

# MATERIAL SAFETY DATA SHEET



## 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

<b>Product Name:</b>	<b>SUPER #3000™ Mix 22</b>
<b>UN Number</b>	No UN Number Allocated
<b>Product Type:</b>	Monolithic Refractory (Mortars)
<b>TS Number:</b>	LEY30369

<b>Company Name And Address:</b>	Vesuvius USA 495 Emma Street Bettsville, OH 44815 U.S.A.
<b>Technical Contact:</b>	Phone #: 1-419-986-5126 24hr. Emergency Assistance (CHEMTREC) 1-800-424-9300
<b>Emergency Contact:</b>	Outside the Continental U.S. See Section 15 or Call Chemtrec Collect: 703-527-3887

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance	% Range	Identification No.	Exposure Limits U.S.A.
Aluminosilicate	45-70	CAS 1302-93-8	<b>Nuisance Particulate</b> ACGIH TLV:TWA (resp.) 5mg/m <sup>3</sup> OSHA PEL:TWA (resp.) 5mg/m <sup>3</sup>
Silica, Fused	1-5	CAS 69012-64-2	ACGIH TLV:TWA 0.10mg/m <sup>3</sup>
Crystalline Silica, Cristobalite	1-5	CAS 14464-46-1	ACGIH TLV:TWA (resp.) 0.05mg/m <sup>3</sup> OSHA PEL:TWA (resp.) 10mg/m <sup>3</sup> ÷ 2(%SiO <sub>2</sub> +2)
Crystalline Silica, Quartz	1-5	CAS 14808-60-7	ACGIH TLV:TWA (resp.) 0.05mg/m <sup>3</sup> OSHA PEL:TWA (resp.) 10mg/m <sup>3</sup> ÷ (%SiO <sub>2</sub> +2)
Sodium Silicate	10-30	CAS 1344-09-8	None Established ACGIH TLV:STEL /NaOH/ Ceiling 2mg/m <sup>3</sup>



### 3. HAZARDS IDENTIFICATION

<b>Emergency Overview:</b>	Product is a wet gray/brown mixture of coarse to fine particles. Not a fire or spill hazard. Some risk by inhalation (Dried). Prolonged skin contact may produce irritation/inflammation. Sodium silicate component is a very corrosive alkaline material.
<b>Precautions:</b>	Pre-existing lung conditions such as, but not limited to bronchitis, emphysema and asthma.
<b>Chronic Health Effects:</b>	Prolonged inhalation of dried product may lead to the development of a disabling pulmonary fibrosis known as silicosis, which may lead to cancer.
<b>Acute Health Effects:</b>	Eyes: Corrosive and physical eye irritant Skin: Slight skin irritation Inhalation: Irritation of upper respiratory system Ingestion: May cause gastrointestinal disturbances

### 4. FIRST AID MEASURES

<b>Inhalation:</b>	Remove victim to fresh air. If not breathing, give artificial respiration and seek medical attention.
<b>Eye contact:</b>	Flush eyes with large amounts of water. Seek medical attention if irritation persists.
<b>Skin contact:</b>	Wash affected area with mild soap and water.
<b>Ingestion:</b>	Seek medical attention if symptoms persist.

### 5. FIRE FIGHTING MEASURES

<b>Extinguisher Type:</b>	No special instructions or conditions.
<b>Special Procedures:</b>	No special instructions other than use of approved respirators. Product is not a combustible. No hazardous decomposition products.

### 6. ACCIDENTAL RELEASE MEASURES

<b>Spillage:</b>	No special requirements. Use safety glasses, gloves, skin protection, and respiratory protection.
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### 7. HANDLING AND STORAGE

<b>Handling</b>	No special requirements. Use safety gloves and glasses.
<b>Storage</b>	No special requirements

### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

<b>Ventilation:</b>	Provide sufficient ventilation, in both volume and airflow patterns, to control any mist/particulate emissions below allowable limits. See Exposure Limits in Section 2.
<b>Respiratory:</b>	Provide workers with legally approved respirators for level of exposure incurred.
<b>Eye:</b>	The use of proper eye protection is recommended (ex. safety glasses).
<b>Hand:</b>	The use of proper hand protection is recommended (ex. barrier cream with anti-slip gloves).
<b>Other:</b>	Safety shoes and long sleeve shirts are recommended for foot and skin protection.



## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** A wet gray/brown mixture of fine materials; odorless.

