

# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>CETCO® TABLETS - 1/4</b>
<b>Other means of identification</b>	
<b>CAS number</b>	1302-78-9
<b>Synonyms</b>	SMECTITE * BENTONITE * MONTMORILLONITE
<b>Recommended use</b>	Bentonite has a variety of uses. It can be used as a rheology modifier, binding agent, adsorbent, hydraulic-barrier, and filler.
<b>Recommended restrictions</b>	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.

### Manufacturer/Importer/Supplier/Distributor information

#### Manufacturer

<b>Company name</b>	CETCO, an MTI Company	
<b>Address</b>	2870 Forbs Avenue Hoffman Estates, IL 60192 United States	
<b>Telephone</b>	General Information	800 527-9948
<b>Website</b>	<a href="http://www.cetco.com/">http://www.cetco.com/</a>	
<b>E-mail</b>	<a href="mailto:safetydata@mineralstech.com">safetydata@mineralstech.com</a>	
<b>Emergency phone number</b>	Emergency	1.866.519.4752/1 760 476 3962
<b>Americas</b>	1.866.519.4752 (US, Canada, Mexico) 1 760 476 3962	

## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Carcinogenicity	Category 1A
	Specific target organ toxicity, repeated exposure	Category 1
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	

#### Label elements



<b>Signal word</b>	Danger	
<b>Hazard statement</b>	May cause cancer. Causes damage to organs through prolonged or repeated exposure.	
<b>Precautionary statement</b>		
<b>Prevention</b>	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection.	
<b>Response</b>	If exposed or concerned: Get medical advice/attention.	
<b>Storage</b>	Store locked up.	
<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.	
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.	
<b>Supplemental information</b>	None.	

## 3. Composition/information on ingredients

#### Substances

Material name: CETCO® TABLETS - 1/4

5267 Version #: 20 Revision date: 26-September-2018 Issue date: 19-November-2015

Chemical name	Common name and synonyms	CAS number	%
Bentonite	SMECTITE BENTONITE MONTMORILLONITE	1302-78-9	100

#### Constituents

Chemical name	Common name and synonyms	CAS number	%
QUARTZ (SIO <sub>2</sub> )		14808-60-7	<= 8
CRISTOBALITE		14464-46-1	<= 2

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

**Composition comments** Occupational Exposure Limits for constituents are listed in Section 8. Bentonite is composed mainly of smectite group minerals but the composition is varied, as expected for a UVCB substance, and other mineral constituents will be present in small and varying amounts. These minor constituents are not relevant for classification and labelling. The purity of the product is 100% w/w. Impurities are not applicable for a UVCB substance.

## 4. First-aid measures

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist. No specific first aid measures noted.

**Skin contact** Get medical attention if irritation develops and persists. No specific first aid measures noted.

**Eye contact** No specific first aid measures noted. Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.

**Ingestion** No specific first aid measures noted.

**Most important symptoms/effects, acute and delayed** Dust in the eyes will cause irritation. Dusts may irritate the respiratory tract, skin and eyes. Prolonged exposure may cause chronic effects.

**Indication of immediate medical attention and special treatment needed** Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

**General information** IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. No hazards which require special first aid measures. Provide general supportive measures and treat symptomatically.

## 5. Fire-fighting measures

**Suitable extinguishing media** Use any media suitable for the surrounding fires.

**Unsuitable extinguishing media** Not applicable, non-combustible.

**Specific hazards arising from the chemical** None known. The product itself does not burn.

**Special protective equipment and precautions for firefighters** Material can be slippery when wet.

**Fire fighting equipment/instructions** Use water spray to cool unopened containers.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

**General fire hazards** No unusual fire or explosion hazards noted. This material will not burn.

## 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Material can be slippery when wet. Wear appropriate protective equipment and clothing during clean-up. Do not breathe dust. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS. No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.

**Methods and materials for containment and cleaning up**

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect dust using a vacuum cleaner equipped with HEPA filter. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS. Collect powder using special dust vacuum cleaner with particle filter or carefully sweep into closed container.

**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage****Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. In case of insufficient ventilation, wear suitable respiratory equipment. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities**

Store locked up. No special restrictions on storage with other products. Store in a dry area. Keep the container dry. Store in tightly closed container. Store in a well-ventilated place. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS).

**8. Exposure controls/personal protection****Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Constituents	Type	Value	Form
CRISTOBALITE (CAS 14464-46-1)	PEL	0.05 mg/m <sup>3</sup>	Respirable dust.
QUARTZ (SiO <sub>2</sub> ) (CAS 14808-60-7)	PEL	0.05 mg/m <sup>3</sup>	Respirable dust.

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

Constituents	Type	Value	Form
INERT OR NUISANCE DUSTS	TWA	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
CRISTOBALITE (CAS 14464-46-1)	TWA	0.05 mg/m <sup>3</sup>	Respirable.
		1.2 mppcf	Respirable.
QUARTZ (SiO <sub>2</sub> ) (CAS 14808-60-7)	TWA	0.1 mg/m <sup>3</sup>	Respirable.
		2.4 mppcf	Respirable.

