



**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**Common name** Calcined Magnesite, Magnesium Oxide.  
**Common name** Magnesium Sulfate.

Chemical Name	CAS No.	Weight-%	Trade Secret
Magnesium Sulfate	7487-88-9	10-15	
Magnesium Oxide	1309-48-4	85-90	

**4. FIRST AID MEASURES**

**First aid measures**

**Eye contact** Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists: Get medical advice/attention.

**Skin Contact** Wash skin with soap and water.

**Inhalation** Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately.

**Ingestion** Ingestion is an unlikely route of exposure. If ingested in sufficient quantity and victim is conscious, give 1-2 glasses of water or milk. Never give anything by mouth to an unconscious person. Leave decision to induce vomiting to qualified medical personnel, since particles may be aspirated into the lungs. Seek immediate medical attention.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

**5. FIRE-FIGHTING MEASURES**

**Suitable extinguishing media**

Product on initial contact with water will generate some heat. Excess water will dissipate any heat.

**Unsuitable extinguishing media** Caution: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**

No information available.

**Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Protective equipment and precautions for firefighters**

Firefighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Ensure adequate ventilation, especially in confined areas.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional ecological information.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Carefully clean up and place material into a suitable container, being careful to avoid creating excessive dust. If conditions warrant, clean up personnel should wear approved respiratory protection, gloves and goggles to prevent irritation from contact and/or inhalation.

**7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Store in dry, protected storage. Product is stable under normal conditions of storage. Minimize dust generation during material handling and transfer.

**Incompatible materials** Magnesium Oxide component is soluble in aqueous acids generating heat and steam; violent reaction or ignition with interhalogens (e.g., bromine pentafluoride; chlorine trifluoride). Incandescent reaction with phosphorus pentachloride. Water will react with magnesium oxide producing magnesium hydroxide and heat. The magnesium sulfate is potentially explosive when reacted with ethoxyethynyl alcohols (i.e., 1-ethoxy-3methyl-1butyn-3-ol).

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control parameters**

**Exposure Guidelines** This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Magnesium Oxide 1309-48-4	TWA: 10 mg/m <sup>3</sup> inhalable fraction	TWA: 15 mg/m <sup>3</sup> fume, total particulate (vacated) TWA: 10 mg/m <sup>3</sup> fume and total particulate	IDLH: 750 mg/m <sup>3</sup> fume

**Appropriate engineering controls**

**Engineering Controls** Provide sufficient ventilation, in both volume and air flow patterns to control mist/dust concentrations below allowable exposure limits.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** The use of eye protection is recommended.

**Skin and body protection** The use of eye protection, gloves and long sleeve clothing is recommended.

**Respiratory protection** Provide workers with NIOSH approved respirators in accordance with requirements of 29 CFR 1910. 134 for level of exposure incurred.

**General Hygiene Considerations** Avoid contact with skin, eyes or clothing. After handling this product, wash hands before eating or drinking.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information on basic physical and chemical properties**

<b>Physical state</b>	Solid	<b>Odor</b>	Odorless
<b>Appearance</b>	Fine Powder	<b>Odor threshold</b>	No information available
<b>Color</b>	Brownish		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	10-11	
<b>Melting point/freezing point</b>	melting pt >2100 °C melting pt >3800 °F	
<b>Boiling point / boiling range</b>	Not applicable	
<b>Flash point</b>	No information available	
<b>Evaporation rate</b>	Not applicable	
<b>Flammability (solid, gas)</b>	No information available	
<b>Flammability Limit in Air</b>		
<b>Upper flammability limit:</b>	No information available	
<b>Lower flammability limit:</b>	No information available	
<b>Vapor pressure</b>	No information available	
<b>Vapor density</b>	No information available	
<b>Specific Gravity</b>	No information available	
<b>Water solubility</b>	Slight <1%	
<b>Solubility in other solvents</b>	No information available	
<b>Partition coefficient</b>	No information available	
<b>Autoignition temperature</b>	No information available	
<b>Decomposition temperature</b>	No information available	
<b>Kinematic viscosity</b>	No information available	
<b>Dynamic viscosity</b>	No information available	
<b>Explosive properties</b>	No information available	
<b>Oxidizing properties</b>	No information available	

**Other Information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	65-75 lb/ft3

**10. STABILITY AND REACTIVITY****Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Hazardous polymerization**

Hazardous polymerization does not occur.

**Conditions to avoid**

Extremes of temperature and direct sunlight.

**Incompatible materials**

Magnesium Oxide component is soluble in aqueous acids generating heat and steam; violent reaction or ignition with interhalogens (e.g., bromine pentafluoride; chlorine trifluoride). Incandescent reaction with phosphorus pentachloride. Water will react with magnesium oxide producing magnesium hydroxide and heat. The magnesium sulfate is potentially explosive when reacted with ethoxyethynyl alcohols (i.e., 1-ethoxy-3methyl-1butyn-3-ol).

**Hazardous Decomposition Products**Heat and steam above 1100°C SO<sub>x</sub>.

**11. TOXICOLOGICAL INFORMATION**

**Information on likely routes of exposure**

<b>Product Information</b>	Magnesium Oxide # 1309-48-4 Product does not present an acute toxicity hazard based on known or supplied information. Magnesium Sulfate CAS #7487-88-9 Product does not present an acute toxicity hazard based on known or supplied information.
<b>Inhalation</b>	Inhalation of fume (not MgO dust particulate) produced upon decomposition of magnesium compounds can produce a febrile reaction and leukocytosis in humans.
<b>Eye contact</b>	Irritating to eyes.
<b>Skin Contact</b>	Low toxicity by skin contact.
<b>Ingestion</b>	Ingestion is an unlikely route of exposure. If ingested in large amounts it may cause irritation, nausea, vomiting, diarrhea, abdominal pain, black stool, pink urine, coma and possibly death.

**Information on toxicological effects**

**Symptoms** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Serious eye damage/eye irritation</b>	Irritating to eyes.
<b>Irritation</b>	Irritating to eyes and respiratory system.
<b>Sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.

**Numerical measures of toxicity - Product Information**

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

No data available on any adverse effects of this material on the environment

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

**Other adverse effects**

No information available

**13. DISPOSAL CONSIDERATIONS**

**Waste treatment methods**

**Disposal of wastes** This product does not exhibit any characteristics of a hazardous waste. The product is suitable for landfill disposal. Follow all applicable federal, state and local regulations for safe disposal.

Contaminated packaging Do not reuse container.

**14. TRANSPORT INFORMATION**

DOT Not regulated by DOT as a hazardous material. No hazard class, label or placard required, no UN or NA number assigned.

**15. REGULATORY INFORMATION**

International Inventories

TSCA Does not comply

Chemical Name	TSCA
Magnesium Sulfate	X
Magnesium Oxide	X

DSL/NDSL Does not comply  
 EINECS/ELINCS Does not comply  
 ENCS Does not comply  
 IECSC Does not comply  
 KECL Does not comply  
 PICCS Does not comply  
 AICS Does not comply

X - Listed

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

US Federal Regulations

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

**US State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Magnesium Oxide 1309-48-4	X	X	X

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not Applicable

**16. OTHER INFORMATION**

<b>NFPA</b>	Health hazards 1	Flammability 0	Instability 0	Physical and Chemical Properties - Personal protection X
<b>HMIS</b>	Health hazards 0	Flammability 0	Physical hazards 0	

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**Revision Note**

No information available

**Disclaimer**

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet