

MATERIAL SAFETY DATA SHEET

Utah Refractories Corp., LLC
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SECTION I

PRODUCT NAME: GREFCO CO MM

PRODUCT TYPE: Refractory Brick or Shape

Canadian WHMIS Classification: D,2

NFPA Rating: 1-0-0

Chemical Family: SiO₂ = 94-95% Al₂O₃ = <1%
Fe₂O₃ = <1% NaKO = <Tr%

FORMULA: NotApplicable

SECTION II PRODUCT HAZARDOUS INGREDIENTS

| <u>CHEMICAL</u> | <u>TLV-TWA</u> | <u>CAS#</u> |
|---|---|-------------|
| Cristobalite ** (SiO ₂) (60-65%) | 0.05 mg/m ³ * Respirable Dust | 14464-46-1 |
| Quartz ** (SiO ₂) (<1%) | 0.1 mg/m ³ * Respirable Dust | 14808-60-7 |
| Tridymite ** (SiO ₂) (35-38%) | 0.05 mg/m ³ * Respirable Dust | 15468-32-3 |

* Source: American Conference of Governmental Industrial Hygienists, 1997.

** Not mechanically separate from each other or other mineralogical phases in product as supplied.

SECTION III
HAZARDS INFORMATION

This product contains crystalline silica. Prolonged exposure to dust may cause silicosis, a progressive pneumoconiosis, or other respiratory diseases. The International Agency for research on Cancer (IARC) has classified crystalline silica as Group 1. The agency states there is sufficient evidence of carcinogenicity in humans. Reference: IARC Monograph 68.

Dust from product at any stage of its use or during tear-out after service may, especially on long exposure, lead to lung disease unless respiratory protection is employed. NIOSH approved respirators should be worn any time that refractories are torn out after service. While a respiratory hazard and/or nuisance dust may exist from the product itself, other foreign substances may warrant additional precautions during tearout and disposal.

SECTION IV
FIRST AID MEASURES

EFFECT OF OVEREXPOSURE:

EYES: ACUTE: Dust or chips can cause mechanical irritation.
CHRONIC: None Known

SKIN: ACUTE: Can cause cuts or abrasions.
CHRONIC: None Known

INHALATION: ACUTE: Dust, if present, may cause upper respiratory irritation.
CHRONIC: None Known

INGESTION: ACUTE: Unknown
CHRONIC: Unknown

FIRST AID MEASURES:

EYES: Flush with clean water for 15 minutes. If irritation occurs, consult physician.

SKIN: Wash with soap and water. If irritation occurs, consult physician.

INHALATION: Remove to fresh air. Seek medical attention.

INGESTION: Contact physician immediately. Do not induce vomiting unless instructed to do so by physician. Product is non-toxic as supplied, but its abrasive nature could damage internal organs.

SECTION V
FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES: None

EXTINGUISHING MEDIA: Not combustible

FIRE FIGHTING INSTRUCTIONS: No special instructions

UNUSUAL FIRE & EXPLOSION HAZARDS: None

SECTION VI
ACCIDENTAL RELEASE MEASURES

SMALL/LARGE SPILL: For broken shapes or fragments, sweep, shovel up, or pick up and place in a container for disposal.

SECTION VII
HANDLING AND STORAGE

Store in a dry place, away from extreme heat. Product is non-flammable.

SECTION VIII
EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: General mechanical ventilation is usually adequate (SECTION II).

RESPIRATORY PROTECTION: Use a NIOSH approved respirator when working around material and when removing this product after service.

EYE PROTECTION: Goggles or safety glasses with side shields should be worn.

SKIN PROTECTION:

Impervious gloves and long-sleeved and long-legged clothing should be worn to prevent skin contact.

OTHER:

Safety shoes should be worn to prevent foot injury from accidentally dropped bricks or shapes.

SECTION IX
PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|-----------------------------|-----------------|-----------------------|----------------|
| APPEARANCE: | Light Tan Solid | | |
| BOILING POINT: | Not Applicable | pH: | Not Applicable |
| SOLUBILITY IN WATER: | None | ODOR: | None |
| SPECIFIC GRAVITY: | 2.3-2.4 | MELTING POINT: | >1650° C |

SECTION X
STABILITY AND REACTIVITY

Product is stable under normal conditions of use, storage, and transportation.

Product can react with concentrated acids.

SECTION XI
TOXICOLOGICAL INFORMATION

LD₅₀ or L₅₀ for oral, dermal, or inhalation routes of administration: no data for product.

SECTION XII
ECOLOGICAL INFORMATION

Ecotoxicological/chemical fate information: not available.

SECTION XII
DISPOSAL CONSIDERATIONS

As supplied, product may be disposed of in an approved landfill, in accordance with federal, state, and local regulations.

Supplier can make no statement concerning disposal of used product, since product may become contaminated by hazardous materials during use.

SECTION XIV
TRANSPORT INFORMATION

U.S.A. DOT: Not Regulated
Canadian TDG Hazard Class & PIN: Not Regulated

SECTION XV
REGULATORY INFORMATION

TSCA Status: All Components Listed
Canadian DSL: All Components Listed
SARA Title III, Section 313: This MSDS provides the toxic chemical “**SUPPLIER INFORMATION**” required under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and 40 CFR 372. Toxic chemical information, *if applicable to the product(s) named*, is located in **Section II – HAZARDOUS INGREDIENTS** section of the MSDS. This information is subject to the toxic chemical reporting requirements of Section 313 and must be included in all MSDS’s that are copied and distributed for this product.

SECTION XVI
OTHER INFORMATION

MSDS Status: Replaces MSDS Dated 10/04/96

Note: This material safety data sheet contains confidential proprietary information and is not to be disclosed to the general public or to competition except as required by law. The information accumulated herein is believed to be accurate but is not warranted to be, whether originating with Utah Refractories Corp. LLC or not. This information is offered solely for use in your evaluation of this product in respect to safety, health, and environmental hazards.
