

SECTION 1 - IDENTIFICATION

COMPANY ADDRESS:

The Virtual Foundry, Inc
211 S Water St
Stoughton, WI 53589
USA

PRODUCT NAME: **Magnesium Silicate**

PRODUCT USE: **Sintering Refractory Ballast**

SECTION 2 - HAZARDS IDENTIFICATION SUMMARY

(As defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200)

PHYSICAL HAZARDS: None.

HAZARD STATEMENTS: This chemical is considered hazardous. May cause respiratory tract irritation.

OTHER HAZARDS: None.

SECTION 3 - COMPOSITION, INFORMATION OF INGREDIENTS

Chemical name	CAS No.	% by Weight
Magnesium Silicate	14807-96-6	> 97.0
Dolomite	16389-88-1	< 3.0

*The exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 - FIRST AID MEASURES

IF SWALLOWED: Clean mouth with water and drink plenty of water.

IF ON SKIN OR CLOTHING: Wash skin with soap and water.

IF IN EYES: Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

IF INHALED: Remove to fresh air.

MAIN SYMPTOMS: Redness, coughing and/or wheezing.

NOTE TO PHYSICIAN: Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES**FLAMMABILITY**

AUTOIGNITION TEMPERATURE: 388°C

SUITABLE EXTINGUISHING MEDIA: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

UNSUITABLE EXTINGUISHING MEDIA: Use of water spray when fighting fire may be inefficient.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL: No information available.

HAZARDOUS COMBUSTION PRODUCTS: None.

EXPLOSION DATA

SENSITIVITY TO MECHANICAL IMPACT: Not sensitive.

SENSITIVITY TO STATIC DISCHARGE: No information available.

FIRE FIGHTING INSTRUCTIONS AND FIRE FIGHTING EQUIPMENT: No information available.

ADDITIONAL INFORMATION:

PERSONAL PROTECTIVE EQUIPMENT: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS: Ensure adequate ventilation, especially in confined areas.

ENVIRONMENTAL PRECAUTIONS: See Section 12 for additional ecological information.

METHODS FOR CLEANING UP: Use personal protective equipment as required. Cover powder spill with a plastic sheet or tarp to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Handle in accordance with good industrial hygiene and safety practice.

STORAGE: Keep containers tightly closed in a dry, cool and well-ventilated place.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE LIMITS

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Magnesium Silicate 14807-96-6	TWA: 2 mg/m ³ particulate matter containing no asbestos and <1% crystalline silica, respirable fraction	(vacated) TWA: 2 mg/m ³ respirable dust <1% Crystalline silica, containing no Asbestos TWA: 20 mppcf if 1% Quartz or more, use Quartz limit	IDLH: 1000 mg/m ³ TWA: 2 mg/m ³ containing no Asbestos and <1% Quartz respirable dust

TLV: Threshold Limit Value over 8 hours of work.

PEL: Permissible Exposure Limit

Other Information: Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

ADDITIONAL PROTECTION:

ENGINEERING CONTROLS

Engineering Measures:

EXPOSURE MONITORING

Exposure Limits: See table above.

Hygiene Measures: Avoid contact with eyes.

PERSONAL PROTECTIVE EQUIPMENT

Eye protection: No special technical protective measures are necessary.

Skin protection: No special technical protective measures are necessary.

Respiratory protection: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hand protection: While material is hot, wear insulated safety gloves; wash hands after handling.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice.

Special hazard: No information available

Environmental Protection: No information available

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Solid
Appearance:	Powder
Color:	White
Odor:	Slight
Odor Threshold:	No information available.
Melting/Freezing Point:	No information available
Boiling Point:	No information available.
Flash Point:	No information available.
Evaporation Rate:	No information available.
Flammability:	No information available.
Flammability Limits:	No information available.
Vapor Pressure:	Not applicable
Vapor Density:	Not applicable
Specific gravity:	2.8
Relative Density:	No information available.
Water Solubility:	No information available
Percent Volatile (v/v):	0%
Chemical Stability:	No information available.
Conditions to avoid:	No information available.
Solubility in other solvents:	No information available
Partition Coefficient:	No information available.
Auto-Ignition Temperature:	No information available

Hazardous Decomposition Products: No information available.
Possibility of Hazardous Reactions: No information available.
Hazardous Polymerization: No information available.
Decomposition Temperature: No information available
Viscosity: No information available.
Explosive Properties: No information available.
Oxidizing Properties: No information available.