**US. ACGIH Threshold Limit Values**

Constituents	Type	Value	Form
CRISTOBALITE (CAS 14464-46-1)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.
QUARTZ (SiO <sub>2</sub> ) (CAS 14808-60-7)	TWA	0.025 mg/m <sup>3</sup>	Respirable fraction.

**US. NIOSH: Pocket Guide to Chemical Hazards**

Constituents	Type	Value	Form
CRISTOBALITE (CAS 14464-46-1)	TWA	0.05 mg/m <sup>3</sup>	Respirable dust.
QUARTZ (SiO <sub>2</sub> ) (CAS 14808-60-7)	TWA	0.05 mg/m <sup>3</sup>	Respirable dust.

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

<b>Appropriate engineering controls</b>	If engineering measures are not sufficient to maintain concentrations of dust/particulates below the OEL, suitable respiratory protection must be worn. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. 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.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Chemical respirator with organic vapor cartridge, full facepiece, dust and mist filter. Applicable for industrial settings only. Wear dust-resistant safety goggles where there is danger of eye contact.
<b>Skin protection</b>	
<b>Hand protection</b>	Wear appropriate chemical resistant gloves. Applicable for industrial settings only. No protection is ordinarily required under normal conditions of use.
<b>Other</b>	Use of an impervious apron is recommended. Normal work clothing (long sleeved shirts and long pants) is recommended. Applicable for industrial settings only.
<b>Respiratory protection</b>	Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Chemical respirator with organic vapor cartridge, full facepiece, dust and mist filter. Applicable for industrial settings only.
<b>Thermal hazards</b>	Not applicable.
<b>General hygiene considerations</b>	Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Use good industrial hygiene practices in handling this material.

## 9. Physical and chemical properties

<b>Appearance</b>	Tablet. Pellets.
<b>Physical state</b>	Solid.
<b>Form</b>	Solid. Tablet.
<b>Color</b>	Various.
<b>Odor</b>	None.
<b>Odor threshold</b>	Not applicable.
<b>pH</b>	8.5 - 11
<b>Melting point/freezing point</b>	> 842 °F (> 450 °C) / Not applicable.
<b>Initial boiling point and boiling range</b>	Not applicable.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	This product is not flammable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not applicable.
<b>Flammability limit - upper (%)</b>	Not applicable.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not applicable.
<b>Vapor density</b>	Not applicable.
<b>Relative density</b>	2.6 g/cm <sup>3</sup>
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	< 0.9 mg/l
<b>Partition coefficient (n-octanol/water)</b>	Not applicable. Not applicable.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	> 932 °F (> 500 °C)

Viscosity	Not applicable.
Viscosity temperature	Not applicable.
<b>Other information</b>	
Bulk density	0.9 - 1.4 g/cm <sup>3</sup>
Explosive limit	Not applicable.
Explosive properties	Not explosive. Not explosive
Explosivity	Not applicable.
Flame extension	Not applicable.
Flammability	Not applicable.
Flammability (flash back)	Not applicable.
Flammability (Heat of combustion)	Not applicable.
Flammability (Train fire)	Not applicable.
Flammability class	Not applicable.
Flash point class	Not flammable
Molecular formula	UVCB Substance
Molecular weight	Not applicable.
Oxidizing properties	Not oxidizing. None.
Percent volatile	0 %
pH in aqueous solution	8.5 - 11
Specific gravity	Not applicable.
VOC	CARB 0 %

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Stable at normal conditions.
<b>Possibility of hazardous reactions</b>	Will not occur.
<b>Conditions to avoid</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Moisture. Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.
<b>Incompatible materials</b>	None known.
<b>Hazardous decomposition products</b>	None.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Dust may irritate respiratory system.
<b>Skin contact</b>	Dust or powder may irritate the skin.
<b>Eye contact</b>	Dust in the eyes will cause irritation.
<b>Ingestion</b>	Not classified.

**Symptoms related to the physical, chemical and toxicological characteristics** Dusts may irritate the respiratory tract, skin and eyes. None known.

### Information on toxicological effects

**Acute toxicity** Not classified. Not known.

Product	Species	Test Results
Bentonite (CAS 1302-78-9)		
<u>Acute</u>		
<b>Inhalation</b>		
<i>Dust</i>		
LC50	Rat	> 5.27 mg/l, 4 hr OECD 436

Product	Species	Test Results
Oral Dust LD50	Rat	> 2000 mg/kg OECD 425
Constituents	Species	Test Results

CRISTOBALITE (CAS 14464-46-1)

**Acute**

**Oral**

LD50 Rat > 22500 mg/kg

**Skin corrosion/irritation** Not classified.

**Serious eye damage/eye irritation** Not classified. Mild irritant to eyes (according to the modified Kay & Calandra criteria)

**Respiratory or skin sensitization**

**Respiratory sensitization** Not classified.

**Skin sensitization** Not classified.

**Germ cell mutagenicity** Not classified.

**Carcinogenicity**

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. May cause cancer. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled. This product contains <10% total crystalline silica. The respirable crystalline silica as determined by the SWeRF method is <1% w/w.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

CRISTOBALITE (CAS 14464-46-1) 1 Carcinogenic to humans.

