



SAFETY DATA SHEET REFRACTORY MORTAR

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: Refractory Mortar

Other Names: 3000°F Refractory Mortar
Wet Air Setting Mortar

Primary Use: Insulating and finishing refractory air drying mortar/cement for bonding brickwork into a solid unit. Material used for layering of fire, super duty, and high alumina bricks.

Secondary Use: Premium refractory compound for filling voids.

Uses Advised Against:

None known.

Distributor/Manufacturer:

CeraMaterials
525 Silver Lake Rd
Dingmans Ferry, PA 18328
Emergency Contact: Jeff Optiz
Product Stewardship: 518.701.6722

24hr Emergency Contact Info:

CHEMTREC US Transportation: 800.424.9300

CHEMTREC International Transportation: 703.741.5500

SECTION 2 - HAZARDS IDENTIFICATION

OSHA/HCS status:

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture:

Carcinogenicity - Category 1A. Specific target organ toxicity (STOT) repeated exposure.
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 0%



Signal word, symbols, hazard and precautionary statements:

Hazard Pictogram



Signal Word

Danger

Hazard Statements

If dust present, it is suspected of causing cancer by inhalation through prolonged or repeated exposure.

Precautionary Statements

Prevention: If dust is present

Obtain special instructions before use. Do not handle until all safety instructions have been read and understood. Wear protective gloves, protective clothing, eye protection, and face protection. Do not breathe dust. Use respiratory protection as required; see section 8 of the Safety Data Sheet. Wash thoroughly after handling. Do not eat, drink, or smoke while using this product.

Response:

If concerned about exposure, get medical advice.

Storage:

Store locked up and in a manner to minimize airborne dust.

Disposal:

Dispose of contents and container waste in accordance with local, state, federal, and international regulations.

Supplementary Information

Use precautions if exposure exceeds the established OSHA limits. This material does not



present a hazard unless dust is generated from processing operations.

Hazards not classified that have been identified during the classification process

None known.

SECTION 3 - COMPOSITION

Substance or mixture: Mixture

Other Means of Identification: None

CAS number/other identifiers: CAS number: Mixture
Product code: None

<u>Chemical & Common Name</u>	<u>CAS#</u>	<u>% By Weight</u>
Calcined kaolin clay	1302-93-8	30-55
Kyanite	1302-76-7	30-35
Clay	1332-58-7	10-15
Sodium Silicate	1344-09-8	10-25
Crystalline Silica	14808-60-7	< 15
Crystalline Silica (cristobalite)	14464-46-1	< 10

*Concentrations shown as a range to protect confidentiality or is due to batch variation.

**There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

SECTION 4 - FIRST AID MEASURES

Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin, and eye contact, and ingestion.

Skin:

Gently wash with plenty of soap and water after each exposure. If skin becomes irritated and irritation persists seek medical attention.

Eyes:

Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Do not rub eyes. Check for and remove any contact lenses. Rinse for at least 15 minutes. If irritation persist seek medical attention.

Nose & Throat:



If these become irritated move to a dust free area or fresh air. Drink plenty of water and blow nose to evacuate remaining dust. If symptoms persist, seek medical advise.

Ingestion:

If prolonged irritation to gastrointestinal tract or mouth persist seek medical attention.

Most important symptoms/effects, acute and delayed.

Inhalation:

Respirable airborne particles may cause temporary irritation to the lungs and upper respiratory system.

Skin contact:

Prolonged exposure may cause dryness or irritation to the skin.

Eye contact:

Will cause mechanical irritation to the eyes. May cause moderate to severe eye irritation and dryness.

Ingestion:

May cause irritation to gastrointestinal tract or mouth.

Over-exposure signs/symptoms.

Inhalation:

Adverse symptoms may include the following: Irritation

Skin contact:

Adverse symptoms may include the following: Irritation & Dryness

Eye contact:

Adverse symptoms may include the following: Irritation & Dryness

Ingestion:

Adverse symptoms may include the following: Irritation & Stomach pains

Indication of immediate medical attention and special treatment needed, if necessary.

Notes to Physicians:



Medical conditions which may be aggravated by exposure include dry skin, dermatitis, and pre-existing lung conditions such as bronchitis, emphysema, and asthma. Cigarette smoking may increase the risk of silicosis, bronchitis, pneumoconiosis, and lung cancer in persons exposed to crystalline silica.

Specific treatments: No specific treatment.

Protection of first-aiders:

No action shall be taken involving any personal risk or without suitable training. Wear a suitable NIOSH-approved dust mask. Wash contaminated clothing before re-use.

SECTION 5 - FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media.

Use extinguishing agent suitable for surrounding combustible materials.

**Specific hazards arising from the chemical
(e.g., nature of any hazardous combustion products).**

None known other than those represented elsewhere in SDS. Non-combustible products, class of reaction to fire is zero. Packaging and surrounding materials may be combustible.

