

SAFETY DATA SHEET

1. Identification

Product identifier	CETCO® TABLETS - 3/8		
Other means of identification			
CAS number	1302-78-9		
Synonyms	SMECTITE * BENTONITE *	MONTMORILLONITE	
Recommended use	Bentonite has a variety of u hydraulic-barrier, and filler.	Bentonite has a variety of uses. It can be used as a rheology modifier, binding agent, adsorbent, hydraulic-barrier, and filler.	
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.		
Manufacturer/Importer/Supplier	Distributor information		
Manufacturer			
Company name	CETCO, an MTI Company		
Address	2870 Forbs Avenue Hoffman Estates, IL 60192 United States		
Telephone	General Information	800 527-9948	
Website	http://www.cetco.com/		
E-mail	safetydata@mineralstech.com		
Emergency phone number	Emergency	1.866.519.4752/1 760 476 3962	
Americas	1.866.519.4752 (US, Canada, Mexico) 1 760 476 3962		
2 Hazard(s) identification			

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Carcinogenicity	Category 1A
	Specific target organ toxicity, repeated exposure	Category 1
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	
Label elements		

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Signal word	Danger		
Hazard statement	May cause cancer. Causes damage to organs through prolonged or repeated exposure.		
Precautionary statement			
Prevention	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.		
Response	If exposed or concerned: Get medical advice/attention.		
Storage	Store locked up.		
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.		
Hazard(s) not otherwise classified (HNOC)	None known.		
Supplemental information	None.		

3. Composition/information on ingredients

Substances

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 (SIO2)		14808-60-7	<= 8
CRISTOBALITE		14464-46-1	<= 2
*Designates that a specific chemic	cal identity and/or percentage of composition ha	as been withheld as a trade sec	cret.
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 symptom noted.	ns develop or persist. No specif	ic first aid measures
Skin contact	Get medical attention if irritation develops and	d persists. No specific first aid i	neasures noted.
Eye contact	No specific first aid measures noted. Do not r irritation develops and persists.	rub eyes. Rinse with water. Get	medical attention if
Ingestion	No specific first aid measures noted.		
Most important symptoms/effects, acute and delayed	Dust in the eyes will cause irritation. Dusts m Prolonged exposure may cause chronic effect		skin and eyes.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and tre Symptoms may be delayed.	at symptomatically. Keep victin	n under observation
General information	IF exposed or concerned: Get medical advice (show the label where possible). Ensure that involved, and take precautions to protect ther measures. Provide general supportive measu	medical personnel are aware on mselves. No hazards which req	f the material(s)
5. Fire-fighting measures			
Suitable extinguishing media	Use any media suitable for the surrounding fi	res.	
Unsuitable extinguishing media	Not applicable, non-combustible.		
Specific hazards arising from the chemical	None known. The product itself does not burr	٦.	
Special protective equipment and precautions for firefighters	Material can be slippery when wet.		
Fire fighting equipment/instructions	Use water spray to cool unopened containers	5.	
Specific methods	Use standard firefighting procedures and con	sider the hazards of other invo	lved materials.
General fire hazards	No unusual fire or explosion hazards noted. 7	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	Туре	Value	Form
CRISTOBALITE (CAS 14464-46-1)	PEL	0.05 mg/m3	Respirable dust.
QUARTZ (SIO2) (CAS 14808-60-7)	PEL	0.05 mg/m3	Respirable dust.
US. OSHA Table Z-3 (29 CFR 1910.	1000)		
Constituents	Туре	Value	Form
INERT OR NUISANCE DUSTS	TWA	5 mg/m3	Respirable fraction
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction
CRISTOBALITE (CAS 14464-46-1)	TWA	0.05 mg/m3	Respirable.
		1.2 mppcf	Respirable.
QUARTZ (SIO2) (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.
US. ACGIH Threshold Limit Values	5		
Constituents	Туре	Value	Form
CRISTOBALITE (CAS 14464-46-1)	TWA	0.025 mg/m3	Respirable fraction
QUARTZ (SIO2) (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction
US. NIOSH: Pocket Guide to Chem	ical Hazards		
Constituents	Туре	Value	Form
CRISTOBALITE (CAS 14464-46-1)	TWA	0.05 mg/m3	Respirable dust.
QUARTZ (SIO2) (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.

Biological limit values

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

Appropriate engineering controls	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.	
Individual protection measures,	such as personal protective equipment	
Eye/face protection	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.	
Skin protection		
Hand protection	Wear appropriate chemical resistant gloves. Applicable for industrial settings only. No protection is ordinarily required under normal conditions of use.	
Other	Use of an impervious apron is recommended. Normal work clothing (long sleeved shirts and long pants) is recommended. Applicable for industrial settings only.	
Respiratory protection	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.	
Thermal hazards	Not applicable.	
General hygiene considerations	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

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

Visco	osity	Not applicable.
Visco	osity temperature	Not applicable.
Othe	r information	
E	Bulk density	0.9 - 1.4 g/cm ³
E	Explosive limit	Not applicable.
E	Explosive properties	Not explosive. Not explosive
E	Explosivity	Not applicable.
F	Flame extension	Not applicable.
F	Flammability	Not applicable.
F	Flammability (flash back)	Not applicable.
	Flammability (Heat of combustion)	Not applicable.
F	Flammability (Train fire)	Not applicable.
F	Flammability class	Not applicable.
F	Flash point class	Not flammable
ľ	Molecular formula	UVCB Substance
ľ	Molecular weight	Not applicable.
C	Oxidizing properties	Not oxidizing. None.
F	Percent volatile	0 %
F	oH in aqueous solution	8.5 - 11
5	Specific gravity	Not applicable.
١	VOC	CARB 0 %
10. 3	Stability and reactivity	
		The product is stable and per respire under permal conditions of use, starses and tran