QUARTZ (SiO<sub>2</sub>) (CAS 14808-60-7) 1 Carcinogenic to humans.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

CRISTOBALITE (CAS 14464-46-1) Cancer

QUARTZ (SiO<sub>2</sub>) (CAS 14808-60-7) Cancer

**US. National Toxicology Program (NTP) Report on Carcinogens**

CRISTOBALITE (CAS 14464-46-1) Known To Be Human Carcinogen.  
Reasonably Anticipated to be a Human Carcinogen.

QUARTZ (SiO<sub>2</sub>) (CAS 14808-60-7) Known To Be Human Carcinogen.

**Reproductive toxicity** Not classified.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Causes damage to organs through prolonged or repeated exposure.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Causes damage to organs through prolonged or repeated exposure.

**12. Ecological information**

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Product	Species	Test Results
Bentonite (CAS 1302-78-9)		
<b>Aquatic</b>		
Algae	EC50	Freshwater algae > 100 mg/l, 72 hours
Crustacea	EC50	Coon stripe shrimp ( <i>Pandalus danae</i> ) 24.8 mg/l, 96 hours
		Daphnia > 100 mg/l, 48 hours
		Dungeness or edible crab ( <i>Cancer magister</i> ) 81.6 mg/l, 96 hours

Product	Species	Test Results
Fish	LC50	Freshwater fish 16000 mg/l, 96 hours
		Marine water fish 2800 - 3200 mg/l, 24 hours

<b>Persistence and degradability</b>	Not relevant for inorganic substances
<b>Bioaccumulative potential</b>	Will not bio-accumulate.
<b>Mobility in soil</b>	Bentonite is almost insoluble and thus presents a low mobility in most soils.
<b>Mobility in general</b>	The product has poor water-solubility.
<b>Other adverse effects</b>	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

### 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Store containers and offer for recycling of material when in accordance with the local regulations.

### 14. Transport information

<b>DOT</b>	Not regulated as dangerous goods.
<b>IATA</b>	Not regulated as dangerous goods.
<b>IMDG</b>	Not regulated as dangerous goods.
<b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	Not applicable.

### 15. Regulatory information

<b>US federal regulations</b>	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
<b>TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)</b>	Not regulated.
<b>CERCLA Hazardous Substance List (40 CFR 302.4)</b>	Not listed.
<b>SARA 304 Emergency release notification</b>	Not regulated.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)</b>	
CRISTOBALITE (CAS 14464-46-1)	Cancer
QUARTZ (SIO2) (CAS 14808-60-7)	Cancer
CRISTOBALITE (CAS 14464-46-1)	lung effects
QUARTZ (SIO2) (CAS 14808-60-7)	lung effects
CRISTOBALITE (CAS 14464-46-1)	immune system effects
QUARTZ (SIO2) (CAS 14808-60-7)	immune system effects
CRISTOBALITE (CAS 14464-46-1)	kidney effects
QUARTZ (SIO2) (CAS 14808-60-7)	kidney effects
<b>Superfund Amendments and Reauthorization Act of 1986 (SARA)</b>	
<b>SARA 302 Extremely hazardous substance</b>	Not listed.
<b>SARA 313 (TRI reporting)</b>	Not regulated.

## Other federal regulations

### Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

### Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**Food and Drug Administration (FDA)** Total food additive  
Direct food additive  
GRAS food additive

## US state regulations

### California Proposition 65



**WARNING:** This product can expose you to QUARTZ (SIO<sub>2</sub>), which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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

QUARTZ (SIO<sub>2</sub>) (CAS 14808-60-7)

Listed: October 1, 1988

### US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

CRISTOBALITE (CAS 14464-46-1)

QUARTZ (SIO<sub>2</sub>) (CAS 14808-60-7)

## International Inventories

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
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	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)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

<b>Issue date</b>	19-November-2015
<b>Revision date</b>	26-September-2018
<b>Version #</b>	20
<b>Further information</b>	UVCB = a substance of Unknown or Variable composition, Complex reaction products or Biological materials SWERF = Size Weighted Respirable Fraction methodology is a scientific method developed to quantify the content of respirable particles within a bulk product. All details about the SWERF method are available at <a href="http://www.crystallinesilica.eu">www.crystallinesilica.eu</a> .
<b>HMIS® ratings</b>	Health: 3* Flammability: 0 Physical hazard: 0
<b>NFPA ratings</b>	Health: 2 Flammability: 0 Instability: 0



**List of abbreviations**

SWERF = Size-Weighted Relevant Fine Fraction methodology is a scientific method developed to quantify the content of respirable particles within a bulk product. All details about the SWERF method are available at [www.crystallinesilica.eu](http://www.crystallinesilica.eu).

UVCB = a substance of Unknown or Variable composition, Complex reaction products or Biological materials

**References**

For any information on literature references or toxicity/ecotoxicity studies, please contact the supplier.

**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. 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. CETCO, an MTI Company cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

**Revision information**

This document has undergone significant changes and should be reviewed in its entirety.