

Magnesium Metal
3013233-0153
3073282

Material Safety Data Sheet



Aluminum Company of America
1501 Alcoa Building, Pittsburgh, PA 15219

No. 230^a

Common Name Magnesium Ribbon

Phone No. 412-553-4001

Date 1982-02-01

Revised 1985-05-10

Hazardous Material (as Defined in 29 CFR 1910.1200)

☒ Flammable	☐ Explosive	☐ Organic Peroxide	☐ Irritant	☐ Acute Toxicity	☐ Other Health Hazard ^a
☐ Combustible	☐ Reactive	☐ Pyrophoric	☐ Sensitizer	☐ Ingestion	(See Sec. VI)
☐ Oxidizer	☐ Water Reactive	☐ Compressed Gas	☐ Corrosive	☐ Inhalation	☒ OSHA or ACGIH Limit
				☐ Absorption	

SECTION I. Material Description

Chemical Name & Formula: Metallic Magnesium, Mg

Other Designation:

CAS No.: Mg (7439-95-4)

Manufacturer: Alcoa

SECTION II. Ingredients

Occupational Exposure Limits

Magnesium metal 99.8

Magnesium Metal
Alcoa Permissible Limit
Total Fraction - 10 mg/m³ (TWA)
Respirable Fraction - 5 mg/m³ (TWA)
Magnesium Oxide Fume
ACGIH TLV (1984) - 10 mg/m³ (TWA)
OSHA PEL - 15 mg/m³ (TWA)

SECTION III. Physical Data

Physical Form: Solid metal ribbon, 0.006" thick by 1/8" wide
Boiling Temperature: 2030°F (1110°C)
Freeze-Melt Temperature: 1202°F (650°C)
Vapor Pressure: NA
Evaporation Rate: NA
Specific Gravity: 1.74
Density: 0.063 lb/in³
Water Solubility: Negligible
pH: NA
Color: Silvery/white
Odor: None

SECTION IV. Fire and Explosion Data

Flashpoint: NA	Auto-Ignition Temp.: 950°F (510°C)	Flammability Limits in Air: NA	Lower: Upper:
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Fine powder, thin sheets, chips, and turnings are easily ignited and burn with intense heat and brilliant white flame. Powders may form explosive mixtures with air.

Smother fires with dry graphite or other suitable dry powders. Do not use foam, halogenated extinguishing agents, 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.

Fire fighters should wear NIOSH approved self-contained breathing apparatus and protective clothing when appropriate.

SECTION V. Reactivity Data

Stability: Magnesium is stable under normal conditions. Avoid exposure to moisture, heat, sparks, and flame.
Incompatibility: Magnesium will react with water and acids to release hydrogen; also hazardous with chlorine, bromine, iodine, oxidizing agents, and acids.
Combustion: Supports ignition above 950°F and burns extremely vigorously with a white, hot flame.

Section VI. Health Hazard Information

(See Section II for exposure limits)

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, welding, molten metal work, etc. can result in metal fume fever, similar to that induced by zinc oxide fumes, although its occurrence is very rare. Metal fume fever from MgO fumes is considered milder than that which is caused by zinc oxide fumes. The temporary symptoms can include fever, chills, nausea, vomiting, and muscular pain. Onset of symptoms occurs 4 - 12 hours after exposure. Recovery is usually complete in 24 - 48 hours. Meeting the exposure limits in Section II should prevent metal fume fever from occurring.

Section VII. Spill, Leak & Disposal Procedures

Collect scrap in containers for remelting.

RCRA Hazardous Waste No. Not Federally Regulated

Section VIII. Special Protection Information

Use with adequate ventilation to meet the exposure limits as listed in Section II. Where the exposure limit is or may be exceeded, use NIOSH approved respiratory protection. The selection of the appropriate respirator (dust and fume respirator, etc.) should be based on the actual or potential airborne contaminants and their concentrations present. Wear appropriate eye protection, as necessary, to prevent eye irritation. Wear appropriate fire-resistant clothing (e.g., gloves, coveralls, etc.) when exposing magnesium ribbon to elevated temperatures (950°F) which can cause ignition.

Section IX. Special Precautions & Comments

Precautions to be taken in handling and storage: Protect containers against physical damage. Wet, moist, or high humidity storage conditions will lead to corrosion of the product. Store away from other combustibles in metal cabinet.

Chemical substance components have been reported to the EPA Office of Toxic Substances in accordance with the requirements of the Toxic Substances Control Act (Title 40 CFR Part 710).

DOT Shipping Name, Hazard Class, I.D. No. (if applicable) Magnesium Metal (Ribbon), Flammable Solid, UN 2950

Section X. References

Information herein is given in good faith as authoritative and valid; however, no warranty, express or implied, can be made.