

SAFETY DATA SHEET

Preparation Date: 9/21/2015

Revision Date: 8/8/2018

Revision Number: G3

1. IDENTIFICATION

Product identifier

Product code: MA125
Product Name: MAGNESIUM OXIDE, HEAVY POWDER, USP

Other means of identification

Synonyms: Calcined brucite
 Calcined magnesia
 Calcined magnesite
 Calcined brucite
 Maglite
 Magnesia
 Óxido de magnesio(Spanish)
 Oxyde de magnesium (French)

CAS #: 1309-48-4
RTECS # OM3850000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: Ceramics. Fertilizer compositons.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000

Order Online At: <https://www.spectrumchemical.com>
Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)
 Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Not Hazardous

Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Magnesium Oxide, heavy	1309-48-4	100

4. FIRST AID MEASURES

First aid measures

- General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.
- Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention if irritation develops. Consult a physician if necessary.
- Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention if irritation occurs. If symptoms persist, call a physician.
- Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

- Symptoms**
- May cause eye/skin/respiratory tract irritation
 - May cause digestive (gastrointestinal) tract irritation
 - Ingestion may cause nausea, vomiting, and diarrhea
 - May cause "Metal Fume Fever", a Flu-like condition consisting of fever, chills, sweating, metallic taste in mouth, dry mouth and throat, cough, weakness, muscle aches and joint pain, headache, nausea, vomiting, chest tightness, difficulty breathing and shortness of breath

Indication of any immediate medical attention and special treatment needed

- Notes to Physician:** Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

- Suitable Extinguishing Media:** The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.
- Unsuitable Extinguishing Media:** No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products:

No information available.

Specific hazards:

Magnesium Oxide may ignite and explode when heated with sublimed sulfur, magnesium powder, or aluminum powder. It reacts violently with interhalogens (bromine pentafluoride, chlorine trifluoride) and produces flames. When combined with phosphorus pentachloride, it incandesces.

Special Protective Actions for Firefighters

Specific Methods:

No information available.

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions:

Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment.

Environmental precautions

Prevent further leakage or spillage. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment

Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up

Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe dust. Use only in well-ventilated areas. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Hygroscopic. Moisture sensitive. Protect from moisture. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Chlorine trifluoride
Phosphorous Pentachloride
Formic acid
Bromine pentafluoride

Oxidizing agents
 Powdered metals
 Acids

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Magnesium Oxide, heavy	1309-48-4	15 mg/m ³ TWA	None	10 mg/m ³ TWA inhalable particulate matter	None

Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Magnesium Oxide, heavy	1309-48-4	10 mg/m ³ TWA fume	10 mg/m ³ TWA fume, inhalable 3 mg/m ³ TWA Mg respirable dust and fume 10 mg/m ³ STEL Mg respirable dust and fume	None	None

Australia and Mexico

Components	CAS-No.	Australia	Mexico
Magnesium Oxide, heavy	1309-48-4	10 mg/m ³ TWA	10 mg/m ³ TWA

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation, especially in confined areas. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Goggles or Safety glasses with side-shields

Skin and body protection: Chemical resistant apron
 Gloves
 Long sleeved clothing

Respiratory protection: Effective dust mask. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

Hygiene measures: Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid	Appearance: Powder.	Color: White.
Odor: Odorless.	Taste No information available.	Formula: No information available
Molecular/Formula weight (g/mole): No information available	Flammability: No information available	Flashpoint (°C/°F): No information available.
Flash Point Tested according to: Not available	Autoignition Temperature (°C/°F): No information available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): 2500-2825 °C/4532-5117 °F	Decomposition temperature(°C/°F): No information available
Boiling point/range(°C/°F): 3600°C/6512°F	Bulk density: No information available	Density (g/cm3): 3.58
Specific gravity: No information available	pH: No information available	Vapor pressure @ 20°C (kPa): No information available
Evaporation rate: No information available	Vapor density: No information available	VOC content (g/L): No information available
Odor threshold (ppm): No information available	Partition coefficient (n-octanol/water): No information available	Viscosity: No information available
Miscibility: No information available	Solubility: Soluble in dilute acids Soluble in ammonium salt solutions Insoluble in Ethanol Very slightly soluble in water	

10. STABILITY AND REACTIVITY

Reactivity

Magnesium Oxide may ignite and explode when heated with sublimed sulfur, magnesium powder, or aluminum powder. It reacts violently with interhalogens (bromine pentafluoride, chlorine trifluoride) and produces flames. When combined with phosphorus pentachloride, it incandesces.

Hygroscopic. Air Sensitive. Readily absorbs moisture and carbon dioxide when exposed to air. Hydrates slowly in contact with moisture.

Reacts violently with chlorine trifluoride and phosphorous pentachloride

Reactive with oxidizing agents

Reactive with acids

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Exposure to moisture. Exposure to moist air. Exposure to water. Excess Heat. Incompatible materials.

Incompatible Materials: Chlorine trifluoride
Phosphorous Pentachloride
Performic acid
Bromine pentafluoride
Oxidizing agents
Powdered metals
Acids

Hazardous decomposition products: Oxygen. Magnesium.

