



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

**Material name** GROUNDING GROUT™  
**Version #** 06  
**Revision date** 01-September-2009  
**Chemical description** Powder  
**CAS #** Mixture  
**Company** CETCO  
Drilling Products Group  
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## 2. Hazards Identification

**Emergency overview** Material can be slippery when wet

**Potential health effects**

**Routes of exposure** Inhalation.

**Eyes** Dust or powder may irritate eye tissue.

**Skin** Non-irritating to the skin.

**Inhalation** Repeated or prolonged inhalation may cause toxic effects. For additional information on inhalation hazards, see Section 11 of this safety data sheet.

**Ingestion** No significant adverse effects are expected upon ingestion of the product.

**Target organs** Lungs.

**Chronic effects** This product has the potential for generation of respirable dust during handling and use. Dust may contain respirable crystalline silica. Overexposure to dust may result in pneumoconiosis, a respiratory disease caused by inhalation of mineral dust, which can lead to fibrotic changes to the lung tissue, or silicosis, a respiratory disease caused by inhalation of silica dust, which can lead to inflammation and fibrosis of the lung tissue. Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

## 3. Composition / Information on Ingredients

| Components   | CAS #       | Percent  |
|--|-------------|----------|
| TRADE SECRET   | Proprietary | 2.5 - 10 |
| Non-hazardous and other components below reportable levels |             | > 90     |

**Composition comments** This product contains naturally occurring crystalline silica (not listed in Annex I of Directive 67/548/EEC) in quantities less than 6%.

## 4. First Aid Measures

**First aid procedures**

**Eye contact** Flush eyes immediately with large amounts of water. Get medical attention if irritation develops or persists.

**Skin contact** No special measures required. Get medical attention if irritation develops or persists.

**Inhalation** If symptoms are experienced, remove source of contamination or move victim to fresh air. If the affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. Call a physician if symptoms develop or persist.

**Ingestion** No special measures required. If ingestion of a large amount does occur, seek medical attention.

**Notes to physician** Provide general supportive measures and treat symptomatically.

## 5. Fire Fighting Measures

**Flammable properties** None known.

**Extinguishing media****Suitable extinguishing media**

Use any media suitable for the surrounding fires. Dry chemical, CO2, water spray or regular foam.

**Protection of firefighters****Protective equipment and precautions for firefighters**

Material can be slippery when wet

**Hazardous combustion products**

None known.

**6. Accidental Release Measures****Personal precautions**

Material can be slippery when wet. Wear a dust mask if dust is generated above exposure limits.

**Environmental precautions**

No special environmental precautions required.

**Methods for containment**

None necessary.

**Methods for cleaning up**

Avoid the generation of dusts during clean-up. Collect dust or particulates using a vacuum cleaner with a HEPA filter. Reduce airborne dust and prevent scattering by moistening with water.

**7. Handling and Storage****Handling**

Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. In case of insufficient ventilation, wear suitable respiratory equipment.

**Storage**

Guard against dust accumulation of this material. No special storage conditions required. No special restrictions on storage with other products.

**8. Exposure Controls / Personal Protection****Occupational exposure limits****ACGIH****Components****Type****Value****Form**

TRADE SECRET (Proprietary)

TWA

10 mg/m3

**Constituents****Type****Value****Form**

INERT OR NUISANCE DUST (SEQ250)

TWA

10 mg/m3

Inhalable particles.  
Respirable particles.  
Respirable fraction.

QUARTZ (14808-60-7)

TWA

0.025 mg/m3

**U.S. - OSHA****Components****Type****Value****Form**

TRADE SECRET (Proprietary)

PEL

5 mg/m3

Respirable fraction.  
Total dust.

TWA

15 mg/m3

50 mppcf

5 mg/m3

10 mg/m3

Respirable fraction.  
Total dust.**Constituents****Type****Value****Form**

INERT OR NUISANCE DUST (SEQ250)

PEL

15 mg/m3

Total dust.  
Respirable fraction.  
Total dust.  
Respirable fraction.  
Respirable fraction.

TWA

5 mg/m3

15 mg/m3

5 mg/m3

15 mppcf

50 mppcf

QUARTZ (14808-60-7)

TWA

0.1 mg/m3

0.1 mg/m3

0.3 mg/m3

2.4 mppcf

Respirable.  
Respirable dust.  
Total dust.  
Respirable.**Exposure guidelines**

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

**Engineering controls**

If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL, suitable respiratory protection must be worn.

## Personal protective equipment

|                                       |   |
|---------------------------------------|---|
| <b>Eye / face protection</b>          | Wear dust goggles.  |
| <b>Skin protection</b>                | No special protective equipment required.   |
| <b>Respiratory protection</b>         | Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit. |
| <b>General hygiene considerations</b> | Eye wash fountain is recommended. Use good industrial hygiene practices in handling this material.            |

## 9. Physical & Chemical Properties

|   |                              |
|---|------------------------------|
| <b>Appearance</b>                                     | Not available.               |
| <b>Color</b>  | Various.                     |
| <b>Odor</b>   | None.                        |
| <b>Odor threshold</b>                                 | Not available.               |
| <b>Physical state</b>                                 | Solid.                       |
| <b>Form</b>   | Powder.                      |
| <b>pH</b>   | 7 - 9                        |
| <b>Melting point</b>                                  | 1630.4 °F (888 °C) estimated |
| <b>Freezing point</b>                                 | Not available.               |
| <b>Boiling point</b>                                  | Not available.               |
| <b>Flash point</b>                                    | Non-flammable                |
| <b>Evaporation rate</b>                               | Not available.               |
| <b>Flammability</b>                                   | Not available.               |
| <b>Flammability limits in air, upper, % by volume</b> | Non-explosive                |
| <b>Flammability limits in air, lower, % by volume</b> | Non-explosive                |
| <b>Vapor pressure</b>                                 | 0 hPa estimated              |
| <b>Vapor density</b>                                  | Not available.               |
| <b>Specific gravity</b>                               | 0.1335 estimated             |
| <b>Relative density</b>                               | 0.1335 lb/cu ft estimated    |
| <b>Solubility (water)</b>                             | Negligible                   |
| <b>Partition coefficient (n-octanol/water)</b>        | Not available.               |
| <b>Auto-ignition temperature</b>                      | Not available.               |
| <b>Decomposition temperature</b>                      | Not available.               |
| <b>VOC</b>  | 0 % estimated                |
| <b>Percent volatile</b>                               | 0 % estimated                |

