



Safety Data Sheet

Section 01 - Identification

Product Identifier	Bentonite
Other Means of Identification	Wyoming gel, bentonite clay, montmorillonite.
Product Use and Restrictions on Use	Oil well drilling fluid additive.
Initial Supplier Identifier	ClearTech Industries Inc. 1500 Quebec Avenue Saskatoon, SK. Canada S7K 1V7
Prepared By	ClearTech Industries Inc. Technical Writer Phone: 1 (800) 387-7503
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Section 02 - Hazard Identification

GHS-Classification

STOT-Repeated Exposure	Category 1
Carcinogenicity	Category 1A

Physical Hazards

No known physical hazards.

Danger

Hazards Statements

H372 – Causes damage to lungs through prolonged or repeated exposure.
H350 – May cause cancer.

Pictograms



Precautionary Statements

P405 – Store locked up.
P201 – Obtain special instructions before use.
P202 – Do not handle until all safety precautions have been read and understood.
P280 – Wear protective gloves, protective clothing, eye protection, and face protection.
P308 + P313 – IF exposed or concerned: Get medical advice/attention.
P260 – Do not breathe dust.
P264 – Wash hands thoroughly after handling.

P270 – Do not eat, drink or smoke when using this product.

P501 – Dispose of contents/container in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 03 - Composition / Information on Ingredients

Chemical Name	CAS Number	Weight %	Unique Identifiers
Bentonite	1302-78-9	94-98%	
Quartz, crystalline silica	14808-60-7	2-6%	

Section 04 - First Aid Measures

Inhalation	This chemical is a carcinogen and a chronic toxicity hazard. Remove victim to fresh air. Giver artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist. Inhalation may aggravate existing respiratory illness.
Skin Contact / Absorption	No health effects expected. Wash gently and thoroughly with lukewarm, gently flowing water and non-abrasive soap for 5 minutes.
Eye Contact	DO NOT allow victim to rub eye(s). Let the eye(s) water naturally. Have victim move eye around to attempt to dislodge particle/dust. If it does not dislodge, flush with lukewarm, gently flowing water for 30 minutes or until dust/particle is removed. If irritation persists, immediately obtain medical attention. DO NOT attempt to manually remove anything stuck to the eye(s).
Ingestion	No health effects are expected. If irritation or discomfort occurs, obtain medical advice.
Additional Information	Not Available.

Section 05 - Fire Fighting Measures

Suitable Extinguishing Media	Does not burn. Use appropriate means of extinction for cause of fire with the exception of water as product becomes very slippery in contact with water.
Unsuitable Extinguishing Media	Not Available.
Specific Hazards Arising From the Chemical	None known.
Special Protective Equipment and Precautions for Fire-Fighters	Wear NIOSH-approved self-contained breathing apparatus and protective clothing.
Further Information	Not Available.

Section 06 - Accidental Release Measures

Personal Precautions / Protective Equipment / Emergency Procedures	Wear appropriate personal protective equipment. Ventilate area. Only enter area with PPE. Stop or reduce leak if safe to do so. Flush with water to remove any residue.
Environmental Precautions	Avoid release of product into waterways and/or sewers.
Methods and Materials for Containment and Cleaning Up	Wear an approved respirator. Vacuum if possible to avoid generating airborne dust. Collect uncontaminated material for repackaging. Collect contaminated material in an approved container for disposal. Avoid adding water as product will become slippery when wet.

Section 07 - Handling and Storage

Precautions for Safe Handling	This material is a VERY TOXIC solid. Avoid creating dust. Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. Empty packages contain residual hazardous material; handle as if full.
Conditions for Safe Storage	Store in a cool, dry, well-ventilated place. Keep container tightly closed.
Incompatibilities	No incompatible substances known.

Section 08 - Exposure Controls and Personal Protection

Exposure Limit(s)

Component	Regulation	Type of Listing	Value
Quartz, crystalline silica	ACGIH	TLV-TWA	0.025mg/m ³
	OSHA	PEL-TWA	0.1mg/m ³

Engineering Control(s)

Ventilation Requirements Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions should be provided. Supply sufficient replacement air to make up for air removed by exhaust systems.

Other Keep an eye wash fountain and safety shower available and in close proximity to work area.

Protective Equipment

Eyes/Face Chemical safety glasses with side shields should be worn while product is being handled.

Hand Protection Impervious gloves are not required other than what is mandated at place of work. Wash contaminated clothing dry thoroughly before reuse.

Skin and Body Protection Body suits, aprons, and/or coveralls of chemical resistant material should be worn. Wash contaminated clothing with soap and water, dry thoroughly before reuse.

Respiratory Protection Always wear an approved dust mask for levels below the TLV. Use NIOSH/MSHA approved respirators for silica bearing dust if airborne concentrations exceed the TLV.

