MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name **BENTOGROUT®**

Version # 11

Revision date 08-April-2011

Manufacturer information

CETCO
Building Materials Group
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http://www.cetco.com/
General Information (800) 527-9948
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2. Hazards Identification

Potential health effects

Routes of exposure Inhalation.

Eyes Dust or powder may irritate eye tissue. Symptoms include itching, burning, redness and tearing.

Skin This product may cause irritation to the skin. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Inhalation Inhalation of dusts may cause respiratory irritation. 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 pneumocononiosis, 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

Hazardous components	CAS #	Percent
BENTONITE	1302-78-9	60 - 100
SODIUM ACID PYROPHOSPHATE	7758-16-9	1 - 5

Non-hazardous components	CAS #	Percent
TRADE SECRET	Proprietary	1 - 5

Composition comments Bentonite contains naturally occurring crystalline silica (not listed in Annex I of Directive 67/548/EEC) in quantities less than 6%. Occupational Exposure Limits for impurities are listed in Section 8.

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, CO_2, water spray or regular foam.

Protection of firefighters

Protective equipment for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Fire fighting equipment/instructions Not available.

Explosion data

Sensitivity to static discharge Not available.

Sensitivity to mechanical impact Not available.

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

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
TRADE SECRET (Proprietary)	STEL	10.0000 mg/m3	Respirable dust and/or fume.
	TWA	3.0000 mg/m3	Respirable dust and/or fume.
		10.0000 mg/m3	Inhalable fume.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Impurities	Type	Value	Form
INERT OR NUISANCE DUSTS (SEQ250)	TWA	10.0000 mg/m3	Total dust.
		3.0000 mg/m3	Respirable fraction.
QUARTZ (14808-60-7)	TWA	0.0250 mg/m3	Respirable fraction.

Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
TRADE SECRET (Proprietary)	TWA	10.0000 mg/m3	Inhalable

Canada. Ontario OELs. (Ministry of Labor - Control of Exposure to Biological or Chemical Agents)

Impurities	Type	Value	Form
INERT OR NUISANCE DUSTS (SEQ250)	TWA	10.0000 mg/m3	Inhalable particulate.
		3.0000 mg/m3	Respirable particles.
QUARTZ (14808-60-7)	TWA	0.1000 mg/m3	Respirable fraction.

Canada. Quebec OELS. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
TRADE SECRET (Proprietary)	TWA	10.0000 mg/m3	Fume.

Canada. Quebec OELS. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Impurities	Type	Value	Form
INERT OR NUISANCE DUSTS (SEQ250)	TWA	10.0000 mg/m3	Total dust.
QUARTZ (14808-60-7)	TWA	0.1000 mg/m3	Respirable dust.

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

Eye / face protection Wear dust goggles.

Skin protection No special protective equipment required.

Respiratory protection Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.

9. Physical & Chemical Properties

Appearance Not available.

Physical state Solid.

Form Powder.

Color Various.

Odor None.

Odor threshold Not available.

pH 7 - 9

Vapor density Not available.

Boiling point Not available.

Melting point/Freezing point Not available.

Solubility (water) Negligible

Relative density Not available.

Flash point Not flammable

Flammability limits in air, upper, % by volume Not explosive

Flammability limits in air, lower, % by volume Not explosive

Auto-ignition temperature Not available.

VOC 0 % estimated

Percent volatile 0 % estimated

10. Chemical Stability & Reactivity Information

Chemical stability Stable at normal conditions.

Conditions to avoid None known.

Incompatible materials None known.

Hazardous decomposition products	None known.
Possibility of hazardous reactions	Will not occur.

11. Toxicological Information

Toxicological data

Product	Test Results
BENTOGROUT®	Acute Inhalation LC50 Rat: 14.5 mg/l/4h Acute Oral LD50 Mouse: 88333.3 mg/kg estimated Acute Oral LD50 Rat: 60000 mg/kg estimated Acute Other LD50 Mouse: 1966.67 mg/kg estimated

Components	Test Results
SODIUM ACID PYROPHOSPHATE (7758-16-9)	Acute Inhalation LC50 Rat: 0.5801 mg/l/4h Acute Oral LD50 Mouse: 2650 mg/kg Acute Oral LD50 Rat: 1800 mg/kg Acute Other LD50 Mouse: 59 mg/kg

Impurities	Test Results
QUARTZ (14808-60-7)	Acute Oral LD50 Rat: 500 mg/kg

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 of Carcinogenicity

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

12. Ecological Information

Ecotoxicological data

Product	Test Results
BENTOGROUT®	LC50 Fish: 19895.3 mg/l 96.00 hours estimated

Components	Test Results
BENTONITE (1302-78-9)	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss): 19000 mg/l 96.00 hours

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

TDG

Not regulated as dangerous goods.

15. Regulatory Information

WHMIS status Controlled

WHMIS classification D2A - Other Toxic Effects-VERY TOXIC
D2B - Other Toxic Effects-TOXIC

WHMIS labeling

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 Existing Commercial Chemical Substances (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)	Yes
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)

16. Other Information

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.

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

HMIS® ratings Health: 1*
Flammability: 0
Physical hazard: 0

NFPA ratings Health: 1
Flammability: 0
Instability: 0

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This data sheet contains changes from the previous version in section(s):	Product and Company Identification: Alternate Trade Names Composition / Information on Ingredients: Disclosure Overrides