



**1 IDENTIFICATION OF SUBSTANCE**

PRODUCT NAME: MAGNESIUM SILICATE, synthetic, amorphous, hydrous  
TRADE NAME: MAGNESOL®  
GRADES: MAGNESOL® R Series  
SUPPLIER: The Dallas Group of America, Inc.  
374 Route 22  
P.O. Box 489  
Whitehouse, NJ 08888 Tel: 908-534-7800 FAX: 908-534-0084  
Information department: Product Safety Department

**2 COMPOSITION/DATA ON INGREDIENTS**

CAS No.	Description	% Min.
1343-88-0	Magnesium Silicate	97

**3 HAZARDS IDENTIFICATION**

HMIS ratings (scale 0-4)

Health = 0  
Fire = 0  
Reactivity = 0

0	Health
0	Fire
0	Reactivity

MAGNESOL® is not explosive, flammable, or combustible. It is a mild irritant to eyes, skin, and respiratory passages.

**4 FIRST AID MEASURES**

Inhalation: Drink water to clear the throat, blow nose to clear respiratory passages.  
Ingestion: Incidental ingestion of this product does not require first aid.  
Skin Contact: Wash exposed area thoroughly with soap and water.  
Eye Contact: Flush eyes with plenty of water. Call a physician if irritation persists.

**5 FIRE FIGHTING MEASURES**

EXTINGUISHING MEDIA: Select the proper media to extinguish a surrounding fire.

**6 ACCIDENTAL RELEASE MEASURES**

SPILL CLEANUP METHODS: Sweep or vacuum spilled material; the use of a sweeping compound/dust suppressant is suggested.  
Make sure that all personnel involved in housekeeping and spill clean up follow good industrial hygiene practices and wear proper personal protective equipment.

## **7 HANDLING AND STORAGE**

USAGE PRECAUTIONS: None in designated use.  
STORAGE PRECAUTIONS: None in designated use.  
STORAGE CRITERIA: No special requirements.

## **8 EXPOSURE CONTROLS AND PERSONAL PROTECTION**

INGREDIENT NAME: Magnesium Silicate CAS No.: 1343-88-0

American Conference of Government Industrial Hygienists (ACGIH) - The ACGIH does not list synthetic magnesium silicate in the substance index. A threshold limit value - time weighted average (TLV-TWA) of 10 mg/m<sup>3</sup> of total dust is recommended for substances for which no specific TLVs have been assigned.

### **PROTECTIVE EQUIPMENT**

VENTILATION: No special requirements.  
RESPIRATORS: If the airborne concentration exceeds the ACGIH recommended TLV, an approved dust mask should be worn.  
PROTECTIVE GLOVES: Not required.  
EYE PROTECTION: Not required.  
OTHER PROTECTION: Not required.  
HYGIENIC WORK ROUTINES: No special requirements.

## **9 PHYSICAL AND CHEMICAL PROPERTIES**

Normal Physical State @ 20°C (68°F): White, odorless powder  
pH (1 in 10 slurry) 7.0 to 10.8  
Melting Point: 1910°C (3470°F)  
Absolute Density (H<sub>2</sub>O = 1) 2.10 - 2.20  
Solubility in Water: Magnesium Silicate is insoluble

Vapor Pressure: N/A\* % Volatile: N/A\*  
Viscosity: N/A\* Evaporation Rate: N/A\*  
Boiling Point: N/A\* Ignition Temperature: N/A\*  
Vapor Density: N/A\* \*N/A - Not applicable

## **10 STABILITY AND REACTIVITY**

Stability: Stable  
Polymerization: Will not and cannot occur  
Conditions and Materials to Avoid: None in designated use.

**Note:** In sufficient quantity, a filter cake composed of a flammable organic liquid absorbed on synthetic magnesium silicate or other filter materials such as diatomaceous earth, Perlite, or natural clays may be self-heating or possibly pyrophoric.

