

## SAFETY DATA SHEET

Preparation Date: 8/24/2015

Revision Date: 8/8/2018

Revision Number: G2

### 1. IDENTIFICATION

#### Product identifier

**Product code:** MA120  
**Product Name:** MAGNESIUM OXIDE, LIGHT 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, light	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 incandescens.

## 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, light	1309-48-4	15 mg/m <sup>3</sup> TWA	None	10 mg/m <sup>3</sup> TWA inhalable particulate matter	None

**Canada**

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

**Australia and Mexico**

Components	CAS-No.	Australia	Mexico
Magnesium Oxide, light	1309-48-4	10 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> 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

<b>Physical state:</b> Solid	<b>Appearance:</b> Powder.	<b>Color:</b> White.
<b>Odor:</b> Odorless.	<b>Taste</b> No information available.	<b>Formula:</b> No information available
<b>Molecular/Formula weight (g/mole):</b> No information available	<b>Flammability:</b> No information available	<b>Flashpoint (°C/°F):</b> No information available.
<b>Flash Point Tested according to:</b> Not available	<b>Autoignition Temperature (°C/°F):</b> No information available	<b>Lower Explosion Limit (%):</b> No information available
<b>Upper Explosion Limit (%):</b> No information available	<b>Melting point/range(°C/°F):</b> 2500-2825 °C/4532-5117 °F	<b>Decomposition temperature(°C/°F):</b> No information available
<b>Boiling point/range(°C/°F):</b> 3600°C/6512°F	<b>Bulk density:</b> No information available	<b>Density (g/cm3):</b> 3.58
<b>Specific gravity:</b> No information available	<b>pH:</b> No information available	<b>Vapor pressure @ 20°C (kPa):</b> No information available
<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> No information available	<b>VOC content (g/L):</b> No information available
<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> No information available	<b>Viscosity:</b> No information available
<b>Miscibility:</b> No information available	<b>Solubility:</b> 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, light	
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, light	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:** MA120**Product name:** MAGNESIUM OXIDE,  
LIGHT 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, light	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:** MA120

**Product name:** MAGNESIUM OXIDE,  
LIGHT POWDER, USP

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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, light</i>	1309-48-4	PresentACTIVE	Present KE-22728	Present	Present (1)-465	Present	Present	Present 215-171-9

**U.S. Regulations**

*Magnesium Oxide, light*

**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:** MA120

**Product name:** MAGNESIUM OXIDE,  
LIGHT 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, light	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, light	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, light	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, light 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

<b>Components</b> Magnesium Oxide, light	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, light	1 %

**Inventory**

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

**Product code:** MA120

**Product name:** MAGNESIUM OXIDE,  
LIGHT POWDER, USP

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

## EU Classification

### EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Magnesium Oxide, light	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, light	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: 8/24/2015  
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