Thermal Hazards Not Available.

Section 09 - Physical and Chemical Properties

Appearance

Physical State	Solid
Colour	Light tan to grey
Odour	Odourless
Odour Threshold	Not Applicable

Property

pH	8-10 (5% suspension)
Melting Point/Freezing Point	Not Available

Initial Boiling Point and Boiling Range	Not Applicable
Flash Point	Not Applicable
Evaporation Rate	Not Available
Flammability	Non-flammable
Upper Flammable Limit	Not Applicable
Lower Flammable Limit	Not Applicable
Vapour Pressure (mm Hg, 20°C)	Not Applicable
Vapour Density (Air=1)	Not Applicable
Relative Density	Not Available
Solubility(ies)	Insoluble in water
Partition Coefficient: n-octanol/water	Not Available
Auto-ignition Temperature	Not Applicable
Decomposition Temperature	Not Available
Viscosity	Not Available
Explosive Properties	None
Specific Gravity (Water=1)	2.45-2.55
% Volatiles by Volume	Not Applicable
Formula	Not Available
Molecular Weight	Not Available

Section 10 - Stability and Reactivity

Reactivity	Not Available.
Stability	Stable.
Possibility of Hazardous Reactions	No polymerization will occur.
Conditions to Avoid	Not Available
Incompatible Materials	No incompatible substance known.
Hazardous Decomposition Products	None.

Section 11 - Toxicological Information

Acute Toxicity

Component	Oral LD ₅₀	Dermal LD ₅₀	Inhalation LC ₅₀
Quartz, crystalline silica	8333 mg/kg (rat)	Not Available	Not Available

Chronic Toxicity – Carcinogenicity

Component	IARC
Quartz, crystalline silica	Group 1: Carcinogenic to humans.

Skin Corrosion/Irritation	Possibly drying resulting in dermatitis.
Ingestion	No adverse effects expected.
Inhalation	May cause irritation of the nose, throat and respiratory passages.
Serious Eye Damage/Irritation	Dust may cause eye irritation.
Respiratory or Skin Sensitization	Not Available.
Germ Cell Mutagenicity	Crystalline silica has been shown to cause mutagenic effects in human cells (in-vitro).
Reproductive Toxicity	Not Available.
STOT-Single Exposure	Not Available.
STOT-Repeated Exposure	Long term inhalation may cause silicosis, a progressive, disabling, and sometimes fatal lung disease. Chronic inhalation exposure to crystalline silica quartz has been observed to cause lymph node effects, kidney effects, and auto-immune disease. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness and reduced pulmonary function.
Aspiration Hazard	Not Available.
Synergistic Materials	Not Available.

Section 12 – Ecological Information

Ecotoxicity

Component	Toxicity to Algae	Toxicity to Fish	Toxicity to Daphnia and Other Aquatic Invertebrates
Bentonite	Not Available	LC ₅₀ (Oncorhynchus mykiss, 96hr): 19000mg/L	Not Available
Biodegradability	Biodegradation of bentonite appears to be minimal, if it occurs at all.		
Bioaccumulation	Not Available.		
Mobility	Not Available.		
Other Adverse Effects	Not Available.		

Section 13 – Disposal Considerations

Waste From Residues/Unused Products	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.
Contaminated Packaging	Dispose in accordance with all federal, provincial, and/or local regulations including the Canadian Environmental Protection Act.

Section 14 – Transport Information

UN Number	Not Regulated
UN Proper Shipping Name	Not Regulated
Transport Hazard Class(es)	Not Regulated
Packaging Group	Not Regulated
Environmental Hazards	Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.
Special Precautions	Not Available
Transport in Bulk	Not Available

TDG

Other Secure containers (full and/or empty) with suitable hold down devices during shipment and ensure all caps, valves, or closures are secured in the closed position.

TDG PRODUCT CLASSIFICATION: This product has been classified on the preparation date specified at section 14 of this MSDS / SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and/or published test data regarding the classification of this product are listed in the references at section 16 of this MSDS / SDS.

Section 15 – Regulatory Information

NOTE: THE PRODUCT LISTED ON THIS SDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN CONTROLLED PRODUCTS REGULATIONS. THIS SDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.

Section 16 – Other Information

Preparation Date September 8, 2015

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations.

Attention: Receiver of the chemical goods / SDS coordinator

As part of our commitment to the Canadian Association of Chemical Distributors (CACD) Responsible Distribution[®] initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service center.

References:

- 1) CHEMINFO
- 2) eChemPortal
- 3) TOXNET
- 4) Transportation of Dangerous Goods Canada
- 5) HSDB
- 6) ECHA

ClearTech Industries Inc. - Locations

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