Hazardous thermal decomposition products:

Decomposition products may include the following materials: Clays, Sodium Silicate, and Crystalline Silica.

Special protective precautions, actions, and equipment for fire-fighters.

Material will not burn. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. No special firefighting equipment is necessary. Firefighters should wear appropriate protective equipment and self contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

NFPA Codes: Flammability: 0 Health: 1 Reactivity: 0 Special: 0

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures.

For non-emergency personnel:

No action shall be taken involving any personal risk or without suitable training. Evacuate



surrounding areas. Keep unnecessary and unprotected personnel from entering. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders:

If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions:

This material does not pose a significant threat to the environment. Avoid dispersion of material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

Methods and materials for containment and cleaning up.

Small spill:

Stop source of spill. Avoid creating airborne dust and use dust suppressant as necessary. Place material into closed waste disposal container. Any sweeper or vacuum should be equipped with High Efficiency Particulate (HEPA) filter. Dispose of using a licensed waste disposal contractor.

Large spill:

Stop source of spill. Avoid creating airborne dust and use dust suppressant as necessary. Place material into closed waste disposal container. Any sweeper or vacuum should be equipped with High Efficiency Particulate (HEPA) filter. Dispose of using a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Empty containers:

Product packaging may contain residue. Do not reuse.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling.

Protective Measure:

Minimize dust generation. Use appropriate respiratory protection if dust is present above the established exposure limits. If dusty conditions exist (such as during cutting, sanding, or milling) use engineering controls and/or respiratory protection (See Section 8).



Advice on general occupational hygiene:

Eating and smoking should be prohibited in area where this material is handled, stored, and processed. Workers should wash hands and face before eating and smoking. Remove contaminated clothing and protective equipment before entering eating areas, See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities.

Store in accordance with local regulations. Store in original container in a dry area, away from incompatible materials (see Section 10) and food/drink.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters.

Occupational exposure limits:

US Occupational Safety & Health Administration Permissible Exposure Limit (OSHA PEL):

Nuisance Dust (all components except crystalline silica)	5 mg/m ³
Crystalline Silica	
Permissible Exposure Limit	50 µg/m ³
Action Level	25 µg/m ³

(See 29 CFR 1910.1053, effective June 23, 2018. Regulation contains additional requirements, including written exposure plan, medical exams, training, and record keeping.)

(See 29 CFR 1910.1000 Table Z-3)

American Conference of Governmental & Industrial Hygienists Threshold Limit Value (ACGIH TLV):

Calcined Kaolin Clay	2 mg/m ³ (respirable dust)
Kyanite	3 mg/m ³ (respirable dust)
Crystalline Silica	0.025 mg/m ³

Note: TLV and PEL values are for eight hour exposures, unless noted.

Appropriate Engineering controls:

If user operations generate dust, use process enclosures, local exhaust ventilation or other



engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. Power equipment should be fitted with a properly designed dust collection device.

Environmental Exposure controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters, or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures:

Hygiene measures:

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection:

Wear a NIOSH-approved dust mask to limit exposure to product dust. High dust levels may require use of a half or full mask respirator with dust filters. Use local exhaust if necessary to lower dust levels. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Eye/Face protection:

Wear safety glasses with side shields or goggles complying with an approved standard to avoid exposure to dust.

Hand protection:

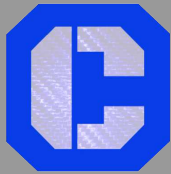
Protective gloves should be worn when handling and to avoid abrasion or drying of skin.

Body protection:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

Other skin protection:

Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.



SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Off-white to gray	pH:	Not applicable
Odor:	Odorless	Vapor pressure:	Not applicable
Odor threshold:	Not applicable	Vapor density:	Not applicable
Melting point:	Not applicable	Relative density:	3.5
Initial boiling point / range:	Not applicable	Solubility in water:	Slight
Flash point:	None	Auto-ignition temperature:	Not applicable
Evaporation rate:	0 (butyl acetate = 1)	Decomposition temperature:	Not applicable
Flammability:	Not applicable	Viscosity:	Not applicable
Upper/lower flammability or explosive limits:	Not applicable	Partition coefficient (n-octanol/water):	Not applicable

SECTION 10 - STABILITY AND REACTIVITY

Reactivity:	This product is normally not reactive.
Chemical stability:	The product is stable.
Possibility of hazardous reactions:	Under normal conditions of storage and use, hazardous reactions or polymerization will not occur.
Conditions to avoid:	Avoid strong acids and ammonium salts. Contact with strong oxidizing agents (such as fluorine, chlorine trifluoride) may present a fire hazard.
Incompatible materials:	Reactive or incompatible with the following materials: Hydrofluoric acid, fluorine, chlorine trifluoride, oxygen difluoride.
Hazardous decomposition products:	Crystalline silica will dissolve in hydrofluoric acid and produce silicon tetrafluoride, a corrosive gas..

