



# Safety Data Sheet

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## Section 01 Identification

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**Product Identifier** Magnesium Oxide  
Magnesium Oxide, NSF® - 60, FloMag PWT 6 X 16

**Other Means of Identification**

**Product Use and Restrictions on Use** This product is certified to NSF / ANSI / CAN standard 60 for use in drinking water, see section 15 and the NSF website for further information.

**Initial Supplier Identifier** ClearTech Industries Inc.  
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**Prepared By** ClearTech Industries Inc. technical writer

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## Section 02 Hazard Identification

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**GHS-Classification**

This product has been assessed in accordance with the Hazardous Products Regulations and is not classified as a hazardous substance or mixture.

**Hazards Not Otherwise Classified**

Not available

**Supplemental Information**

Not available

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## Section 03 Composition / Information on Ingredients

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**Ingredients:**

Chemical name	Common name(s)	CAS number	Concentration (w/w%)
Magnesium oxide	Magnesia; oxomagnesia	1309-48-4	≥97.0%

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## Section 04 First-Aid Measures

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**Description of necessary first-aid measures**

**Inhalation** Get medical advice / attention if you feel unwell or are concerned.

**Ingestion** Get medical advice / attention if you feel unwell or are concerned.

**Skin contact** If skin irritation occurs or if you feel unwell: Get medical advice / attention.

**Eye contact** Gently brush product off face. Do not rub eyes. Let the eyes water naturally for a few minutes. Look right and left, then up and down. If particle / dust does not come out, cautiously rinse eye with lukewarm gently flowing water for 5 minutes or until particle / dust is removed, while holding the eyelids open. If eye irritation persists: Get medical advice / attention. Do not attempt to manually remove anything from the eyes.

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

**Inhalation** May cause respiratory irritation.  
**Ingestion** May cause discomfort or nausea.  
**Skin contact** Not available  
**Eye contact** May cause eye irritation and redness.  
**Further information** For further information see Section 11 Toxicological Information.

## **Section 05 Fire Fighting Measures**

**Suitable extinguishing media** Extinguish fire using extinguishing agents suitable for the surrounding fire.  
**Unsuitable extinguishing media** Water jets are not recommended in fires involving chemicals.  
**Specific hazards arising from the chemical** None known  
**Special protective equipment for fire-fighters** Wear NIOSH-approved self-contained breathing apparatus and protective clothing.

## **Section 06 Accidental Release Measures**

**Personal Precautions / Protective Equipment / Emergency Procedures** Wear appropriate personal protective equipment (See Section 08 Exposure Controls and Personal Protection). Stay upwind, ventilate area.  
**Environmental Precautions** Prevent material from entering waterways, sewers or confined spaces. Notify local health and wildlife officials. Notify operators of nearby water intakes.  
**Methods and Materials for Containment and Cleaning Up** Dry sweeping is not recommended. Pre-dampening the material or use of a vacuum is preferred. Shovel into clean, dry, labeled containers and cover. Flush area with water.

## **Section 07 Handling and Storage**

**Precautions for Safe Handling** Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.  
Inspect containers for damage or leaks before handling. If the original label is damaged or missing replace with a workplace label. Have suitable emergency equipment for fires, spills and leaks readily available.  
**Conditions for Safe Storage** Store in a cool, dry, well-ventilated area, away from heat sources and incompatible materials. Always store in original labeled container. Keep containers tightly closed when not in use and when empty. Protect label and keep it visible.  
**Incompatibilities** Strong acids, such as sulphuric, nitric, and hydrochloric.

## **Section 08 Exposure Controls and Personal Protection**

### **Exposure limits**

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Component	Regulation	Type of listing	Value
Magnesium oxide, Respirable dust and fume, as Mg	ACGIH	TWA	3 mg/m <sup>3</sup>
		STEL	10 mg/m <sup>3</sup>
	NIOSH	IDLH	750 mg/m <sup>3</sup>

## Engineering controls

**Ventilation Requirements** Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions should be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems.

**Other** No specific recommendations beyond the required hygiene facilities at the place of work.

## Protective equipment

The following are recommendations only. It is the responsibility of the employer / user to conduct a hazard assessment of the process in which this product being used and determine the proper engineering controls and PPE for their process. Additional regulatory and safety information should be sought from local authorities and, if needed, a professional industrial hygienist.

**Eye and face protection** Where there is potential eye or face exposure, safety glasses are recommended. Contact lenses are not recommended; they may contribute to severe eye injury.

**Hand and body protection** Where handling this product it is recommended that skin contact is avoided.

**Respiratory protection** In case of insufficient ventilation wear suitable respiratory equipment.

**Thermal hazards** Not available

## Section 09 Physical and Chemical Properties

### Appearance

Physical state	Solid
Colour	White
Odour	Odourless
Odour threshold	Not available

### Property

pH	10.3 (saturated solution)
Melting point / freezing point	2797-2857 °C
Initial boiling point and boiling range	3600 °C
Flash point	Not applicable
Evaporation rate	Not available
<b>Flammability</b>	
Upper flammable limit	Not available
Lower flammable limit	Not available
Vapour pressure	Not available
Vapour density	Not available
Relative density	~1.15 g/cm <sup>3</sup> (loose bulk)
Solubility	Not available

<b>Partition coefficient: n-octanol/water</b>	Not available
<b>Auto-ignition temperature</b>	Not available
<b>Decomposition temperature</b>	>1700 °C
<b>Viscosity</b>	Not applicable
<b>Specific gravity</b>	Not applicable
<b>Particle characteristics</b>	Particle size: Not available Particle shape: Not available

## Section 10 Stability and Reactivity

<b>Reactivity</b>	Reacts violently with acids.
<b>Stability</b>	This product is stable if stored according to the recommendations in Section 07.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization is not known to occur.
<b>Conditions to avoid</b>	Avoid contact with incompatible materials.
<b>Incompatible materials</b>	Strong acids, such as sulphuric, nitric, and hydrochloric.
<b>Hazardous decomposition products</b>	If magnesium oxide is heated to the point of volatilization (>1700 °C), magnesium oxide fumes may be generated.

