

MATERIAL SAFETY DATA SHEET

SECTION I - CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Trade Name: BNZ Insulating Fire Brick - (All Grades)

Generic Name: Insulating Fire Brick

Manufacturer: BNZ Materials, Inc.

Address: 6901 S. Pierce Street, Suite 260

Littleton, CO 80128, USA

MSDS Number: BNZ/10

Revision: 12

Date Issued: June 4, 2006

24 hour Emergency Number (ChemTrec®): 800-424-9300

SECTION II - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	%	TLV	PEL
Ceramic matrix (mullite, anorthite, corundum)	None	60-98	3 mg/m ³	5 mg/m ³
Crystalline Silica (quartz)	14808-60-7	0.1-20	0.05 mg/m ³	0.1 mg/m ³
Crystalline Silica (cristobalite)	14464-46-1	0-20	0.05 mg/m ³	0.05 mg/m ³

Key: TLV = ACGIH, 8 hr. time weighted average (TWA); PEL = OSHA permissible exposure limit.

TLV and PEL limits are for total respirable dust.

SECTION III - HAZARDS IDENTIFICATION

Emergency Overview: This product contains crystalline silica which is considered a hazard by inhalation. The International Agency for Research on Cancer (IARC) has classified occupational exposures to respirable crystalline silica as being carcinogenic to humans (Class 1). This classification is based on what IARC considered sufficient evidence from epidemiological studies of humans for the carcinogenicity of inhaled silica in the forms of quartz and cristobalite. Crystalline silica is also known to cause Silicosis, a non-cancerous lung

disease.

HMIS Rating: **Health:** 1* **Fire:** 0 **Reactivity:** 0 **Other:** 0
WHMIS Class: D-2A - Material causing other toxic effects (VERY TOXIC - Chronic)

Primary Routes of Entry: Via respirable dust to the lungs and respiratory system and via coarse dust and particulate to the eyes.

Primary Target Organs: Lungs, respiratory system and eyes.

Potential Health Effects:

Inhalation: Long term overexposure to respirable crystalline silica dust may cause permanent and irreversible lung damage including silicosis.

Skin Contact: Possible dryness or irritation resulting from long term exposures to product dust.

Eye Contact: A mechanical irritant which can cause moderate to severe eye irritation.

Ingestion: Non-hazardous when ingested. Potentially a mild irritant to the GI tract if excessive quantity is ingested.

Medical Conditions Aggravated by Exposure: Pre-existing chronic upper respiratory and lung diseases such as, but not limited to, bronchitis, emphysema and asthma.

Carcinogenicity: This product contains crystalline silica which is classified as a class 1, human carcinogen by IARC, as a suspect carcinogen by NTP and as a possible select carcinogen by OSHA.

SECTION IV - FIRST AID MEASURES

Inhalation: Remove to fresh air. Drink water to clear throat and blow nose to evacuate dust. If coughing and irritation develop, call a physician.

Eye Contact: Flush with large amounts of water until irritation subsides, at least 15 minutes. See a physician if irritation persists.

Skin Contact: Normal good personal hygiene practices. Wash with mild soap and warm water after each exposure.

Ingestion: Emergency procedures not normally required. May be a temporary irritant to the GI system.

SECTION V - FIREFIGHTING MEASURES

NFPA Rating: Health: 0

Fire: 0

Reactivity: 0

Other: 0

Flashpoint and Method: This is a non-flammable product

LEL: N/Ap

UEL: N/Ap

Extinguishing Method: Not applicable. Product will not burn.

Special Firefighting Procedures: Not applicable.

Fire or explosion Hazards: The brick products described above are non-flammable. However, the cardboard packaging is combustible, and due care should be taken to minimize fire hazards.

SECTION VI - ACCIDENTAL RELEASE MEASURES

Clean-up Procedures: Pick up or shovel material into waste container taking care to minimize dust. Wet down if necessary to control dust. Vacuum clean dust with equipment fitted with HEPA filter

Personal Precautions: If dusty conditions exist, wear a face mask approved for use with dusts such as 3M 8511 N-95 or equivalent.

Environmental Precautions: None normally required.

SECTION VII - HANDLING AND STORAGE

Storage Requirements: Store in dry area. Always segregate materials by major hazard class.

