



Western Clay Corp.

600-12220 Stony Plain Rd, NW Edmonton, Alberta, Canada, T5N 3Y4
(438) 523-6213

SAFETY DATA SHEET (SDS)

Prepared in accordance with WHMIS 2015 (Canada) and OSHA Hazard Communication Standard (29 CFR 1910.1200, GHS-aligned)

Preparation Date: February 28, 2025

SECTION 1: IDENTIFICATION

- **Product Name:** PolarBarrier™ MAX
- **CAS Number:** 1302-78-9
- **Intended Use:** Industrial Use – Environmental Barrier and Sealing Applications, Absorbents, Drilling, Agriculture, and Cat Litter.
- **Supplier Name:** Western Clay Corp.
- **Manufacturing Address:** 311 South Road, Rosalind, AB T0B3Y0
- **Emergency Contact:** +1 (438) 523-6213; +1 (438) 524-7411

SECTION 2: HAZARD IDENTIFICATION

- **GHS Classification:**
 - Specific Target Organ Toxicity – Repeated Exposure (STOT-RE), Category 2 (Respiratory)
 - Eye Irritation, Category 2B
- **Signal Word:** WARNING
- **Hazard Statements:**
 - **H373:** May cause lung damage through prolonged exposure to respirable crystalline silica dust.
 - **H320:** Causes eye irritation.
- **Precautionary Statements:**
 - **P261:** Avoid breathing dust.
 - **P264:** Wash hands and skin thoroughly after handling.
 - **P280:** Wear protective gloves, safety glasses, and respiratory protection if dust exposure is excessive.
 - **P285:** In case of inadequate ventilation, use respiratory protection.
 - **P305+P351+P338:** If in eyes, rinse cautiously with water for several minutes and remove contact lenses if present.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Concentration
Bentonite Clay (Montmorillonite -based Clay minerals)	1302-78-9	75-90%
Crystalline Silica (Quartz)	14808-60-7	2-6%
Other Naturally Occurring Aluminosilicates	12174-11-7/1332-58-7	5-15%



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SECTION 4: FIRST AID MEASURES

- **Inhalation:** Move to fresh air. Seek medical attention if irritation persists.
- **Eye Contact:** Flush eyes with water for at least 15 minutes. Remove contact lenses if applicable.
- **Skin Contact:** Wash with soap and water if irritation occurs.
- **Ingestion:** Not considered hazardous if ingested in small amounts. Seek medical advice if symptoms develop.

SECTION 5: FIRE-FIGHTING MEASURES

- **Flammability:** Non-flammable (inorganic mineral).
- **Flash Point:** Not applicable.
- **Autoignition Temperature:** Not applicable.
- **Flammable Limits (LEL / UEL):** Not applicable.
- **Extinguishing Media:**
Material is non-combustible; use extinguishing media appropriate for surrounding fire.
- **Special Fire-Fighting Procedures:**
No special firefighting procedures required for bentonite.
Firefighters should wear self-contained breathing apparatus in areas with heavy dust accumulation.
- **Unusual Fire and Explosion Hazards:**
None known.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- **Spill Response:**
 - Use vacuum systems or wet methods to suppress dust generation.
 - Avoid sweeping or using compressed air, as these may increase airborne dust.

SECTION 7: HANDLING AND STORAGE

- **Precautions for Safe Handling:**
 - Avoid generating or breathing airborne dust.
 - Use local exhaust ventilation where dust is generated.
 - Use NIOSH/MSHA-approved respirators if exposure limits for crystalline silica may be exceeded.
 - Avoid adding water to dry material, as the product becomes slippery when wet.
- **Steps to Take in Case of Spillage or Release:**
 - Use vacuum systems or wet methods to suppress dust generation.
 - Avoid sweeping or using compressed air, as these may increase airborne dust.
- **Waste Disposal Considerations:**
 - Dispose of according to federal, state, and local regulations for solid waste.
 - Avoid disposal methods that generate additional dust.
- **Storage Conditions:**
 - Store in a dry, well-ventilated area to prevent excessive dust buildup.



