



# Safety Data Sheet

Magnesium Oxide, Powder

Date of Issue: February 2022

Supersedes: May 2019

Version 2.0

## SECTION 1: IDENTIFICATION

### Product Identifier

Product Form: Powder  
Product Name: Magnesium Oxide Powder, Magnesia, Calcined Magnesia, Calcined Magnesite, Fused Magnesia, OxipHix™  
Chemical Name: Magnesium Oxide  
Chemical Formula: MgO

### Intended Use of the Product

Industrial Chemical Process, Animal Feed Supplement, Refractory Material

### Name, Address, and Telephone of the Responsible Party

Company: GARRISON MINERALS  
11901 W 48th Avenue  
Wheat Ridge, CO 80033  
sales@garrisonminerals.com  
720.389.7609

### Emergency Telephone Number

Emergency Number: 720-389-7609

## SECTION 2: HAZARDS IDENTIFICATION

Hazards Classification: Not Classified

Label Elements  
Hazard Symbol: No symbol  
Signal Word: No signal word  
Hazard Statement: Not applicable

Other Hazards: No additional information available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Name	Product Identifier	% (w/w)
Magnesium Oxide	(CAS No) 1309-48-4	94-98
Oxides of calcium, iron, aluminum, and silicon	Mixture	2-6



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## SECTION 4: FIRST-AID MEASURES

Inhalation:	If symptoms of exposure are experienced (see hazards identification), remove victim to fresh air. Obtain medical attention.
Ingestion:	Rinse mouth with and/or drink water if conscious. Obtain medical attention.
Eyes:	If irritation occurs, immediately flush eyes with water for at least 10 minutes. Obtain medical attention.
Skin:	Not expected to cause a problem, however, if irritation occurs, flush affected area with water. If irritation persists obtain medical attention.

## SECTION 5: FIRE-FIGHTING MEASURES

Conditions of Flammability:	Not flammable
Extinguishing Agents:	As for surrounding fire*
Flashpoint and method:	Not applicable
Upper Flammable Limit:	Not applicable
Lower Flammable Limit:	Not applicable
Autoignition Temperature:	Not applicable
Hazardous Combustion Products:	Not applicable
Sensitivity to Mechanical Impact:	No special sensitivity
Sensitivity to Static Discharge:	Not sensitive
Firefighting Procedures:	As for surrounding fire*

- *Water reacts exothermically with magnesium oxide to produce magnesium hydroxide and heat/steam. Avoid water contact in closed or restricted storage vessels as heat, swelling, and rupture of storage vessel may occur.*

## SECTION 6: ACCIDENTAL RELEASE MEASURES

Leak and Spill Procedures:	Pick up spills without creating dusts. Place materials into a dry container and cover. Hold in sealed container for disposal. Use personal protective equipment as required (See Section 8- Exposure Controls and Personal Protection).
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## SECTION 7: HANDLING AND STORAGE

### Handling Procedures and Equipment:

Avoid inhalation of dust. Clean area frequently to avoid dust build up. Wear applicable personal protective equipment as indicated in Section 8- Exposure Controls and Personal Protection.

### Storage Requirements:

Store in a dry area in sealed containers. Keep away from incompatible materials such as interhalogens and strong acids. Avoid contact with water- product reacts exothermically with water to form magnesium hydroxide and heat/steam. Water contact in closed or restricted storage vessels may cause heat, swelling, and possible rupture of storage vessel.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits		
OSHA- PEL	ACGIH- TLV	Alberta- TWA
15 mg/m <sup>3</sup> (Nuisance Particulate)	10 mg/m <sup>3</sup> (Nuisance Particulate)	10 mg/m <sup>3</sup> (Nuisance Particulate)
5 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>
15 mg/m <sup>3</sup> (Total Particulate)	10 mg/m <sup>3</sup> (Total Particulate)	10 mg/m <sup>3</sup> (Total Particulate)

### Engineering Controls:

Engineering controls may include process enclosure and/or local exhaust ventilation to maintain dust concentrations below allowable exposure limits. Local exhaust ventilation with or without process enclosure is important where large quantities are handles, as in bagging operations.