## Section 11 Toxicological Information

### Acute Toxicity (LD50 / LC50 values)

<b>Component</b>	<b>Route</b>	<b>Species</b>	<b>Value</b>	<b>Exposure time</b>
Magnesium oxide	Oral	Rat	3870-3990 mg/kg bw	

### Toxic Health Effect Summary

<b>Chemical characteristics</b>	No known effects
<b>Skin</b>	Not available
<b>Ingestion</b>	May cause discomfort or nausea.
<b>Inhalation</b>	May cause respiratory irritation.
<b>Eye contact</b>	May cause eye irritation and redness.
<b>Sensitization</b>	This product and its components at their listed concentration have no known sensitizing effects.
<b>Mutagenicity</b>	This product and its components at their listed concentration have no known mutagenic effects.
<b>Carcinogenicity</b>	This product and its components at their listed concentration have no known carcinogenic effects.
<b>Reproductive toxicity</b>	This product and its components at their listed concentration have no known reproductive effects.
<b>Specific organ toxicity</b>	This product and its components at their listed concentration have no known effects on specific organs.
<b>Aspiration hazard</b>	Not available
<b>Synergistic materials</b>	Not available

## Section 12 Ecological Information

### Ecotoxicity

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Component	Type	Species	Value	Exposure Time
Magnesium oxide	LC50	Fish	1355 mg/L	96 hours
	EC50	Aquatic invertebrates	190 mg/L	48 hours
<b>Biodegradability</b>	The domestic substance list categorizes magnesium oxide as persistent.			
<b>Bioaccumulation</b>	The domestic substance list categorizes magnesium oxide as non-bioaccumulative.			
<b>Mobility</b>	This product is water soluble, is not predicted to adsorb to soil and may contaminate ground water.			
<b>Other adverse effects</b>	Not available			

## Section 13 Disposal Considerations

<b>Waste From Residues / Unused Products</b>	Dispose in accordance with all federal, provincial, and local regulations including the Canadian Environmental Protection Act.
<b>Contaminated Packaging</b>	Do not remove label, follow label warnings even after the container is empty. Empty containers should be recycled or disposed of at an approved waste handling facility.

## Section 14 Transport Information

<b>UN number</b>	This product does not meet the definition of dangerous goods per Part 2 of Transport of Dangerous Goods Regulations
<b>UN proper shipping name and description</b>	Not available
<b>Transport hazard class(es)</b>	Not available
<b>Packing group</b>	Not available
<b>Excepted quantities</b>	Not available
<b>Environmental hazards</b>	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.
<b>Special precautions</b>	No special precautions
<b>Transport in bulk</b>	ERAP index: not available
<b>Additional information</b>	MARPOL 73/78 and IBC Code: This product is not listed in Chapter 17 of the IBC Code. Secure containers (full or empty) during shipment and ensure all caps, valves, or closures are secured in the closed position.

**TDG PRODUCT CLASSIFICATION:** This product has been classified on the preparation date specified at section 16 of this SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and published test data regarding the classification of this product are listed in the references at section 16 of this SDS.

## Section 15 Regulatory Information.

**NOTE: THE PRODUCT LISTED ON THIS SAFETY DATA SHEET HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN HAZARDOUS PRODUCTS REGULATIONS. THIS SAFETY DATA SHEET CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.**

All components of this product appear on the domestic substance list.

NSF Certification: Magnesium Oxide, NSF® - 60, FloMag PWT 6 X 16 is certified to NSF / ANSI / CAN Standard 60 for pH adjustment at a maximum dosage of: 100 mg/L. NSF product use restrictions based on requirements obtained from the NSF website; consult NSF website for current requirements.

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## Section 16 Other Information

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Date of latest revision: February 24, 2025

**Note:** The responsibility to provide a safe workplace remains with the buyer / user. The buyer / user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the buyer / user to comply with all applicable laws and regulations regarding handling, using, reselling and shipping this product.

**Attention: Receiver of the chemical goods / SDS coordinator**

As part of our commitment to the RDC Responsible Distribution® initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service center.

**References:**

- 1) *NIOSH Pocket Guide to Chemical Hazards*; U.S. Department of Health and Human Services, <https://www.cdc.gov/niosh/npg/default.html>
- 2) *WorkSafe BC E-Limit*; Workers' Compensation Foard of British Columbia, <https://elimit.online.worksafebc.com/>
- 3) *ECHA - Registered Substance Dossier*; European Chemicals Agency, <https://echa.europa.eu/information-on-chemicals/registered-substances>
- 4) *Transportation of Dangerous Goods Regulations*; Transport Canada, <https://laws-lois.justice.gc.ca/eng/regulations/SOR-2001-286/index.html>
- 5) Globally Harmonized System of Classification and Labeling of Chemicals (GHS) *Seventh revised edition*
- 6) International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code) 2007 Edition
- 7) The ACS Style Guide