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- Keep containers closed when not in use.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

- **Occupational Exposure Limits:**

Component	OSHA PEL	ACGIH TLV	NIOSH REL
Crystalline Quartz (Respirable Dust)	0.05 mg/m ³ TWA	0.05 mg/m ³ TWA	50 µg/m ³ TWA
Total Respirable Dust (Nuisance Dust)	5 mg/m ³	5 mg/m ³	5 mg/m ³

- **Personal Protective Equipment (PPE):**

- **Respiratory Protection:** Use **NIOSH/MSHA-approved respirators** where dust concentrations exceed exposure limits.
- **Eye Protection:** **Safety glasses or goggles recommended** in areas with airborne dust.
- **Gloves:** **Not required under normal use**, but may be used to reduce skin exposure.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Pale grey to brown powder or granules.

Odor: Odorless.

Odor Threshold: Not applicable.

pH: 8.0 - 10.5 (when dispersed in water).

Boiling Point: Not applicable.

Melting Point: Not applicable.

Flash Point: Not applicable.

Evaporation Rate: Not applicable.

Flammability: Non-flammable.

Vapor Pressure: Not applicable.

Vapor Density: Not applicable.

Relative Density (Specific Gravity, H₂O = 1): 2.5

Bulk Loose Density: Depends on moisture level (7%-14%), typically ranges from 800-1200kg/M³

Solubility in Water: Negligible.

Partition Coefficient (n-octanol/water): Not applicable.

Autoignition Temperature: Not applicable.

Decomposition Temperature: Not applicable.

Viscosity: Not applicable.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Not reactive under normal conditions.

Chemical Stability: Stable under normal temperatures and pressures.

Hazardous Reactions: Will not occur under normal handling conditions.

Conditions to Avoid: None known.



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Incompatible Materials: None known.

Hazardous Decomposition Products: None known.

Hazardous Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Primary Routes of Exposure:

- Inhalation (main concern).
- Skin contact (low risk).
- Ingestion (not expected to be hazardous).

Health Effects:

- **Inhalation:** Prolonged exposure to respirable crystalline silica may cause lung disease (silicosis).
- **Eye Contact:** May cause mechanical irritation.
- **Skin Contact:** Not expected to cause irritation under normal conditions.
- **Ingestion:** Not expected to cause harm, but large quantities may cause discomfort.

Chronic Effects & Carcinogenicity:

- **IARC Classification: Group 2A – Possible Carcinogen (Crystalline Silica)**
- **OSHA Classification:** Regulated as a **hazardous substance when airborne** in respirable sizes.

Symptoms of Overexposure:

- Shortness of breath, coughing, and reduced pulmonary function with prolonged inhalation of fine dust.

Medical Conditions Aggravated by Exposure:

- Individuals with asthma or chronic respiratory conditions may be more susceptible to the effects of dust inhalation.

Emergency and First Aid Procedures:

- **Eyes:** Flush with water for 15 minutes. If irritation persists, seek medical attention.
- **Inhalation:** Remove to fresh air. Provide oxygen or artificial respiration if needed. Seek medical help if breathing is difficult.
- **Skin:** Wash with soap and water.
- **Ingestion:** Not considered hazardous, but if large amounts are swallowed, seek medical advice.

SECTION 12: ECOLOGICAL INFORMATION

- **Environmental Impact:** Not hazardous to the environment.
- **No aquatic toxicity reported.**

SECTION 13: DISPOSAL CONSIDERATIONS

- **Waste Disposal:** Dispose of in accordance with federal, state, and local regulations.

SECTION 14: TRANSPORT INFORMATION

- **DOT (US):** Not classified as hazardous.
- **IATA (Air Transport):** Not classified as hazardous.
- **IMDG (Maritime Transport):** Not classified as hazardous.



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SECTION 15: REGULATORY INFORMATION

- **Regulatory Compliance:**
 - This SDS complies with **WHMIS 2015 (Canada) and OSHA GHS (USA)**.
 - Sodium Bentonite is listed on the **TSCA (USA) and DSL/NDSL (Canada) inventories**.

SECTION 16: OTHER INFORMATION

- **SDS Preparation Date:** February 28, 2025
- **SDS Version:** 1.1 Initial issue for PolarBarrier™ MAX
- **Reviewed for WHMIS and OSHA requirements.**