



LTS Research Laboratories, Inc.
Safety Data Sheet
Magnesium Orthosilicate

1. Product and Company Identification

Trade Name:	Magnesium orthosilicate
Chemical Formula:	Mg ₂ SiO ₄
Recommended Use:	Scientific research and development
Manufacturer/Supplier:	LTS Research Laboratories, Inc.
Street:	2001 Oaks Pkwy
City:	Belmont
State:	North Carolina
Zip Code:	28012
Country:	USA
Tel #:	+1 (704) 899 2840
24-Hour Emergency Contact:	800-424-9300 (US & Canada) +1-703-527-3887 (International)

2. Hazards Identification

Signal Word: None

Hazard Statements: None

Precautionary Statements:

None

HMIS Health Ratings (0-4):

Health:	0
Flammability:	0
Physical:	0

3. Composition

Chemical Family:	Ceramic
Additional Names:	Magnesium silicon oxide, Forsterite, Talc
Magnesium orthosilicate (Mg ₂ SiO ₄):	
Percentage:	100 wt.%
CAS #:	10034-94-3
EC #:	233-112-5

4. First Aid Procedures	
General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	Treat symptomatically
Important Symptoms:	None
Inhalation:	Remove victim to fresh air. Seek medical attention.
Ingestion:	Clean mouth with water and drink afterwards plenty of water. Seek medical attention.
Skin:	Wash affected area with mild soap and water for at least 15 minutes. Remove any contaminated clothing. Seek medical attention.
Eyes:	Flush eyes with water, blinking often for several minutes. Seek medical attention.
5. Firefighting Measures	
Flammability:	Non-flammable
Extinguishing Media:	No special restrictions – use suitable extinguishing agent for surrounding material and type of fire.
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Keep product and empty container away from heat and sources of ignition. See section 10 for decomposition products.
6. Accidental Release Measures	
If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.
7. Handling and Storage	
Handling Conditions:	Wear personal protective equipment/ face protection. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.
8. Exposure Controls and Personal Protection	
Permissible Exposure Limits:	N/A
Threshold Limit Value:	N/A
Special Equipment:	None
Respiratory Protection:	Dust Respirator
Protective Gloves:	Nitrile rubber gloves, 0.11 mm thick
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	White
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	1890 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	3.21 g/cc
Molecular weight:	140.69 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Strong oxidizing agents
Incompatible Conditions:	None
Hazardous Decomposition Products:	Magnesium oxides, Silicon dioxide

11. Toxicological Information

Potential Health Effects:	
Eyes:	Causes irritation
Skin:	Causes irritation
Ingestion:	May cause irritation
Inhalation:	Avoid breathing dust or spray mist. Harmful if inhaled
Chronic:	Inhalation of magnesium compounds may cause metal fume fever. Metallic magnesium which perforates the skin may cause local lesions. Some magnesium salts have produced muscle weakness, cardiac arrhythmia, respiratory effects and changes in blood chemistry following ingestion. Inorganic silicon compounds may be acute inhalation irritants. Prolonged inhalation may cause pulmonary fibrosis known as silicosis.
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	N/A
Carcinogen:	N/A

12. Ecological Information

Aquatic Toxicity:	Low
Persistent Bioaccumulation Toxicity:	No
Very Persistent, Very Bioaccumulative:	No
Notes:	N/A

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous:	Not hazardous for transportation.
Hazard Class:	N/A
Packing Group:	N/A
UN Number:	N/A
Proper Shipping Name:	N/A

15. Regulatory Information

Sec 302 Extremely Hazardous:	No
Sec 304 Reportable Quantities:	N/A
Sec 313 Toxic Chemicals:	No

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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