



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

221 Rochester Street
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(585) 226-6177

MSDS No.: MM0010 MM0022
Effective Date: January 12, 2007

SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	Magnesium Metal, Ribbon, Chips, Turnings
Chemical Synonyms	Magnesium Metal
Formula	Mg
Unit Size	up to 2.5 Kg.
C.A.S. No.	7439-95-4



CHEMTREC
800-424-9300
Day 585-226-6177

Health	0
Fire	2
Reactivity	2

NFPA

HAZARD RATING				
MINIMAL	SLIGHT	MODERATE	SERIOUS	SEVERE
0	1	2	3	4

HMIS*

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Magnesium metal	99.8%	See Section V.
DANGER! FLAMMABLE SOLID!		

DANGEROUS WHEN WET. KEEP AWAY FROM ALL IGNITION SOURCES.

SECTION III PHYSICAL DATA

Melting Point (°F)	1202°F (651°C)	Specific Gravity (H ₂ O = 1)	1.74 at 20°C
Boiling Point (°F)	2030°F (1110°C)	Percent Volatile by Volume (%)	Non-volatile.
Vapor Pressure (mm Hg)	1 mm at 621°C	Evaporation Rate (n-Butyl acetate =1)	Non-volatile.
Vapor Density (Air=1)	Data not listed.		
Solubility in Water	Negligible (Decomposes-reacts with water to yield magnesium oxide.)		
Appearance & Odor	Silvery gray metal ribbon, chips, turnings; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	1175°F (636°C)	Flammable Limits in Air	Lower	Upper
		% by Volume	N/A	
Extinguisher Media	DO NOT USE WATER. Do NOT use foam, halogenated extinguishing agents, or carbon dioxide. Smother with dry graphite, talc, dry sand, G-1 powder, purple K.			

SPECIAL FIREFIGHTING PROCEDURES

Do not use foam, carbon tetrachloride, or carbon dioxide. Manual application of water should be conducted with care to prevent contact with burning or molten magnesium. Protect eyes and skin against flying particles. Avoid direct viewing of magnesium fires as eye injury may result. Firefighters should wear a NIOSH/MSHA-approved self-contained breathing apparatus and protective clothing when appropriate. Wear fire glasses when viewing magnesium flame.

(2004 EMERGENCY RESPONSE GUIDEBOOK, RSPA P 5800.9, GUIDE PAGE NO. 138)

UNUSUAL FIRE AND EXPLOSION HAZARDS

Combustible metal. Easily ignited and burns with intense heat and brilliant white flame. Powders form explosive mixtures with air which may be ignited by a spark. In finely divided form, will react with water and acids to release hydrogen; also hazardous in such form with chlorine, bromide, iodine, oxidizing agents and acids.

Autoignition Temperature: 510°C (950°F).

D.O.T. Magnesium, 4.1, UN1869, PG III, Ltd Qty ≤ 5 Kg.

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA

MM0022

Threshold Limited Value	None established. (ACGIH 2001). Magnesium Oxide Fume: ACGIH TLV (1984) 10 mg/m ³ (TWA); OSHA PEL 15 mg/m ³ (TWA).
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Effects of Overexposure	Exposure to magnesium metal or oxide dust should be a low health risk by inhalation and should be treated as a nuisance dust. Exposure to magnesium oxide fume subsequent to burning can result in metal fume fever. The temporary symptoms can include fever, chills, nausea, vomiting and muscular pain. Onset of symptoms occurs 4-12 hours after exposure. EYES: May cause burns and corneal abrasions. SKIN: Particles of magnesium embedded in the skin may produce lesions that resist healing. INGESTION: No problem because of physical properties. Target organs: None known.
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Emergency and First Aid Procedures

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person. **EYES:** Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention. **SKIN:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SECTION VI REACTIVITY DATA

Stability	Unstable		Conditions to Avoid	Dangerous when wet. Avoid exposure to moisture, heat, sparks and flame.
	Stable	X		

Incompatibility (Materials to Avoid)	Magnesium will react with water and acids to release hydrogen; also hazardous with chlorine, bromine, iodine, oxidizing agents and acids.
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Hazardous Decomposition Products	Hydrogen will be produced - when exposed for long time to water and acids.
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Hazardous Polymerization	Conditions to Avoid
May Occur	Will Not Occur
	X
Not applicable.	

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled

Recover for use if not contaminated. Do not use water to clean up spill. Use appropriate safety equipment - clean up using non-sparking tools no smoking or open flames in the area. Avoid dusting. Clean dry product may be returned to dry container and sealed against moisture or place in a suitable container for disposal. Wet or contaminated material should be placed in vented containers and moved to a remote area for disposal by burning.

Waste Disposal Method	Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only.
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Dispose of in an approved incinerator or in an approved chemical landfill or contract with a licensed waste disposal service.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type)	None needed in normal laboratory handling. If dusty conditions prevail, work in ventilation hood or wear a NIOSH/MSHA-approved dust mask or respirator.
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Ventilation	Local Exhaust	If dusty.	Special	No.
	Mechanical (General)	If dusty.	Other	No.

Protective Gloves	Fire-resistant.	Eye Protection	Chemical safety goggles.
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Other Protective Equipment	Wear appropriate fire resistant clothing (e.g., gloves, coveralls, etc.) when exposing magnesium metal to elevated temperatures (950°F) which can cause ignition.
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SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing

Store at room temperature in a dry place away from other combustibles in a metal cabinet. Avoid direct viewing of magnesium fires as eye injury may result. Ground all handling and transferring operations.

Keep container tightly closed when not in use.

Other Precautions	Read label on container before using. Do not wear contact lenses when working with chemicals. For laboratory use only. Not for drug, food or household use. Keep out of reach of children.
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Wet, moist or high humidity storage conditions will lead to corrosion of the product. Constant clean-up and good housekeeping.

Revision No. 11	Date 01/12/07	Approved James A. Bertsch	Chemical Safety Coordinator JAB
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