

M.S.D.S.

(MATERIAL SAFETY DATA SHEET)

PRODUCT IDENTITY: CLAY **BRICK** CMU (concrete masonry unit) **BLOCK** or, **CONCRETE PAVERS**

SECTION I

Manufacturer's Name:

Mutual Materials Company

Address:

P. O. Box 2009

Bellevue, Washington 98009

Date Prepared:

November 1, 1994

Emergency Phone Number:

(425) 452-2300 or (800) 477-3008

Telephone Number for Information:

(425) 452-2300 or (800) 477-3008

Updated:

November 2003

SECTION II - Hazardous Ingredients/Identity Information

Hazardous Components:

Crystalline Quartz Silica

Specific Chemical Identity:

Quartz (Silicon Dioxide), SiO₂

These "Hazardous Components" are not released under normal conditions of use, but may be released from the fired clay brick as airborne respirable free crystalline silica particles when dry-sawing, dry-grinding, or otherwise materially modifying the product.

Common Names: Dust from dry sawing or grinding, Sand, Silica.

OSHA PEL:

Exposure to airborne crystalline silica shall not exceed an 8-hour time-weighted average limit as stated in 29 CFR 1910.1000 Table Z-3 for Mineral Dusts, specifically:

Silica, Crystalline Quartz (respirable): 0.1 mg/M³

ACGIH TLV:

Crystalline Quartz

TLV-TWA = 0.1 mg/M³ (Respirable Dust)

See Threshold Limit Value and Biological Exposure Indices for 1991-1992, American Conference of Governmental Industrial Hygienists.

Other Limits Recommended:

NIOSH has recommended that the permissible exposure limit be changed to 0.05 mg/M³ (as respirable free silica) averaged over a work shift of up to 10 hours per day, 40 hours per week. Consult the NIOSH Criteria Document for Crystalline Silica for more information.

SECTION III - Physical/Chemical Characteristics

Boiling Point: 4046^oF

Vapor Pressure: N/A

Vapor Density: N/A

Solubility in Water: Not Soluble

Specific Gravity: 2.65

Melting Point: 3050^oF

Evaporation Rate: N/A

Appearance & Odor: Granular or Powder, Odorless

SECTION IV - Fire and Explosion Hazard Data

Flash Point: Non-Combustible

Flammable Limits: None

Extinguishing Media: N/A

Special Fire Fighting Procedures: N/A

LEL: None

UEL: None

Unusual Fire and

Explosion Hazards: None

SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid: None

Incompatibility (Materials to Avoid):

Silica will dissolve in hydrofluoric acid and produce a corrosive gas, silicon tetra fluoride.

Hazardous Decomposition or Byproducts: None.

Hazardous Polymerization: Will not occur.

Conditions to Avoid: None

SECTION VI - Health Hazard Data

Route(s) of Entry:

Inhalation?: Yes **Skin?:** No **Ingestion?:** No

Health Hazards (Acute and Chronic):

Dry-sawing or dry-grinding will result in the release of dust particles, which can result in acute and chronic conditions.

Acute: Short-term exposure can cause minor irritation of the eye, nose, or skin.

Chronic: Excessive inhalation of dust particles for prolonged periods may result in lung disease (silicosis). Silicosis is a form of disabling pulmonary fibrosis, which can be progressive and may lead to death. See "Carcinogenicity" section below.

Carcinogenicity:

NTP?: Yes.

In the Sixth Annual Report on Carcinogens by The National Toxicology Program (NTP), it was concluded that respirable crystalline silica may reasonably be anticipated to be a carcinogen. The conclusion is based on sufficient evidence of carcinogenicity in laboratory animals, and limited evidence in humans.

IARC Monographs?: Yes.

The International Agency for Research on Cancer (IARC) Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans (Vol. 42, 1987) concludes that there is sufficient evidence for the carcinogenicity of crystalline silica to experimental animals, and that there is limited evidence of the carcinogenicity of crystalline silica to humans. IARC Class 2A.

Signs and Symptoms of Exposure:

Symptoms of excessive exposure are irritation of eyes, nose and/or throat, shortness of breath, or sputum production.