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

11. Toxicological information

Information on likely routes of exposure			
Inhalation	Dust may irritate respiratory system.		
Skin contact	Dust or powder may irritate the skin.		
Eye contact	Dust in the eyes will cause irritation.		
Ingestion	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)		
Acute		
Inhalation		
Dust		
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	6-1)			
<u>Acute</u>				
Oral	Det			
LD50	Rat		> 22500 mg/kg	
Skin corrosion/irritation	Not classifie			
Serious eye damage/eye rritation	Not classifie	ed. Mild irritant to eyes (according to the mo	odified Kay & Calandra criteria)	
Respiratory or skin sensitizati	ion			
Respiratory sensitization	Not classifie	Not classified.		
Skin sensitization		Not classified.		
Germ cell mutagenicity	Not classifie	Not classified.		
	"There is su persons with quarries and the cancer r worker prote regulatory o dust and res	n effect in humans of the inhalation of resp fficient information to conclude that the rela h silicosis (and, apparently, not in employed in the ceramic industry). Therefore, preve risk" (SCOEL SUM Doc 94-final, June 200 ection against silicosis can be consistently ccupational exposure limits. May cause ca spirable crystalline silica should be monitor crystalline silica. The respirable crystalline	ative risk of lung cancer is increased in es without silicosis exposed to silica dust i enting the onset of silicosis will also reduce 03) According to the current state of the ar assured by respecting the existing ncer. Occupational exposure to respirable ed and controlled. This product contains	
IARC Monographs. Overa	all Evaluation of	Carcinogenicity		
CRISTOBALITE (CAS		1 Carcinogenic to huma	ans.	
QUARTZ (SIO2) (CAS	14808-60-7)	1 Carcinogenic to hum		
• • •		s (29 CFR 1910.1001-1052)		
CRISTOBALITE (CAS QUARTZ (SIO2) (CAS US. National Toxicology F	14808-60-7)	Cancer Cancer		
CRISTOBALITE (CAS		Known To Be Human (Carcinogen	
QUARTZ (SIO2) (CAS	,	Reasonably Anticipated	d to be a Human Carcinogen.	
Reproductive toxicity	Not classifie	Known To Be Human C	Jarchogen.	
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Specific target organ toxicity single exposure				
Specific target organ toxicity repeated exposure	- Causes dan	Causes damage to organs through prolonged or repeated exposure.		
Aspiration hazard	Not an aspir	Not an aspiration hazard.		
Chronic effects	Causes dan	nage to organs through prolonged or repea	ited exposure.	
12. Ecological information	on			
Ecotoxicity	The product	t is not classified as environmentally hazard	dous. However, this does not exclude the	
Leoloxicity		hat large or frequent spills can have a harm	Iful or damaging effect on the environment	
Product			ful or damaging effect on the environment Test Results	
-	possibility th	hat large or frequent spills can have a harm		
Product	possibility th	hat large or frequent spills can have a harm		
Product Bentonite (CAS 1302-78-9)	possibility th	hat large or frequent spills can have a harm		
Product Bentonite (CAS 1302-78-9) Aquatic	possibility th	nat large or frequent spills can have a harm Species	Test Results	
Product Bentonite (CAS 1302-78-9) Aquatic Algae	possibility th	hat large or frequent spills can have a harm Species Freshwater algae	Test Results > 100 mg/l, 72 hours	

Product		Species	Test Results
Fish	LC50	Freshwater fish	16000 mg/l, 96 hours
		Marine water fish	2800 - 3200 mg/l, 24 hours
Persistence and degradability	Not relev	ant for inorganic substances	
Bioaccumulative potential	Will not bio-accumulate.		
Mobility in soil	Bentonite is almost insoluble and thus presents a low mobility in most soils.		
Mobility in general	The product has poor water-solubility.		
Other adverse effects	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 consideration	ons		

Disposal instructions	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.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	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).
Contaminated packaging	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

DOT

Not regulated as dangerous goods.

ΙΑΤΑ

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Not applicable. Annex II of MARPOL 73/78 and the IBC Code

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)

CRISTOBALITE (CAS 14464-46-1) QUARTZ (SIO2) (CAS 14808-60-7) CRISTOBALITE (CAS 14464-46-1) QUARTZ (SIO2) (CAS 14808-60-7) CRISTOBALITE (CAS 14464-46-1) QUARTZ (SIO2) (CAS 14808-60-7) CRISTOBALITE (CAS 14464-46-1) QUARTZ (SIO2) (CAS 14808-60-7)

Cancer Cancer lung effects lung effects immune system effects kidney effects kidney effects

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 313 (TRI reporting) 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 (SIO2), which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

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QUARTZ (SIO2) (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))
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CRISTOBALITE (CAS 14464-46-1) QUARTZ (SIO2) (CAS 14808-60-7)

International Inventories

Country(s) or region	Inventory name On inventor	ory (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 compo	nents of this product comply with the inventory requirements administered by the governing country	(s)

*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

Issue date	19-November-2015
Revision date	26-September-2018
Version #	20
Further information	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 www.crystallinesilica.eu.
HMIS® ratings	Health: 3* Flammability: 0 Physical hazard: 0
NFPA ratings	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. 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.