



WYO-BEN, INC.

SAFETY DATA SHEET

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: **TRU-BORE®**
Chemical Family: Mineral
Application: Drilling Fluid
Manufacturer/Supplier: Wyo-Ben, Inc.
1345 Discovery Drive
Billings, MT 59102 USA
Telephone: 800.548.7055
Facsimile: 406.656.0748
Emergency Phone Number: CHEMTREC® 1.800.424.9300

SECTION 2 — HAZARD IDENTIFICATION

Hazard Classification: Carcinogenicity (Category 1A)
Specific Target Organ Toxicity (Repeated Exposure) (Category 1)
Signal Word: Danger
Hazard Statements: May cause cancer.
Causes damage to organs through prolonged or repeated exposure.



Hazard Symbol:

Precautionary Statements

Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breath dust. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product.
Response: If exposed or concerned: Get medical advice/attention.
Get medical attention/advice if you feel unwell.
Storage: Store locked up.
Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazards Not Otherwise Classified: May cause eye and respiratory irritation.

SECTION 3 — COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	Percent
Crystalline Silica, quartz	14808-60-7	≤6%

SECTION 4 — FIRST AID MEASURES

Inhalation:	If inhaled, remove to a dust free area. Get medical attention if respiratory irritation develops or if breathing becomes difficult. Inhalation may aggravate existing respiratory illness.
Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.
Skin:	Wash with soap and water. Seek medical attention if irritation persists.
Ingestion:	Do Not induce vomiting. First aid measures not normally required.
Notes to Physician:	Treat symptomatically

SECTION 5 — FIRE FIGHTING MEASURES

Suitable Extinguishing Media:	Product is non-combustible. All standard firefighting media may be used.
Unsuitable Extinguishing Media:	None
Special Exposure Hazards:	None known. Product is not combustible.
Special Protective Equipment and Precautions for Firefighters:	None for product. Wear self-contained breathing apparatus (SCBA) and full protective gear. Caution: slippery when wet.
NFPA Ratings:	Health 1, Flammability 0, Reactivity 0

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures:	Use appropriate protective equipment. Avoid creating and breathing dust. Prevent further leakage or spillage if safe to do so.
Environmental Precautionary Measures:	No special environmental precautions required
Procedure for Cleaning/Absorption:	Prevent further leakage or spillage if safe to do so. Avoid generating dust. Collect using appropriate dustless method. Dispose in landfill according to local, state and federal regulations.

SECTION 7 — HANDLING AND STORAGE

Handling Precautions:	This product contains quartz which may become airborne. Avoid breathing dust. Avoid creating dusty conditions. Promptly clean up spills to avoid breathing airborne dust. Use only with adequate ventilation to keep exposure below recommended exposure limits. Wear a NIOSH/MSHA European Standard En 149, or equivalent certified for silica bearing dust, respirator when using this product. Material is slippery when wet.
Storage Information:	Use good housekeeping in storage and work areas to prevent accumulation of dust. Close

container when not in use. Do not reuse empty container.

SECTION 8 — EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

Substances	CAS Number	ACGIH TLV-TWA	OSHA PEL-TWA*
Crystalline Silica, quartz	14808-60-7	0.025 mg/m ³	$\frac{10 \text{ mg/m}^3}{\% \text{SiO}_2 + 2}$

* More restrictive exposure limits may be enforced by some states, agencies, or other authorities.

Engineering Controls: Use approved industrial ventilation and local exhaust as required to maintain exposures below applicable exposure limits.

Personal Protective Equipment: If engineering controls and work practices cannot prevent excessive exposures, the selection and proper use of personal protective equipment should be determined by an industrial hygienist or other qualified professional based on the specific application of this product.

Respiratory Protection: Not normally needed. If significant exposures exceeding occupational exposure limit are possible use NIOSH/MSHA respirator approved for silica bearing dust.

Hand Protection: Standard work gloves.

Skin Protection: Wear clothing appropriate for the work environment. Dusty clothing should be laundered before reuse. Use precautionary measures to avoid creating dust when removing or laundering clothing.

Eye Protection: Wear safety glasses or goggles to protect against exposure.

Other Precautions: None known.

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Powdered Solid
Color:	Light tan to gray as dry powder
Odor:	Odorless
pH:	8 – 10 (5% aqueous suspension)
Specific Gravity @ 20 C (Water=1):	2.45 – 2.55
Density @ 20 C (lbs/gallon):	Not determined
Bulk Density @ 20 C (lbs/ft ³):	49 - 70
Boiling Point/Range (F/C):	Not applicable
Freezing Point/Range (F/C):	Not applicable
Vapor Pressure @ 20 C (mmHg):	Not applicable
Vapor Density (Air=1):	Not applicable
Percent Volatiles:	Not applicable
Evaporation Rate (Butyl Acetate=1):	Not applicable
Solubility in Water (g/100ml):	Insoluble, forms colloidal suspension
Solubility in Solvents (g/100ml):	Not applicable
VOCs (lbs/gallon):	Not applicable

