

MATERIAL SAFETY DATA SHEET

Science Kit
& Boreal
Laboratories

MSDS No. MM 20
Effective Date July 1, 1986

Chemical Laboratories Ltd.
1000 Highway 101, Unit 10
Mississauga, Ontario L4V 1N1

SECTION I NAME

Product	MAGNESIUM METAL
Chemical Synonyms	Magnesium Metal
Formula	Mg
Unit(s) Size	1oz, 30, 500 grams
C.A.S. No.	7439-95-4

24 HOUR EMERGENCY ASSISTANCE

ChemTREC
800-424-9300
Day 716-226-6177
Night 716-334-4222

NEPA
HAZARD RATING
0 1 2 3 4
LEAST SLIGHT MODERATE HIGH EXTREME

SECTION II HAZARDOUS INGREDIENTS OF MIXTURES

Principal Hazardous Component(s)	%	TLV Units
Magnesium Metal	99.8%	See Section V

HAZARD: FLAMMABLE SOLID
KEEP AWAY FROM SPARKS, OPEN FLAME, ACID AND DAMPNESS.

SECTION III PHYSICAL DATA

Melting Point (°F)	1202°F (650°C)	Specific Gravity H ₂ O = 1	1.74 at 5°C
Boiling Point (°F)	2030°F (1110°C)	Percent Volatile by Volume (%)	Non-volatile (NA)
Vapor Pressure (mm Hg)	1 mm at 621°C	Evaporation Rate	Non-volatile (NA)
Vapor Density (Air = 1)	Data not listed		
Solubility in Water	Negligible (decomposes-reacts with water to yield magnesium oxide.)		
Appearance and Odor	Silvery gray metal ribbon, powder, chips, turnings; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	1175°F	Flammable Limits % Air	Upper
Extinguisher Media	Do NOT USE WATER.		

SPECIAL FIREFIGHTING PROCEDURES

Autoignition temperature: >651°C (>1204°F).

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-approved self-contained breathing apparatus and protective clothing when appropriate.

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, bromine, iodine, oxidizing agents and acids.

D.O.T. FLAMMABLE SOLID

Approved by U.S. Department of Labor "essentially similar" to form MSDS 30

SECTION V HEALTH HAZARD DATA

Threshold Limited Value
None established.

Effects of Overexposure
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:** No specific hazard known to us. **SKIN:** Particles of magnesium embedded in the skin may produce lesions that resist healing.

Emergency and First Aid Procedures
EYE CONTACT: Immediately flush eyes with plenty of water. Gently flush under upper and lower eye lids. If irritation develops or persists, get immediate medical attention.
INHALATION: Remove to fresh air. If ill effects develop, get medical attention.
NOTE: Flush off in flowing water, no effect expected.

SECTION VI REACTIVITY DATA

Stability	Unstable	Conditions to Avoid
	Stable	Avoid exposure to moisture, heat, sparks and flame.
Incompatibility (Materials to avoid)		Magnesium will react with water and acids to release hydrogen; also hazardous with chlorine, bromine, iodine, oxidizing agents and acids.
Hazardous Decomposition Products		Hydrogen will be produced - when exposed for long time to water and acids.

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled
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.

Waste Disposal Method

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

Respiratory Protection (Specify type)	None required (See approved dust mask).	Special	No
Ventilation (Local Exhaust)	None needed	Other	No
Protective Gloves	Fire-resistant	Eye Protection	Chemical safety glasses
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/dagging.		

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing
Store at room temperature in a dry place away from other combustibles in a metal cabinet.
Keep container tightly closed when not in use.
Other Precautions
Read label on container before using.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Rev. No. 1/88 Date 1/28/88 Approved *Richard A. Borel* Chemical Safety Coordinator

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and non-hazardness.