Other Information:

Softening Point: No information available
 VOC Content (%) No information available
 Bulk Density: No information available
 MEC: No information available
 MIE: No information available
 KST: No information available
 MIT (layer): No information available

SECTION 10 - STABILITY AND REACTIVITY

INCOMPATIBILITY: No information available.

CHEMICAL STABILITY: Stable under recommended storage conditions.

HAZARDOUS POLYMERIZATION: Will not undergo hazardous polymerization.

CONDITIONS & MATERIALS TO AVOID: Extremes of temperature and direct sunlight.

HAZARDOUS DECOMPOSITION PRODUCTS: Burning produces noxious and toxic fumes, Carbon monoxide (CO), Carbon Dioxide (CO₂). Exothermic reaction with water, acids, alkalis, to generate hydrogen and heat.

SECTION 11 - TOXICOLOGICAL INFORMATION

Principal routes of exposure: Skin contact.

PRODUCT INFORMATION:

Acute toxicity: None established.

Chronic toxicity: None established.

Specific effects: None established.

Long term toxicity: None established.

Mutagenic effects: None established.

Reproductive toxicity: None established.

Carcinogenic effects: No information available.

Chemical Name	ACGIH	IARC	NTP	OSHA
Magnesium Silicate 14807-96-6	-	Group 3	-	--

Target organ effects: Central Vascular System (CVS), Eyes, Respiratory system.

Ingestion: May cause gastrointestinal discomfort if consumed in large amounts. Not an expected route of exposure.

Inhalation: Inhalation of dust in high concentration may cause irritation of the respiratory system.

Eye Contact: Dust contact with the eyes can lead to mechanical irritation.

Symptoms related to the physical, chemical, and toxicological characteristics: Redness. Coughing and/or wheezing.

Delayed and immediate effects and also chronic effects from short and long term exposure:

Irritation: Product dust may be irritating to eyes, skin, and respiratory system.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: 0% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

Persistence and degradability: Not readily biodegradable.

Bioaccumulation: Not expected to bioconcentrate or bioaccumulate.

Mobility: Is not likely mobile in the environment.

Other adverse effects: This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).

Ozone: Not applicable.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Disposal should be in accordance with applicable regional, national and local laws and regulations.

CONTAMINATED PACKAGING: Do not reuse containers.

SECTION 14 - TRANSPORT INFORMATION

DOT: Not regulated.

MEX: Not regulated.

ICAO: Not regulated.

IATA: Not regulated.

IMDG: Not regulated.

UN NUMBER: N/A.

SECTION 15 - REGULATORY INFORMATION

International Inventories

TSCA: Complies

DSL/NDSL: Complies

EINECS/ELINCS: Complies

ENCS: Complies

IECSC: Complies

KECL: Complies

PICCS: Complies

AICS: Complies

Legend:

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

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

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 Silicate 14807-96-6	X	X	X

SECTION 16 - OTHER INFORMATION, INCLUDING THE DATE OF PREPARATION OF THE LAST REVISION

LABEL REQUIREMENTS: Not expected to produce significant adverse health effects when the recommended instructions for use are followed.

NFPA HAZARD RATINGS	HEALTH	0
	FLAMMABILITY	0
	PHYSICAL HAZARD	0
	INSTABILITY	-
	4=Severe 3=Serious 2=Moderate 1=Slight 0=Minimal	

HMIS HAZARD RATINGS	HEALTH	0
	FLAMMABILITY	0
	PHYSICAL HAZARD	0
	PERSONAL PROTECTION	X
	4=Severe 3=Serious 2=Moderate 1=Slight 0=Minimal	

DISCLAIMER: The information provided in this SDS is based on available data from reliable sources and is correct to the best of The Virtual Foundry, Inc's knowledge. The Virtual Foundry, Inc makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

REVISED DATE:

May 2023