

SAFETY DATA SHEET

Section 1: IDENTIFICATION

Product Identified:	Bentonite N/T
Other Means of Identification:	None
Recommended Use:	Not available
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.
Supplier:	Bri-Chem Supply Ltd. 27075 Acheson Road Acheson, AB T7X 6B1
Phone Number:	780-962-9490
Emergency Phone Number:	Emergency 1-866-519-4752/1-760-475-3962
Americas:	1-866-519-4752 (US, Canada, Mexico) 1-760-476-3962

Section 2: HAZARD(S) IDENTIFICATION

Physical Hazards:	Not classified
Health Hazard	
Carcinogenicity:	Category 1A
Specific Target Organ Toxicity, Repeated Exposure:	Category 1
Environmental Hazards:	Not classified
OSHA Defined Hazards:	Not classified

Label Elements:



Signal Word: Danger

Hazard Statement: May cause cancer. Causes damage to organs through prolonged or repeated exposure.

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Precautionary Statement

Prevention:	Do not handle until all safety precautions have been read and understood. Do not breathe dust. Do not breathe dust/fume/gas/mist/vapors/spray. 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 in accordance with local/regional/national regulations
Disposal:	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not Otherwise Classified (HNOC):	None known
Supplemental Information:	6.96% of the mixture consists of component(s) of unknown acute oral toxicity. 99.85% of the mixture consists of component(s) of unknown acute dermal toxicity. 99.85% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Mixtures

Chemical Name	Common Name and Synonyms	CAS Number	%
Bentonite		1302-78-9	99.85
Other components below reportable levels			0.15

Constituents

Chemical Name	Common Name and Synonyms	CAS Number	%
QUARTZ (SiO ₂)		14808-60-7	<= 6
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
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Section 4: FIRST-AID MEASURES

Inhalation:	Move to fresh air. Call a physician if symptoms develop or persist.
Skin Contact:	Wash off with soap and water. Get medical attention if irritation develops and persists.

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Eye Contact:	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion:	Rinse mouth. Get medical attention if symptoms occur.
Most Important Symptoms/Effects, Acute and Delayed:	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 label where possible). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

Section 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable Extinguishing Media:	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical:	During fire, gases hazardous to health may be formed.
Special Protective Equipment and Precautions for Firefighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire
Fire fighting equipment/instructions:	Move containers from fire area if you can do so without risk
Specific Methods:	Use standard firefighting procedures and consider the hazards of other involved materials
General Fire Hazards:	No unusual fire or explosion hazards noted

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and Materials for Containment and Cleaning Up:

Stop the flow of material, if this is without risk. Following product recovery, flush area with water. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

Environmental Precautions:

No special environmental precautions required. Prevent discharge of larger quantity to drain.

Section 7: HANDLING AND STORAGE

Precautions for Safe Handling:

Do not handle until all safety precautions have been read and understood. Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust. Avoid prolonged exposure. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities:

Store in tightly closed container. Keep out of the reach of children. Store away from incompatible materials (see Section 10 of the SDS).

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known 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 ³	Respirable dust.
QUARTZ (SiO ₂) (CAS 14808-60-7)	PEL	0.05 mg/m ³	Respirable dust.

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

Constituents	Type	Value	Form
INERT OR NUISANCE DUSTS (CAS SEQ250)	TWA	5 mg/m ³	Respirable fraction.
		15 mg/m ³	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
CRISTOBALITE (CAS 14464-46-1)	TWA	0.05 mg/m ³	Respirable
		1.2 mppcf	Respirable
QUARTZ (SiO ₂) (CAS 14808-60-7)	TWA	0.1 mg/m ³	Respirable
		2.4 mppcf	Respirable

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US. ACGIH Threshold Limit Values

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

US. NIOSH: Pocket Guide to Chemical Hazards

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

Biological Limit Values: No biological exposure limits noted for the ingredient(s)

Exposure Guidelines: Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

Appropriate Engineering Controls: Good general ventilation 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.

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection: Applicable for industrial settings only. Wear safety glasses with side shields (or goggles).

Skin Protection

Hand Protection: Applicable for industrial settings only. Wear appropriate chemical resistant gloves.

Other: Applicable for industrial settings only. Use of an impervious apron is recommended.

Respiratory Protection: Applicable for industrial settings only. Use a particulate filter respirator for particulate concentrations exceeding the Occupational Exposure Limit.

Thermal Hazards: Wear appropriate thermal protective clothing, when necessary.

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.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical State:	Solid
Form:	Solid
Color:	Not available
Odour:	Not available
Odour Threshold:	Not applicable
pH:	8.5 – 11
Melting Point and 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):	Not available
Upper/Lower Flammability or Explosive 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
Auto-ignition Temperature:	Not applicable
Decomposition Temperature:	> 932 °F (> 500 °C)
Viscosity:	Not available
Viscosity Temperature:	Not applicable

Other Information

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Bulk Density:	0.9 - 1.4 g/cm ³
Explosive Limit:	Not applicable
Explosive Properties:	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
Percent Volatile:	0%
pH in Aqueous Solution:	8.5 - 11
Specific Gravity:	Not applicable
VOC:	CARB 0%

Section 10: STABILITY AND REACTIVITY

Reactivity:	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical Stability:	Material is stable under normal conditions
Possibility of Hazardous Reactions:	No dangerous reaction known under conditions of normal use
Conditions to Avoid:	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.
Incompatible Materials:	Powerful oxidizers. Chlorine.
Hazardous Decomposition Products:	No hazardous decomposition products are known

