



MAGNESIUM SILICATE

SAFETY DATA SHEET

This document contains Health and Safety information. We recommend reading it before using the product for the first time.

1. Product and Company Identification

Commercial Name:	MAGNESIUM SILICATE
Chemical Name:	Magnesium Hydroxide Silicate
Class:	Silicates
Group:	Serpentine without Chrysotile
Subgroup:	Antigorite and Lizardite
Chemical Formula:	(Mg,Fe) ₃ Si ₂ O ₅ (OH) ₄ (Antigorite) Mg ₃ Si ₂ O ₅ (OH) ₄ (Lizardite)
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2. Composition and Information on Ingredients

Chemical Formula:	(Mg,Fe) ₃ Si ₂ O ₅ (OH) ₄ (Antigorite) Mg ₃ Si ₂ O ₅ (OH) ₄ (Lizardite)
Typical Analysis	
Total Magnesium:	37%
Silica (SiO₂):	42%
Total Iron:	6 to 10% Fe ₂ O ₃
Alkalinity	Positive
Ingredients:	Magnesium, Silicon, Oxygen, Hydrogen





3. Hazard Identification

Inhalation:	Irritation of nasal and ocular mucous membranes in allergic individuals.
Ingestion:	Throat obstruction.
Skin Contact:	None.
Eye Contact:	Irritation, tearing.

The presence of Serpentine (Antigorite or Lizardite without Chrysotile) in the environment does not pose health risks other than those associated with inert particulate matter in the air. These effects can be eliminated by reducing dust exposure and using appropriate respiratory protection.

Routine inhalation of any type of dust should be avoided. Special care should be taken when emptying bags, sweeping, mixing, or performing tasks that generate dust. Operators assigned to areas with large amounts of dust should use a respirator approved by the relevant authority to protect against any dust particles.

4. First Aid Measures

Inhalation: Move the affected person out of the contaminated area to a place with fresh air, if safe to do so. Otherwise, attempt to provide fresh air through ventilation. Consult a doctor if breathing difficulties occur, keep the person seated and calm, provide oxygen or artificial respiration if necessary.

Ingestion: If the product was ingested, do not induce vomiting. Provide large amounts of water to drink. If vomiting occurs spontaneously, maintain a fresh air environment and provide more water. Never give anything by mouth to an unconscious person. If the problem persists, seek medical attention.

Skin Contact: Non-toxic. Wash thoroughly with water and soap in case of contact with open wounds to prevent possible infections.

Eye Contact: Particulate matter in contact with the eyes may cause irritation due to its alkalinity. In this case, rinse eyes for at least 10 minutes.

5. Fire-Fighting Measures

This product is non-combustible and non-flammable, it does not burn, but the packaging may catch fire upon contact with a flame.

Suitable extinguishing methods: Not applicable for the product. Use appropriate means to extinguish surrounding fires.

Special exposure hazard: Use equipment to protect the respiratory system from smoke inhalation while extinguishing the fire.



6. Accidental Release Measures

Clean the area with a boom or vacuum cleaner. The product is not affected except when spilled on acidic liquid solutions.

7. Handling and Storage

Handling: Avoid dust accumulation in areas such as beams, columns, ceilings, ducts, and floors to prevent degradation of these places. Practice good cleaning habits typical in handling particulate materials.

Storage: Store the product in its original packaging, in a ventilated, cool, and dry area.

8. Exposure Controls and Personal Protection

Personal protective equipment required when dust is present in the environment:

- **Eye and face protection:** Use safety glasses with side shields.
- **Respiratory protection:** Use a mask covering nose and mouth.
- **Hand protection:** Use gloves.

9. Physical and Chemical Properties

Appearance:	Solid in powder or granular form
Odor:	Odorless
Bulk Density:	Specific Gravity: 2.2 to 2.6 1.5 to 2.0 depending on particle size
Water Solubility (% weight):	Slightly soluble
Melting Point:	> 1500 °C
pH in 10% solution:	10
Total Magnesium:	37% MgO
Silica:	42% SiO ₂

10. Stability and Reactivity

Magnesium silicate is stable under normal conditions in contact with air; however, it reacts with acids since it is alkaline. When exposed outdoors, it reacts with CO₂ from the air, when sufficient moisture is present, forming magnesium carbonate.

11. Toxicological Information

The magnesium silicate in this product comes from a serpentine mine composed of Lizardite and Antigorite that are not classified as hazardous. It does not contain chrysotile (asbestos).

12. Ecological Information

General considerations: The product is not classified as ecotoxic by Directive 67/548/EEC and its successive amendments.



Ecological and biological effects: The product is alkaline and should not be applied excessively to soil or water as it may increase pH to undesirable levels.

Biodegradability: Magnesium silicate is stable and biodegradability tests are not applicable as it is an inorganic substance.

Aquatic impact: None.

13. Disposal Considerations

Product: Out-of-spec or discarded product should be treated as non-hazardous waste for disposal.

Container: Containers contaminated with product should be treated under the same conditions, and can be washed with plenty of water and recycled according to the characteristics of the container.

14. Transport Information

Product not classified as hazardous.

15. Regulatory Information

Product not classified as hazardous.

16. Other Information

Product applications:

- **Agricultural sector:** Amendment providing Mg-Fe-Si, P₂O₅, and small amounts of B and Co. Regulates pH and improves calcium/magnesium ratio. Aluminum sequestrant.
- **Chemical industry:** Raw material in the production of magnesium sulfate, metallic magnesium, magnesium chloride, among others.
- **Construction and roads:** Sands, grains, crushed stones, road base material, concrete blocks.
- **Landfills:** Environmental control of acidic leachate liquids.
- **Decoration:** Tiles, tiles for general and heavy traffic.

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