<b>Boiling Point:</b>	Not Applicable
<b>Melting Point:</b>	>2900°F (1590°C)
<b>Bulk Density:</b>	See specific Product Data Sheet
<b>% Volatile by Volume:</b>	0
<b>Evaporation Rate:</b>	Not applicable
<b>Water Solubility:</b>	<1
<b>pH (10% aqueous slurry):</b>	10-11
<b>Specific Gravity (g/cc):</b>	Mixture

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable
<b>Incompatibility</b>	None
<b>Hazardous Decomposition</b>	None

## 11. TOXICOLOGICAL INFORMATION

Substance & CAS Number	Carcinogenic Data	Summary of Hazards
Aluminosilicate (CAS 1302-76-7)	No Data Found	Respiratory: Nuisance Particulate
Silica, Fused (CAS 60676-86-0)	IARC Group 3	Respiratory: Inhalation Hazard
Cristobalite (CAS 14464-46-1)	IARC Group 1	Respiratory: May Develop Silicosis
Sodium Silicate (CAS 1344-09-08)	No Data Found	Corrosive Irritant
Quartz (CAS 14808-60-7)	IARC Group 1	Respiratory: May Develop Silicosis

## 12. ECOLOGICAL INFORMATION

No Data Available

## 13. DISPOSAL INFORMATION

This product, as manufactured, does not exhibit any characteristics of a hazardous waste. It is suitable for landfill disposal. However, debris generated during installation, maintenance or tear-out procedures may be contaminated with other hazardous materials. Therefore, appropriate waste analysis may be necessary to determine proper disposal. A qualified environmental professional in accordance with applicable federal, state, and local regulations should determine waste characterisation and disposal/treatment methods.

## 14. TRANSPORT INFORMATION

This product is not classified as a hazardous material for transportation. No hazard class, no label or placard required, no UN or NA number assigned. Shipment outside the U.S. should be reviewed by an environmental professional for country specific regulatory requirements.

**15. REGULATORY INFORMATION***Products or components of mixture regulated under the following*

## U.S.A. Regulations:

Sara Title III: (302/304) No; (311/312) Yes; (313) No

CERCLA (RQ): No

TSCA: Yes (All Substances listed in ingredients)

California Proposition 65: Yes (Silica)

HMIS Codes: Health: 2 Fire: 0 Reactivity: 0 Protection: E

## Canadian Regulations:

Domestic Substance List (DSL): Yes (All Substances Listed)

WHMIS Class: D2A:E

Contact Phone # 905-732-4441



## 16. OTHER INFORMATION

### Removal After Service/Tear-Out Precautions:

Because of the possible presence of crystalline silica in used refractory debris, particular care should be exercised during tear-out to minimise the generation of dust. Adherence to proper methods of dust suppression and control is imperative. The following precautions should be taken during tear-out.

- 1.) Employees should be apprised of the hazards and proper conditions and precautions for safe use or exposure.
- 2.) Approved respirators, in accordance with requirements of federal regulations, should be used for dust levels above established exposure limits for respirable crystalline silica.
- 3.) Dust generation should be minimised by the use of dust control equipment or water spray.
- 4.) Wear protective clothing and vacuum clean prior to removing clothing.
- 5.) Where there is a possibility of exposure to dust containing respirable crystalline silica, the following warning should be posted.

FREE SILICA WORK AREA	AVOID BREATHING DUST
DUST MAY CAUSE DELAYED LUNG INJURY	
( SILICOSIS )	

### ACRONYMS AND REFERENCES USED IN PREPARATION OF MSDS':

ACGIH: American Conference of Governmental Industrial Hygienists  
 CAS#: Stands for Chemical Abstracts Service  
 CERCLA: Comprehensive Environmental Response, Compensation & Liability Act  
 IARC: International Agency for Research on Cancer  
 Group 1: Carcinogenic to Humans. (IARC)  
 Group 2A: Probably Carcinogenic to Humans. (IARC)  
 Group 2B: Possibly Carcinogenic to Humans. (IARC)  
 Group 3: Unclassifiable as to Carcinogenicity in Humans. (IARC)  
 Group 4: Probably not Carcinogenic to Humans. (IARC)  
 HMIS: Hazardous Materials Identification (National Paint and Coatings Association)  
 mg/m<sup>3</sup>: Milligrams per cubic meter  
 OSHA: Occupational Safety and Health Administration  
 PEL: Permissible Exposure Limit (OSHA)  
 SARA: Superfund Amendments and Reauthorization Act  
 TITLE III: Emergency Planning and Community Right To Know Act  
 Section 302: Extremely Hazardous Substances  
 Section 304: Emergency Release  
 Section 311: *Community Right-to-Know*, MSDS or List of Chemicals  
 Section 312: *Community Right-to-Know*, Inventories & Locations, (Tier I/Tier II)  
 Section 313: Toxic Chemicals, Toxic Chemical Release Reporting, Form R  
 TLV: Threshold Limit Values (ACGIH)  
 TWA: Time Weighted Average

### REFERENCES:

Sax, N. Irving: Dangerous Properties of Industrial Materials, Ninth Edition, Van Nostrand Reinhold Co., Inc., 1996.  
 Kirk, R. and Othmer, D., Encyclopedia of Chemical Technology, Third Edition, Wiley-Interscience, New York, NY 1982.  
 Clansky, K.B., Suspect Chemicals Sourcebook, 1992-2 Edition, Roytech Publications, Bethesda, Maryland.  
 Sax, N.Irving and Lewis, R.J. Hawley's Condensed Chemical Dictionary, Eleventh Ed., Van Nostrand Reinhold Co., Inc., NY  
 Manufacturers/Suppliers, Material Safety Data Sheets on Raw Materials Used  
 American National Standard for Hazardous Industrial Chemicals - Material Safety DataSheets - Preparation, American National Standards Institute, Inc. 11 West 42nd St, New York, NY 10036.

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