Section 11: TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation:	Prolonged inhalation may be harmful
Skin Contact:	No adverse effects due to skin contact are expected
Eye Contact:	Direct contact with eyes may cause temporary irritation
Ingestion:	Expected to be a low ingestion hazard
Symptoms Related to the Physical, Chemical and Toxicological Characteristics:	Direct contact with eyes may cause temporary irritation

Information on Toxicological Effects

Acute Toxicity:	Not known
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Product	Species	Test Results
Bentonite		
<u>Acute</u> Inhalation <i>Dust</i> LC50	Rat	> 5.27 mg/l, 4 hr OECD 436
<u>Oral</u> <i>Dust</i> LD50	Rat	> 2000 mg/kg OECD 425

Constituents	Species	Test Results
CRISTOBALITE (CAS 14464-46-1)		
<u>Acute</u> Oral LD50	Rat	> 22500 mg/kg

Skin Corrosion/Irritation:	Prolonged skin contact may cause temporary irritation
Serious Eye Damage/Eye Irritation:	Direct contact with eyes may cause temporary irritation

Respiratory or Skin Sensitization

Respiratory Sensitization:	Not a respiratory sensitizer
Skin Sensitization:	The product is not expected to cause skin sensitization
Germ Cell Mutagenicity:	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

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Carcinogenicity:

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. May cause cancer. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

IARC Monographs. Overall Evaluation of Carcinogenicity

CRISTOBALITE (CAS 24464-46-1)	1 Carcinogenic to Humans
QUARTZ (SIO2) (CAS 14808-60-7)	1 Carcinogenic to Humans

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

CRISTOBALITE (CAS 24464-46-1)	Cancer
QUARTZ (SIO2) (CAS 14808-60-7)	Cancer

US. National Toxicology Program (NTP) Report on Carcinogens

CRISTOBALITE (CAS 24464-46-1)	Known to be human carcinogen
QUARTZ (SIO2) (CAS 14808-60-7)	Reasonably anticipated to be a human carcinogen. Known to be human carcinogen.

Reproductive Toxicity:

This product is not expected to cause reproductive or developmental effects

**Specific Target Organ
Toxicity – Single Exposure:**

Not classified

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Specific Target Organ Toxicity – Repeated Exposure:	Causes damage to organs through prolonged or repeated exposure
Aspiration Hazard:	Not an aspiration hazard
Chronic Effects:	Prolonged inhalation may be harmful. Causes damage to organs through prolonged or repeated exposure. Prolonged exposure may cause chronic effects.

Section 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.
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Product		Species	Test Results
Bentonite			
	Aquatic		
	Algae EC50	Freshwater algae	> 100 mg/l, 72 hours
	Crustacea EC50	Coon stripe shrimp (Pandalus danae)	24.8 mg/l, 96 hours
		Daphnia	> 100 mg/l, 48 hours
		Dungeness or edible crab (Cancer magister)	81.6 mg/l, 96 hours
	Fish LC50	Freshwater fish	16000 mg/l, 96 hours
		Marine water fish	2800 - 3200 mg/l, 24 hours
	Chronic		
	Crustacea LC50	Opossum shrimp (Americamysis bahia)	1000000 ppm, 96 h

Components		Species	Test Results
BENTONITE (CAS 1302-78-9)			
	Aquatic		
	Acute		
	Fish LC50	Rainbow trout, Donaldson trout (Oncorhynchus mykiss)	19000 mg/l, 96 hours

Persistence and Degradability:	No data is available on the degradability of any ingredients in the mixture
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Bioaccumulative Potential Mobility in Soil: No data available

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.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: 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.

Section 14: TRANSPORT INFORMATION

DOT: Not regulated as dangerous goods

IATA: Not regulated as dangerous goods

IMDG: Not regulated as dangerous goods

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

Section 15: REGULATORY INFORMATION

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

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated

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CERCOA Hazardous Substance List (40 CFR 302.4):
SARA 304 Emergency Release Notification: Not listed
Not regulated

OSHA Specifically Regulates Substances (29 CFR 1910.1001-1053)

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

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely Hazardous Substance: Not listed.

SARA 311/312 Hazardous Chemical: No (Exempt)

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 CFE 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

QUARTZ (SIO2) (CAS 14808-60-7) Listed: October 1, 1988

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

CRISTOBALITE (CAS 14464-46-1)

QUARTZ (SIO₂) (CAS 14808-60-7)

International Inventories

Country(s) or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	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 No Substances (EINECS)	No
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).

Section 16: OTHER INFORMATION

Disclaimer:

The information contained herein is based on data available to us and is believed to be true and accurate. However, no guarantee or warranty is provided, expressed or implied, by the company or its subsidiaries regarding accuracy of the information, the hazards connected with the use of the material, or the results to be obtained from the use thereof. Since the use of this product is within the exclusive control of the user, we do not assume any responsibility and expressly disclaim any liability for any use of this product. It is the user's responsibility to determine the conditions of safe use, storage, and disposal of the product. Compliance with all applicable federal, provincial, and local regulations remains the responsibility of the user.

HMIS® ratings: Health: 3*
 Flammability: 0
 Physical Hazard: 0

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NFPA ratings: Health: 2
Flammability: 0
Physical Hazard: 0

Prepared by: Bri-Chem Supply Ltd.

Revision Date: May 22, 2024

Revision Information: Product and Company Identification: Alternate Trade Names

Hazard(s) identification: Prevention

Composition / Information on Ingredients: Disclosure Overrides

Handling and storage: Precautions for safe handling

Handling and storage: Conditions for safe storage, including any incompatibilities