



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name CETCO TH-7 Bentonite
Version # 08
Revision date 23-January-2012
Chemical description Modified Bentonite
CAS # Mixture
Manufacturer information CETCO
Remediation Technology
2870 Forbs Avenue
Hoffman Estates, IL 60192 United States
www.cetco.com
General Information (800) 527-9948
Emergency (800) 424-9300

2. Hazards Identification

Emergency overview Material can be slippery when wet. Exposure to powder or dusts may be irritating to eyes, nose and throat.

Potential health effects

Routes of exposure Inhalation. Skin contact. Eye contact.

Eyes Dust in the eyes will cause irritation. Symptoms include itching, burning, redness and tearing.

Skin Dust or powder may irritate the skin. May cause skin irritation.

Inhalation Dust may irritate respiratory system. 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 May cause irritation. 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 respirable dust 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.

Constituents	CAS #	Percent
QUARTZ	14808-60-7	<= 5

Composition comments Occupational Exposure Limits for constituents are listed in Section 8. This product contains <5% total crystalline silica. The respirable crystalline silica as determined by the SWeRF method is <0.1% w/w. Details about the SWeRF method are available at www.crystallinesilica.eu.

4. First Aid Measures

First aid procedures

Eye contact Get medical attention if irritation persists after washing. Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Continue flushing during transport to hospital. Take along these instructions.

Skin contact Wash the skin immediately with soap and water. Get medical attention if irritation develops or persists.

Inhalation If dust from the material is inhaled, remove the affected person immediately to fresh air. 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 If ingestion of a large amount does occur, seek medical attention. No special measures required.
Notes to physician Provide general supportive measures and treat symptomatically.
General advice If you feel unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Flammable properties The product is not flammable. No unusual fire or explosion hazards noted. This material will not burn.

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

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. Material can be slippery when wet.

Fire fighting equipment/instructions In the event of fire, cool tanks with water spray. Material can be slippery when wet..

Specific methods Cool containers exposed to flames with water until well after the fire is out.

Hazardous combustion products None known.

6. Accidental Release Measures

Personal precautions Keep unnecessary personnel away. Local authorities should be advised if significant spillages cannot be contained. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Avoid inhalation of dust from the spilled material. Material can be slippery when wet. Material can be slippery when wet. Forms smooth, slippery surfaces on floors, posing an accident risk.

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Runoff from fire control or dilution water may cause pollution. Do not contaminate water. Do not flush into surface water or sanitary sewer system.

Methods for containment If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Block any potential routes to water systems.

Methods for cleaning up Should not be released into the environment. This product is miscible in water. Collect dust using a vacuum cleaner equipped with HEPA filter. Collect dust or particulates using a vacuum cleaner with a HEPA filter. Avoid the generation of dusts during clean-up. Following product recovery, flush area with water. For waste disposal, see section 13 of the MSDS. Reduce airborne dust and prevent scattering by moistening with water.

7. Handling and Storage

Handling Avoid dust formation. Do not breathe dust from this material. In case of insufficient ventilation, wear suitable respiratory equipment. Provide appropriate exhaust ventilation at places where dust is formed. Guard against dust accumulation of this material. Avoid contact with skin and eyes. Avoid release to the environment. Handle and open container with care. Practice good housekeeping. Material can be slippery when wet. Forms smooth, slippery surfaces on floors, posing an accident risk.

Storage No special restrictions on storage with other products. Store in a well-ventilated place. Keep container tightly closed. Avoid dust formation. No special storage conditions required. Guard against dust accumulation of this material. Use care in handling/storage.

8. Exposure Controls / Personal Protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Constituents	Type	Value	Form
INERT OR NUISANCE DUSTS (SEQ250)	TWA	3 mg/m3	Respirable particles.
QUARTZ (14808-60-7)	TWA	10 mg/m3 0.025 mg/m3	Inhalable particles. Respirable fraction.

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

Constituents	Type	Value	Form
INERT OR NUISANCE DUSTS (SEQ250)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Constituents	Type	Value	Form
INERT OR NUISANCE DUSTS (SEQ250)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
		0.3 mg/m3	Total dust.
QUARTZ (14808-60-7)	TWA	0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.

Exposure guidelines	Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.
Engineering controls	Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing. 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	Wear respirator with dust filter. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.
General hygiene considerations	Do not breathe dust. Avoid contact with eyes. Handle in accordance with good industrial hygiene and safety practice. Eye wash fountain is recommended. Use good industrial hygiene practices in handling this material.

9. Physical & Chemical Properties

Appearance	Powder.
Physical state	Solid.
Form	Powder. Various.
Color	Various.
Odor	None.
Odor threshold	Not available.
pH	5.5 - 6.5
Vapor pressure	0.00003251 hPa estimated
Vapor density	Not available.
Boiling point	Not available.
Melting point/Freezing point	1630.4 °F (888 °C) estimated
Solubility (water)	Not available.
Specific gravity	3.15400096 estimated
Relative density	Not available.
Flash point	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Auto-ignition temperature	Not available.
VOC	0 % estimated
Percent volatile	0 % estimated
Other data	
Density	3.15368556 g/cm3 estimated

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Avoid spread of dust. None known.
Incompatible materials	None known.
Hazardous decomposition products	Toxic gas. None known.
Possibility of hazardous reactions	Will not occur. Hazardous polymerization does not occur.

11. Toxicological Information

Toxicological data

Constituents	Test Results
QUARTZ (14808-60-7)	Acute Oral LD50 Rat: 500 mg/kg
Acute effects	Dust in the eyes will cause irritation. May cause skin irritation.
Local effects	Inhalation of dusts may cause respiratory irritation.
Chronic effects	<p>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.)</p> <p>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)</p> <p>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.</p>

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 To Be Human Carcinogen.

12. Ecological Information

Ecotoxicity	Components of this product are hazardous to aquatic life. No data available for this product.
Environmental effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations. Material should be recycled if possible.
Waste from residues / unused products	Not applicable.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport Information

DOT

Not regulated as dangerous goods.

DOT

Packages less than 83 lbs

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.

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)	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 - CRT: Listed date/Carcinogenic substance

QUARTZ (CAS 14808-60-7)

Listed: October 1, 1988 Carcinogenic.

US - New Jersey RTK - Substances: Listed substance

QUARTZ (CAS 14808-60-7)

Listed.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

QUARTZ (CAS 14808-60-7)

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. HMIS® is a registered trade and service mark of the NPCA.

HMIS® ratings

Health: 1*
Flammability: 0
Physical hazard: 0
Personal protection:

NFPA ratings

Health: 1
Flammability: 0
Instability: 0

Disclaimer

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Issue date

07-November-2008

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

Product and Company Identification: Product and Company Identification
Composition / Information on Ingredients: Composition comments