Other Information
Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Toxicity

Component Information

Magnesium Oxide, heavy	
CAS-No.	1309-48-4

LD50/oral/rat = 3990 mg/kg Oral LD50 Rat; 3870 mg/kg Oral LD50 Rat

LD50/oral/mouse = No information available

LD50/dermal/rabbit = No information available

LD50/dermal/rat = No information available

LC50/inhalation/rat = No information available

LC50/inhalation/mouse = No information available

Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = 3870 mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms**Skin Contact:** May cause skin irritation.**Eye Contact:** May cause eye irritation.**Inhalation** May cause irritation of respiratory tract. May cause "metal fume fever". This is a flu-like illness with symptoms such as metallic taste in the mouth, dryness of the mouth and throat, headache, fatigue, fever, chills, nausea, vomiting, muscle aches and joint pains, chest tightness and cough, difficulty breathing and shortness of breath.**Ingestion** May cause gastrointestinal (digestive) tract irritation with nausea, vomiting, diarrhea.**Aspiration hazard** No information available.**Delayed and immediate effects as well as chronic effects from short and long-term exposure****Chronic Toxicity** Inhalation: Repeated or prolonged exposure may result in "Metal Fume Fever". Metal Fume Fever is a flu-like condition consisting of fever, chills, sweating, aches, pains, cough, weakness, headache, nausea, vomiting, and breathing difficulty. There is no permanent ill-effect. Metal Fume Fever resulting from Magnesium Oxide fumes has reportedly occurred in foundry workers. Repeated or prolonged exposure may also affect the blood and brain based on animal data. No human data found.**Sensitization:** No information available.**Mutagenic Effects:** No information available**Carcinogenic effects:** Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Magnesium Oxide, heavy	1309-48-4	Not listed	A4 Not Classifiable as a Human Carcinogen	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)**IARC (International Agency for Research on Cancer)**NTP (National Toxicology Program)**OSHA (Occupational Safety and Health Administration of the US Department of Labor)***Reproductive toxicity** No data is available**Reproductive Effects:** No information available**Developmental Effects:** No information available**Teratogenic Effects:** No information available**Product code:** MA125**Product name:** MAGNESIUM OXIDE,
HEAVY POWDER, USP**7 / 11**

Specific Target Organ Toxicity

STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organs: No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.
Persistence and degradability: No information available
Bioaccumulative potential: No information available.
Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:

Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:

Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Magnesium Oxide, heavy	1309-48-4	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Class No information available
Packing group: No information available
Emergency Response Guide Number No information available
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions No Information available
Symbol(s): No information available
Description: No information available

TDG (Canada)

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available

Product code: MA125

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Marine Pollutant Description: No Information available
No information available

ADR

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Packing Group: No information available
Subsidiary Risk: No information available

IMO / IMDG

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
Marine Pollutant No information available

RID

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available

ICAO

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available

IATA

UN-No: Not Regulated
Proper Shipping Name: No information available
Hazard Class: No information available
Subsidiary Risk: No information available
Packing Group: No information available
ERG Code: No information available
Special Provisions No information available

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Magnesium Oxide, heavy</i>	1309-48-4	PresentACTIVE	Present KE-22728	Present	Present (1)-465	Present	Present	Present 215-171-9

U.S. Regulations

Magnesium Oxide, heavy

- Massachusetts RTK: Present
- New Jersey RTK Hazardous Substance List: 1144
- Pennsylvania RTK: Present
- Minnesota - Hazardous Substance List: Present
- California Directors List of Hazardous Substances: Present
- FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1431

Product code: MA125

Product name: MAGNESIUM OXIDE,
HEAVY POWDER, USP

FDA - 21 CFR - Total Food Additives 155.170, 163.110, 163.111, 163.112, 175.300, 176.170, 177.1680, 177.2260, 177.2400, 177.2600, 178.1010, 178.3297, 184.1431

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Magnesium Oxide, heavy	1309-48-4	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Magnesium Oxide, heavy	1309-48-4	None	None	None	None	None

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Magnesium Oxide, heavy	1309-48-4	Not Applicable	Not Applicable

Canada

WHMIS 2015 - GHS Classifications

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

Component Magnesium Oxide, heavy 1309-48-4 (100)	WHMIS 2015 Hazard Classification Not a dangerous product according to HPR classification criteria
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Canada Hazardous Products Regulation This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

WHMIS 1988 Hazard Class

Non-controlled

Components Magnesium Oxide, heavy	WHMIS 1988 Uncontrolled product according to WHMIS classification criteria
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Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Magnesium Oxide, heavy	1 %

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)

Product code: MA125

Product name: MAGNESIUM OXIDE,
HEAVY POWDER, USP

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Magnesium Oxide, heavy	1309-48-4	Present	Not Listed
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Components	CAS-No.	CEPA Schedule I - Toxic Substances
Magnesium Oxide, heavy	1309-48-4	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Magnesium Oxide, heavy	1309-48-4	Not listed

EU Classification

EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Magnesium Oxide, heavy	1309-48-4	

EU - CLP (1272/2008)

R-phrase(s)

not determined (not applicable)

S -phrase(s)

none

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Magnesium Oxide, heavy	1309-48-4		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

None.

16. OTHER INFORMATION

Preparation Date: 9/21/2015
Revision Date: 8/8/2018
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet