compounds in general: lethal for fish 100 mg/l.

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13. DISPOSAL CONSIDERATIONS

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be dispose of according to relevant local, state and federal government regulations.

14. TRANSPORT INFORMATION

Transport Information	Dangerous Goods of Class 4.1 Flammable Solids, are incompatible in a placard load with any of the following: - Class 1, Class 2.1, Class 4.2, Class 5 and Class 7
U.N. Number	1869
Proper Shipping Name	MAGNESIUM
DG Class	4.1
Hazchem Code	1Z
Packaging Method	3.8.4.1
Packing Group	III
EPG Number	4A1
IERG Number	26

15. REGULATORY INFORMATION

Regulatory Information	Listed in the Australian Inventory of Chemical Substances (AICS).
Poisons Schedule	Not Scheduled
Hazard Category	Highly Flammable

16. OTHER INFORMATION

Contact Person/Point	Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT: All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Chem-Supply accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.
Empirical Formula & Structural Formula	Mg
Literature References	Australian Government Department of Health and Ageing, 'Standard for the Uniform Scheduling of Drugs and Poisons No. 24', Commonwealth of Australia 2009. 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. South Australia Government, 'Approved Code of Practice for the Labelling of Workplace Substances', 1995. Standards Australia 'AS 1940-2004 The Storage and Handling of Flammable and Combustible Liquids. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010. Worksafe Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(2004)]'. Worksafe Australia, 'Hazardous Substances Information System, 2005'. Worksafe Australia, 'National Code of Practice for the Labelling of Workplace Substances [NOHSC:2012(1994)]'. Worksafe Australia, 'National Exposure Standards for Atmospheric Contaminants

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in the Occupational Environment [NOHSC:1003(1995)]'.

CAS No.	7439-95-4
Risk Phrases	15-17
Safety Phrases	43 - 7/8

...End Of MSDS...