Viscosity, Dynamic @ 20 C (centipoise):	3.5 – 12.5 (6% aqueous suspension)
Viscosity, Kinematic @ 20 C (centistrokes):	Not determined
Partition Coefficient/n-Octanol/Water:	Not applicable
Molecular Weight (g/mole):	Not applicable
Flash Point/Range (F/C):	Not applicable
Flash Point Method:	Not applicable
Autoignition Temperature (F/C):	Not applicable
Flammability Limits in Air – Lower (%):	Not applicable
Flammability Limits in Air – Upper (%):	Not applicable

SECTION 10 — STABILITY AND REACTIVITY

Reactivity:	Nonreactive
Chemical Stability:	Stable
Possibility of Hazardous Reactions:	Will not occur.
Conditions to Avoid:	None
anticipated Incompatibility (Materials to Avoid):	None known
Hazardous Decomposition Products:	None
Additional Guidelines:	Not applicable

SECTION 11 — TOXICOLOGICAL INFORMATION

Principle Route of Exposure: Eye or skin contact, inhalation.

Symptoms Related to the Physical, Chemical and Toxicological Characteristics

Inhalation:	Inhaled crystalline silica in the form of quartz from occupational sources is carcinogenic to humans (IARC, Group 1).
Skin Contact:	May cause skin irritation due to drying.
Eye Contact:	May cause mechanical eye irritation.
Ingestion:	None known
Aggravated Medical Conditions:	Individuals with respiratory disease, including but not limited to asthma and bronchitis, or subject to eye irritation, should not be exposed to respirable quartz-bearing dust.
Chronic Effects/Carcinogenicity:	Silicosis: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling, and sometimes-fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness, and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop tuberculosis.

Cancer Status: The International Agency for Research on Cancer (IARC, 1997) concludes that there is sufficient evidence in humans for carcinogenicity of inhaled crystalline silica from occupational sources (IARC Group 1), that carcinogenicity was not detected in all industrial circumstances studied and that carcinogenicity may depend on characteristics of the crystalline silica or on external factors affecting its biological activity. See IARC Monograph 68,

Silica, Some Silicates and Organic Fibres (June 1997). The National Toxicology Program (NTP) classifies respirable crystalline silica as “Known to be a human carcinogen” (NTP 9th Report on Carcinogens, 2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

Other Information:

See “Adverse Effects of Crystalline Silica Exposure” published by the American Thoracic Society Medical Section of the American Lung Association, American Journal of Respiratory and Critical Care Medicine, Volume 155, pages 761-768 (1997).

Toxicity Tests

Oral Toxicity:	Not determined
Dermal Toxicity:	Not determined
Inhalation Toxicity:	Not determined
Primary Irritation Effect:	Not classified
Carcinogenicity:	Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (June 1997).
Genotoxicity:	Not classified
Reproductive/Developmental Toxicity:	Not classified

SECTION 12 — ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air):	Not determined
Persistence/Degradability:	Not determined
Bio-accumulation:	Not determined

Ecotoxicological Information

Acute Fish Toxicity:	Not determined
Acute Crustaceans Toxicity:	Not determined
Acute Algae Toxicity:	Not determined

Chemical Fate Information:	Not determined
Other Information:	Not applicable

SECTION 13 — DISPOSAL CONSIDERATIONS

Disposal Method:	If product should become a waste dispose in a licensed landfill according to federal, state and local regulations.
Contaminated Packaging:	Follow all applicable national or local regulations.

SECTION 14 — TRANSPORT INFORMATION

Land Transportation

- DOT – Not regulated as dangerous goods
- Canadian TDG – Not regulated as dangerous goods

ADR – Not regulated as dangerous goods

Air Transportation

ICAO/IATA – Not regulated as dangerous goods

Sea Transportation

IMDG – Not regulated as dangerous goods

Other Transportation Information

Labels: None

SECTION 15 — REGULATORY INFORMATION

US Regulations

US TSCA Inventory	All components listed on inventory or are exempt.
EPA SARA Title III Extremely Hazardous Substances	Not applicable
EPA SARA (311, 312) Hazard Class	Chronic Health Hazard
EPA SARA (313) Chemicals	This product does not contain a toxic chemical for routine annual “Toxic Chemical Release Reporting” under Section 313 (40 CFR 372).
EPA CERCLA/Superfund Reportable Spill Quantity	Not applicable
EPA RCRA Hazardous Waste Classification	If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.
California Proposition 65	This product contains crystalline silica (respirable) which is a substance known to the State of California to cause cancer.

Canadian Regulations

Canadian DSL Inventory	All components listed on inventory or are exempt.
WHMIS Hazard Class	This product contains crystalline silica (respirable) and is classified as a Class D, Division 2, Subdivision A substance.

SECTION 16 — OTHER INFORMATION

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DISCLAIMER

All information presented herein is believed to be accurate; however, it is the user’s responsibility to determine in advance of need that the information is current and suitable for their circumstances. No warranty or guarantee, expressed or implied is made by WYO-BEN, INC. as to this information, or as to the safety, toxicity or effect of the use of this product.