- A self-heating material is a material that, when in contact with air and without an energy supply, is liable to self-heat. A material of this type which exhibits spontaneous ignition or if the temperature of the sample exceeds 200 °C (392 °F) during the 24-hour test period when tested in accordance with UN Manual of Tests and Criteria, is classed as a Division 4.2 material.
- A pyrophoric material is a liquid or solid that, even in small quantities and without an external ignition source, can ignite within five (5) minutes after coming in contact with air when tested according to the UN Manual of Tests and Criteria.

## **11 TOXICOLOGICAL INFORMATION**

Hill Top Biolabs, Inc.  
Cincinnati, OH, 1989.

a) Albino male rat: Acute oral – LD50 > 5.0 g/kg  
b) Albino rabbit: Acute dermal - LD50 > 2.0 g/kg  
Primary Irritation Index 0.80  
0 = No erythema (skin redness)  
1 = Very slight erythema  
c) Albino rabbit: Eyes - Mild irritation and conjunctivitis.

The above study was specific to MAGNESOL® with the formula  $MgO:2.6SiO_2 \cdot H_2O$ .

The conclusions of this test were:

- MAGNESOL® is classified as non-toxic by oral administration.
- it is not a primary skin irritant or a corrosive by dermal application.
- It is not classified as toxic by dermal administration.
- It is classified in Toxicity Category III by ocular administration.

This product does not contain any ingredient designated by IARC, NTP, ACGIH, or OSHA as probable or suspected human carcinogens.

## **12 ECOLOGICAL INFORMATION**

WATER HAZARD CLASSIFICATION: Not a known pollutant.

## **13 DISPOSAL CONSIDERATIONS**

DISPOSAL METHODS: Magnesium silicate, per se, is not regulated under RCRA landfill requirements. However, under RCRA, it is the responsibility of the user of products to determine, at the time of disposal, whether the product falls under RCRA as a regulatory waste. The product uses, transformations, synthesis, mixtures, etc., may render the resulting end product subject to regulation. See Section 10 for additional information on filter cakes.

## **14 TRANSPORT INFORMATION**

DOT CLASS: Not Regulated  
UN/NA NO.: Not Classified  
FREIGHT CLASSIFICATION: NMFC - 48210 Column 55  
IMO CLASS: Not Classified

## **15 REGULATORY INFORMATION**

This material is not listed in Sections 302, 312, or 313 of SARA III.  
It is reported in the TOSCA Inventory, 1986.

## **16 OTHER INFORMATION**

Approximate chemical formula:  $MgO:2.6SiO_2 \cdot H_2O$   
International Numbering System (INS) number: 553i  
European Union E number: E553a(i)  
EINECS number: 215-681-1

## **16 OTHER INFORMATION, con't**

References A through D and F are specific to magnesium silicate with the approximate chemical formula  $MgO \cdot 2.6SiO_2 \cdot H_2O$ :

- A. 21 CFR Part 182, Subpart C - Generally recognized as safe.
- B. Chemical Toxicology of Commercial Products, Edition 4, 1976 - No acute toxicology recognized.
- C. Chemical Abstracts, 1958, 6721 Referring to USSR Medical Prom.10, No.4, Moscow, USSR - The powder is well tolerated by white rats, dogs, and cats.
- D. NIOSH Registry of Toxic Effects of Chemical Substances, Vol. 2, 1986 - Irritation data: Human skin-300 micro gram/3 days. Very mild.
- E. Magnesium silicate with an approximate chemical formula of  $MgO \cdot 2.6SiO_2 \cdot H_2O$  is not listed in:
  - 1. IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Man, 1988
  - 2. Industrial Hygiene and Toxicology, F. A. Patty
  - 3. Industrial Toxicology, Alice Hamilton and Harriet Hardy
  - 4. Toxicology of the Eye, W. Morton Grant
  - 5. Dangerous Properties of Industrial Materials, Sax and Lewis
  - 6. Government Publications:
    - a. NIOSH/OSHA Pocket Guide to Chemical Hazards
    - b. Registry of Toxic Effects of Chemical Substances
    - c. The Industrial Environment - It's Evaluation and Control

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FOR MORE INFORMATION CALL 812-283-6675

Revised 3-31-11