SECTION 11 - TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
None Known	--	--	--	--
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Irritation/Corrosion: Not available



Sensitization:	Not available
Mutagenicity:	Not available
Carcinogenicity:	Not available
Reproductive toxicity:	Not available
Teratogenicity:	Not available
Aspiration hazard:	Not available
Information on likely routes of exposure:	Oral, Dermal, Inhalation are anticipated
Specific target organ toxicity (single exposure):	Not available
Specific target organ toxicity (repeated exposure):	

This material contains Crystalline Silica, which is known to cause silicosis. Silicosis is a rapidly progressive, non-cancerous lung disease that is often fatal.

Potential acute health effects:

Inhalation:	Respirable airborne particles may cause temporary irritation to the lungs and upper respiratory system.
Skin Contact:	Prolonged exposure may cause dryness or irritation to the skin.
Eye Contact:	Will cause mechanical irritation to the eyes. May cause moderate to severe eye irritation and dryness.
Ingestion:	May cause irritation to gastrointestinal tract or mouth.

Symptoms related to the physical, chemical, and toxicological characteristics:

Adverse symptoms may include the following:

Inhalation:	Irritation and/or dryness
Skin Contact:	Irritation and/or dryness
Eye Contact:	Irritation and/or dryness
Ingestion:	Irritation and/or stomach pains

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

Short term exposure:

Potential immediate and delayed effects:	Not available
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Long term exposure:

Potential immediate, delayed, or chronic effects:	Not available
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General: No other known significant effects or critical hazards.



Carcinogenicity: Crystalline silica - long term overexposure may cause permanent and irreversible lung damage, including silicosis, and increase the risk of lung cancer, kidney, and liver damage. Silicosis is a rapidly progressive, non-cancerous lung disease that is often fatal.

IARC (International Agency for Research on Cancer):

014808-60-7 Silica dust, crystalline, in the form of quartz or cristobalite - Group 1 (Sup 7, 68, 100C, 2012)

National Toxicology Program (NTP) report on Carcinogens:

Crystalline (Respirable Size) - Known to be human carcinogen

OSHA:

Crystalline Silica classified as a Category 1A Carcinogen

Mutagenicity: No known significant effects or critical hazards.

Teratogenicity: No known significant effects or critical hazards.

Developmental: No known significant effects or critical hazards.

Fertility effects: No known significant effects or critical hazards.

Numerical measures of toxicity:

Acute toxicity estimates: Not available

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity (aquatic & terrestrial, where available):	Not available
Persistence and degradability:	Not available
Bioaccumulative potential:	Not available
Mobility in soil:	Not available
Other adverse effects (such as hazardous to the ozone layer)	Most of the ingredients in this product are naturally occurring minerals, and, unless contaminated in service, are not hazardous to the environment.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Management

To prevent waste materials from becoming airborne during waste storage, transportation and disposal, a covered container or plastic bagging is recommended.



State Regulations:

New York:	Crystalline Silica
New Jersey:	Crystalline Silica
Pennsylvania:	Crystalline Silica
Massachusetts:	Crystalline Silica
Rhode Island:	Crystalline Silica
California Prop 65:	Crystalline Silica

International Regulations:

Country(s) /region:	Inventory Name	On Inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Chemical Substances (EINCS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing & New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals & Chemical Substances (PICCS)	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s). A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16 - OTHER INFORMATION

Hazardous Materials Identification System (HMIS) Hazard Rating:

Health	1*
Flammability	0
Reactivity	0
Physical Hazard	0
Personal Protective Equipment	X**

*Indicates possible chronic health effects from continuing exposures

**To be determined by the user

IARC's evaluation of crystalline silica states "Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1)" and additionally notes "carcinogenicity in humans was not detected in all industrial



circumstances studied." IARC also studied mixed mineral crystalline silica containing dusts such as coal dusts (containing 5 - 15 % crystalline silica) and diatomaceous earth without seeing any evidence of disease. (IARC Monograph Vol. 68, 1997). NTP lists all polymorphs of crystalline silica amongst substances which may "reasonably be anticipated to be carcinogens".

Effective Date: November 1, 2018
Revision Summary: Company address updated
Revision Date: October 14, 2019
SDS Prepared By: CeraMaterials

Disclaimer

The information presented herein is presented in good faith and believed to be accurate as the effective date of this Safety Data Sheet. Employers may use this SDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of the product. This summary of the relevant data reflects professional judgement; employers should note that information perceived to be less relevant has not been included in this SDS. Therefore, given the summary nature of this document, CeraMaterials does not extend any warranty (expressed or implied), assume any responsibility, or make any representation regarding the completeness of this information or its suitability for the purposes envisioned by the user.