Special Sensitivity or Incompatibility: Avoid contact with strong acids.

Handling Precautions: Assure proper respiratory protection if dust potential exceeds PEL/TLV.

SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: When over PEL/TLV wear an approved face mask such as 3M 8511 N-95 or equivalent, to protect against silica and pneumoconiosis producing dust. Concentrations of dust that exceed the recommendations of the dust mask manufacturer will need a higher level of respiratory protection, such as a half mask respirator with appropriate dust filters.

Eye Protection: Wear safety glasses with side shields, goggles or face shield when cutting, milling or abrading to

protect eyes against dust and particulate.

Skin Protection: Under normal conditions the wearing of protective gloves and clean, body-covering clothing should be adequate.

Engineering Controls: Maintain sufficient mechanical or natural ventilation to assure dust concentrations remain below PEL/TLV. Use local exhaust if necessary. Power equipment should be equipped with properly designed dust collection devices.

SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Physical Form: Solid, off white to gray block of variable size. No characteristic odor.

Melting Point: >2300° F

Specific Gravity: 0.5 to 1.7

Solubility in Water: Insoluble

Evaporation Rate: N/Ap

SECTION X - REACTIVITY

Stability: Product is stable under normal conditions.

Hazardous Polymerization: Cannot occur.

Incompatibilities: None in designed use.

Decomposition Products: None.

Conditions to Avoid: None in designed use.

SECTION XI - TOXICOLOGICAL/ECOLOGICAL INFORMATION

LD₅₀: N/Av

LC₅₀: N/Av

Toxicological Hazards: No toxicological studies of this specific product have been performed.

Ecological Hazards: Most ingredients in this product are naturally occurring minerals. Unless contaminated in service, this product is non-hazardous to the environment.

Teratogenicity, Mutagenicity, other Reproductive Effects: None known.

SECTION XII - DISPOSAL CONSIDERATIONS

Waste Disposal Method: May be disposed in an approved landfill unless contaminated in service. If contaminated with hazardous materials, place waste in suitable container. Seal and properly label the waste container. Send the container to an approved Transportation, Storage and Disposal (TSD) facility via an approved waste hauler. Be sure manifests have been completed and an adequate "Paper trail" has been established.

SECTION XIII - TRANSPORTATION INFORMATION

US DOT Shipping Name: Not regulated **DOT Label:** None **UN/NA Number:** None

Canadian TGD Shipping Description: Not regulated as dangerous goods according to Canadian TDGA

International Dangerous Goods Information:

IMO: Not regulated as dangerous goods according to the IMDG Code.

ICAO: Not regulated as dangerous goods according to the IACO Technical Instructions.

SECTION XIV - REGULATORY INFORMATION

OSHA Status: This product is considered hazardous under OSHA criteria.

TSCA/CEPA Status: All components of this product are included in the TSCA and CEPA Chemical Inventories.

CERCLA Reportable Quantity: N/Ap

SARA Title III:

Section 302 Extremely Hazardous: This product contains no extremely hazardous substances as defined and listed in section #302

Section 311/312 Hazard Categories: Reportable as a hazardous substance. Check with your Local Emergency Planning Committee for reportable quantities.

Section 313 Toxic Chemicals: This product does not contain substances which are reportable under Section 313.

WHMIS Information: WHMIS Classification: D-2A - Material causing other toxic effects (VERY TOXIC - Chronic). This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR).

Other Regulatory Classifications:

DSCL (EEC): R36 - Irritating to eyes

R39 - Danger of very serious irreversible effects

R45 - May cause cancer

SECTION XV - APPROVALS

Reason for Issue: WHMIS 3 year update

Approval Date: June 4, 2006

Prepared by: CCG, Inc.

Supersedes Date: June 4, 2003

Revision History: Update HMIS Data, May 5, 2002;
Change to Crystalline Silica (quartz) TLV standard
(0.05 mg/m³). Removal of Product Stewardship
Information (June 4, 2003).

SECTION XVI - DISCLAIMER

As of the date of this document, the foregoing information is believed to be accurate and is provided in good faith to comply with applicable federal and state laws. However, no warranty or representation of law or fact, with respect to such information, is intended or given.