### Personal Protective Equipment:

Respiratory Protection: If adequate engineering controls are not available, wear respirator approved by NIOSH/MSHA for dusts/mists, as applicable. If magnesium oxide fume is likely to be produced, then ensure that a NIOSH/MSHA respirator approved for fumes is used. In conditions of oxygen deficiency, or where airborne concentrations exceed 100mg/m<sup>3</sup>, wear positive pressure or pressure demand supplied air respiratory protection or SCBA

Eye/Skin Protection: Wear safety goggles in high dust concentrations unless full face-piece respiratory protection is worn. Wear coveralls.



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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

Appearance	White to light brown powder/granules
Physical State	Solid, powder
Odor	No odor
Odor Threshold	Not available
pH	~10.3 (saturated sol)
Evaporation Rate	Not available
Melting Point	Approx. 2800°C
Boiling Point	Approx. 3600°C
Vapor Pressure	Not available
Vapor Density	Not available
Specific Gravity	3.58 g/cc
Solubility	Water @20°C: 0.0006 g/100ml
Partition Coefficient:	Not available
Viscosity	Not available

## SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable under recommended handling and storage conditions
Conditions to Avoid:	Avoid contact with water- product reacts exothermically with water to form magnesium hydroxide and heat/steam.
Incompatible Materials	Strong acids, interhalogens (ie bromine pentafluoride, chlorine tri-fluoride), phosphorus pentachloride
Hazardous Decomposition Products:	Magnesium fume may be generated if heated to volatilization. Heat and steam may be generated upon contact with water.
Hazardous Polymerization:	Does not occur

## SECTION 11: TOXICOLOGICAL INFORMATION

LD50 and LC50 Data:	Not available
Irritancy:	May cause irritancy of eyes, skin, or nasal passages
Sensitizer:	No data available
Carcinogen:	Magnesium oxide (CAS# 1309-48-4) is not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP or OSHA
Teratogen:	Not available
Reproductive Toxin:	Not available
Mutagen:	Not available
Synergistic Products"	None known



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## SECTION 12: ECOLOGICAL INFORMATION

No Data Available

## SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: This product does not meet the criteria of a hazardous waste. Dispose in accordance with all applicable Feder, State, a local environmental regulation

## SECTION 14: TRANSPORTATION INFORMATION

Special Shipping Information: No special requirements

Canadian TGD: Not regulated. No PIN number assigned

US DOT: Not regulated by DOT. No UN number assigned

Maritime Transport: IMDG: Not regulated

Marine Pollutant: Not Listed

Air Transport: IATA: Not regulated

## SECTION 15: REGULATORY INFORMATION

Inventory | Regulatory Lists:

Magnesium Oxide is reported on the following national inventory and/or regulatory lists:

Australia	Australian Inventory of Chemical Substances (AICS):	1309-48-4
Canada	Domestic Substance List (DSL):	1309-48-4
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS):	215-171-9
Japan	Existing and New Chemical Substances (ENCS)	1-465
Korea	Existing and New Chemical Substances (ENCS)	KE-22728
Philippines	Inventory of Chemicals and Chemical Substances (PICCS)	Magnesium Oxide
USA	Toxic Substance Control Act (TSCA) Inventory List 8(b)	1309-48-4

WHMIS 2015 Classification: Not a dangerous product according to HPR classification criteria

CEPA: This product is not listed as a toxic substance under the Canadian Environmental Protection Act (CEPA 1999)

CERCLA: Not listed as a hazardous substance

SARA TITLE III:

Section 302: Product is not listed as an Extremely Hazardous Substance (EHS)

Section 304: Emergency Release Notification not required

Section 311/312: Hazard Category: Acute (nuisance dust) MSDS, chemical inventory, Tier I/II reporting are applicable

Section 313: Product is not subject to Form R reporting



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## SECTION 16: OTHER INFORMATION

Revision Date

February 2022

Other Information:

This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

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