## 10. Chemical Stability & Reactivity Information

|   |                              |
|---|------------------------------|
| <b>Chemical stability</b>                 | Stable at normal conditions. |
| <b>Conditions to avoid</b>                | None known.                  |
| <b>Incompatible materials</b>             | None known.                  |
| <b>Hazardous decomposition products</b>   | None known.                  |
| <b>Possibility of hazardous reactions</b> | Will not occur.              |

## 11. Toxicological Information

### Toxicological data

#### Product

GROUNDING GROUT™ (Mixture)

#### Test Results

Acute Inhalation LC50 Rat: 27 mg/l/4h  
Acute Oral LD50 Mouse: 70667 mg/kg estimated  
Acute Oral LD50 Rat: 5042 mg/kg

| Product                    | Test Results                                 |
|----------------------------|--|
| GROUNDING GROUT™ (Mixture) | Acute Other LD50 Mouse: 1573 mg/kg estimated |

\* Estimates for product may be based on additional component data not shown.

**Chronic effects** In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.)

In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003)

According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

### Carcinogenicity

**IARC Monographs: Overall evaluation**

QUARTZ (14808-60-7) 1 Carcinogenic to humans.

**US ACGIH Threshold Limit Values: A2 carcinogen**

QUARTZ (14808-60-7) Group A2 Suspected human carcinogen.

**US NTP Report on Carcinogens: Known carcinogen**

QUARTZ (14808-60-7) Known carcinogen.

## 12. Ecological Information

### Ecotoxicological data

| Product                    | Test Results  |
|----------------------------|---|
| GROUNDING GROUT™ (Mixture) | EC50 Daphnia: 63420 mg/l 48.00 Hours estimated<br>LC50 Fish: 18577 mg/l 96.00 Hours estimated |

\* Estimates for product may be based on additional component data not shown.

**Ecotoxicity** This material is not expected to be harmful to aquatic life.

**Environmental effects** Based on the physical properties of this product, significant environmental persistence and bioaccumulation would not be expected.

**Persistence and degradability** Not available.

## 13. Disposal Considerations

**Disposal instructions** Dispose in accordance with all applicable regulations. Material should be recycled if possible.

## 14. Transport Information

**DOT**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

## 15. Regulatory Information

**US federal regulations** OSHA Process Safety Standard: This material is not known to be hazardous by the OSHA Highly Hazardous Process Safety Standard, 29 CFR 1910.119.

**CERCLA (Superfund) reportable quantity**

None

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
 Delayed Hazard - Yes  
 Fire Hazard - No  
 Pressure Hazard - No  
 Reactivity Hazard - No

**Section 302 extremely hazardous substance** No

**Section 311 hazardous chemical** Yes

**Inventory status**

| Country(s) or region        | Inventory name  | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| Australia                   | Australian Inventory of Chemical Substances (AICS)                | Yes                    |
| Canada                      | Domestic Substances List (DSL)                                    | Yes                    |
| Canada                      | Non-Domestic Substances List (NDSL)                               | No                     |
| China                       | Inventory of Existing Chemical Substances in China (IECSC)        | Yes                    |
| Europe                      | European Inventory of New and Existing Chemicals (EINECS)         | Yes                    |
| Europe                      | European List of Notified Chemical Substances (ELINCS)            | No                     |
| Japan                       | Inventory of Existing and New Chemical Substances (ENCS)          | Yes                    |
| Korea                       | Existing Chemicals List (ECL)                                     | Yes                    |
| New Zealand                 | New Zealand Inventory   | Yes                    |
| Philippines                 | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | No                     |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                     | Yes                    |

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

**State regulations** WARNING: This product contains a chemical known to the State of California to cause cancer.

**US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance**

QUARTZ (14808-60-7) Listed.

**US - California Proposition 65 - CRT: Listed date/Carcinogenic substance**

QUARTZ (14808-60-7) Listed: October 1, 1988 Carcinogenic.

**US - Pennsylvania RTK - Hazardous Substances: Listed substance**

QUARTZ (14808-60-7) Listed.

TRADE SECRET (Proprietary) Listed.

**16. Other Information****Further information**

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

**Recommended restrictions**

Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

**HMIS ratings**

|                     |   |   |
|---------------------|---|---|
| HEALTH              | * | 1 |
| FLAMMABILITY        |   | 0 |
| PHYSICAL HAZARD     |   | 0 |
| PERSONAL PROTECTION |   |   |

**NFPA ratings**

Health: 1  
 Flammability: 0  
 Instability: 0

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user's responsibility to verify the suitability and completeness of such information for each particular use.

Third party materials: Insofar as materials not manufactured or supplied by this manufacturer are used in conjunction with, or instead of this product, it is the responsibility of the customer to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of this product in conjunction with materials from another supplier.

**Issue date**

01-September-2009

**This data sheet contains changes from the previous version in section(s):**

Composition / Information on Ingredients: Disclosure Overrides