Medical Conditions Generally Aggravated by Exposure:

Pre-existing pulmonary and/or respiratory lung diseases, including, but not limited to; Emphysema, Asthma, or Bronchitis. Pulmonary function may be reduced by inhalation of respirable crystalline silica. Lung scarring produced by excessive inhalation may lead to a progressive massive fibrosis of the lung which may aggravate other pulmonary conditions and diseases, increasing susceptibility to pulmonary tuberculosis. Progressive massive fibrosis may be accompanied by heart enlargement, heart failure, and pulmonary failure. Smoking aggravates the effects of exposure. Sensitive eye conditions may also be aggravated by excessive exposure.

Emergency and First Aid Procedures:

Eyes: Flush eyes immediately and generously with water for 15 minutes. If irritation persists, seek medical attention.

Inhalation: For gross inhalation, remove person immediately to fresh air. Give artificial respiration as needed, and seek medical attention as needed.

Skin: Wash thoroughly. See physician if irritation persists.

SECTION VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled: Collect dust from dry-sawing or grinding operations using dustless method (vacuum or water). Wear protective equipment specified below.

Waste Disposal Method: Dispose in accordance with Federal, State, and Local regulations.

Precautions to Be Taken in Handling and Storing: Avoid breathing of dust particles from dry-sawing and grinding of units. Take normal precautions against spilling of containers with waste dust particles from dry-sawing or grinding operations.

Other Precautions: **It is strongly recommended that wet cutting or grinding methods be employed. Water will radically reduce the risk to exposure, because dust will be greatly minimized or eliminated.** If dry cutting and grinding is required take measures to dust collect (vacuum) where possible. Always wear a NIOSH approved respirator, tight fitting goggles, and gloves when any sawing or grinding operations are active. Do not permit dust to collect on wall or floor surfaces, clothing, or equipment.

See applicable OSHA Hazard Communication Rule 29 CFR Sections and State and Local worker or community "right to know" laws and regulations. We recommend that smoking be prohibited in all areas where respirators must be used. **WARN YOUR EMPLOYEES AND (YOUR CUSTOMER-USERS IN CASE OF RESALE) BY POSTING AND OTHER MEANS OF THE HAZARD AND OSHA PRECAUTIONS TO BE USED. PROVIDE TRAINING FOR YOUR EMPLOYEES ABOUT THE OSHA PRECAUTIONS.** See also the ASTM E 1132-86, "Standard Practice for Health Requirements Relating to Occupational Exposure to Quartz Dust."

SECTION VIII - Control Measures

NOTE: THESE CONTROL MEASURES ARE TO BE USED WHEN DRY-SAWING, DRY-GRINDING, OR OTHER MATERIAL MODIFYING OPERATIONS ARE ACTIVE. NORMAL CONDITIONS OF USE AND/OR INSTALLATIONS OF CLAY BRICK, CONCRETE BLOCK or CONCRETE PAVER ARTICLES DO NOT REQUIRE RESPIRATORY CONTROL MEASURES.

Respiratory Protection: Use NIOSH approved Particulate Respirator. Provide additional conventional respiratory protection based on considerations of airborne concentrations and duration of exposure. See most recent standards of the following:

American National Standard Institute (ANSI Z.88.2)

Occupational Safety and Health Administration (OSHA 29 CFR Part 1910.134)

Mine Safety and Health Administration (MSHA 30 CFR Part 56)

National Institute for Occupational Safety and Health (NIOSH Pocket Guide to Chemical Hazards)

Ventilation: **Local Exhaust:** Meet PEL requirements set out above in Section II.

Special: N/A **Other:** N/A

Mechanical (General): When cutting in confined area, meet PEL requirements.

Protective Gloves: Recommended. **Eye Protection:** Tight fitting protective goggles.

Other Protective Clothing or Equipment: As needed.

Work/Hygienic Practices: Avoid creating and breathing dust (see Other Precautions, Sec. VII.) The information, data and recommendations contained in this MSDS relates only to the specific material described, and is not to be used in combination with any other material or in any other process. This information is based on data that Mutual Materials Company believes to be correct and reliable. It is intended for use by competent persons having technical skill sufficient to understand the limits and boundaries of application. Mutual Materials Company accepts no responsibility and disclaims all liability for any harmful health effects which may be caused by purchase, resale, use, or exposure to fired clay brick and/or dust created by sawing, grinding or other operations outside normal conditions of use which may be performed on those units. Mutual Materials Company makes no warranties, either expressed or implied, concerning the application of the information herein. Any use of this information and data must be determined by the user to be in accordance with all applicable laws, regulations and orders.