



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name MEDIUM CHIPS
Version # 07
Revision date 30-March-2011
Chemical name Bentonite
Chemical description Smectite Clay
Manufacturer information CETCO
Drilling Products Group
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safetydata@amcol.com
<http://www.cetco.com/>
General Information (800) 527-9948
CHEMTREC® (800) 424-9300

2. Hazards Identification

Emergency overview Material can be slippery when wet

Potential health effects

Routes of exposure Inhalation. Eye contact.

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

The manufacturer lists no ingredients as hazardous according to OSHA 29 CFR 1910.1200.

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, CO₂, water spray or regular foam.

Protection of firefighters**Protective equipment and precautions 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

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****US. ACGIH Threshold Limit Values**

Impurities	Type	Value	Form
INERT OR NUISANCE DUSTS (SEQ250)	TWA	10.0000 mg/m ³	Inhalable particles.
QUARTZ (14808-60-7)	TWA	3.0000 mg/m ³	Respirable particles.
		0.0250 mg/m ³	Respirable fraction.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Impurities	Type	Value	Form
INERT OR NUISANCE DUSTS (SEQ250)	PEL	15.0000 mg/m ³	Total dust.
		5.0000 mg/m ³	Respirable fraction.
	TWA	5.0000 mg/m ³	Respirable fraction.
		15.0000 mg/m ³	Total dust.
		50.0000 mppcf	Total dust.
		15.0000 mppcf	Respirable fraction.
QUARTZ (14808-60-7)	TWA	0.3000 mg/m ³	Total dust.
		2.4000 mppcf	Respirable.
		0.1000 mg/m ³	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**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.

General hygiene considerations

Eye wash fountain is recommended. Use good industrial hygiene practices in handling this material.

9. Physical & Chemical Properties

Appearance	Not available.
Physical state	Solid.
Form	Pellets. Chips. Tablet.
Color	Various.
Odor	None.
Odor threshold	Not available.
pH	7 - 9
Vapor pressure	0 hPa estimated
Vapor density	Not available.
Boiling point	Not available.
Melting point/Freezing point	Not available.
Solubility (water)	Negligible
Specific gravity	Not available.
Relative density	Not available.
Flash point	Non-flammable
Flammability limits in air, upper, % by volume	Non-explosive
Flammability limits in air, lower, % by volume	Non-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

Impurities

QUARTZ (14808-60-7)

Test Results

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

ACGIH Carcinogens

QUARTZ (CAS 14808-60-7)

A2 Suspected human carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

QUARTZ (CAS 14808-60-7)

1 Carcinogenic to humans.

US NTP Report on Carcinogens: Known carcinogen

QUARTZ (CAS 14808-60-7)

Known carcinogen.

12. Ecological Information

Ecotoxicological data

Product

Test Results

MEDIUM CHIPS

LC50 Fish: 19000 mg/l 96.00 hours estimated

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.

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.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2))

Not regulated

DEA Essential Chemical Code Number

Not regulated

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated

DEA Exempt Chemical Mixtures Code Number

Not regulated

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

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)	No
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)

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

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

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

US - Pennsylvania RTK - Hazardous Substances: Listed substance

QUARTZ (CAS 14808-60-7) Listed.

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

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 information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. 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. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Issue date

30-March-2011

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

Composition / Information on Ingredients: Disclosure Overrides