

Material Safety Data Sheet (MSDS) - Bentonite

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

- **Product Name:** Bentonite
- **Chemical Name:** Montmorillonite Clay
- **CAS Number:** 1302-78-9
- **Manufacturer/Supplier:** ATDM

SECTION 2: HAZARDS IDENTIFICATION

- **GHS Classification:** Not classified as hazardous
- **Hazard Statements:**
 - May cause respiratory irritation if inhaled in large amounts.
 - Prolonged skin contact may cause dryness.
- **Precautionary Statements:**
 - Avoid breathing dust.
 - Use protective gloves and safety glasses.
 - Ensure adequate ventilation.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

- **Chemical Composition:**
 - Bentonite (Montmorillonite) - 95-100%
 - May contain trace amounts of quartz and other minerals.

SECTION 4: FIRST AID MEASURES

- **Inhalation:** Move person to fresh air. Seek medical attention if breathing difficulty occurs.
 - **Skin Contact:** Wash with soap and water. Apply moisturizer if irritation occurs.
 - **Eye Contact:** Rinse immediately with water for at least 15 minutes. Seek medical attention if irritation persists.
 - **Ingestion:** Rinse mouth with water. Seek medical attention if symptoms occur.
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SECTION 5: FIRE-FIGHTING MEASURES

- **Flammability:** Non-flammable
- **Suitable Extinguishing Media:** Water, foam, dry chemical, CO₂
- **Special Protective Equipment for Firefighters:** Use self-contained breathing apparatus if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- **Personal Precautions:** Use appropriate protective equipment to avoid inhalation.
- **Environmental Precautions:** Prevent excessive dust release into the environment.
- **Cleanup Methods:** Sweep up and collect in suitable containers. Avoid dry sweeping to minimize dust.

SECTION 7: HANDLING AND STORAGE

- **Handling:**
 - Minimize dust generation and accumulation.
 - Use local exhaust ventilation if necessary.
- **Storage:**
 - Store in a dry, well-ventilated area.
 - Keep container tightly closed.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- **Occupational Exposure Limits:**
 - OSHA PEL (Quartz-containing dust): 0.1 mg/m³ (Respirable)
- **Engineering Controls:** Use local ventilation if necessary.
- **Personal Protective Equipment (PPE):**
 - **Respiratory Protection:** Use NIOSH-approved dust mask if dust exposure is high.
 - **Eye Protection:** Safety glasses or goggles.
 - **Skin Protection:** Protective gloves if prolonged contact occurs.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance:** Fine powder, various colors (gray, beige, tan)
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- **Odor:** Odorless
- **pH (10% solution):** 8-10
- **Boiling Point:** Not applicable
- **Melting Point:** > 1000°C
- **Solubility in Water:** Insoluble, but swells in water

SECTION 10: STABILITY AND REACTIVITY

- **Stability:** Stable under normal conditions.
- **Hazardous Reactions:** None known.
- **Conditions to Avoid:** Excessive moisture, strong acids.
- **Hazardous Decomposition Products:** None known.

SECTION 11: TOXICOLOGICAL INFORMATION

- **Acute Toxicity:** Not classified as toxic.
- **Chronic Exposure:** Long-term inhalation of quartz-containing dust may cause lung disease (silicosis).
- **Carcinogenicity:** Bentonite itself is not classified as a carcinogen, but respirable crystalline silica (if present) is classified as a carcinogen by IARC (Group 1).

SECTION 12: ECOLOGICAL INFORMATION

- **Environmental Effects:** Non-toxic to aquatic and terrestrial organisms.
- **Persistence & Degradability:** Naturally occurring mineral, does not degrade.
- **Bioaccumulation:** Not expected to bioaccumulate.

SECTION 13: DISPOSAL CONSIDERATIONS

- **Waste Disposal Methods:** Dispose of in accordance with local, state, and federal regulations.
- **Packaging Disposal:** Follow regulations for proper disposal or recycling.

SECTION 14: TRANSPORT INFORMATION

- **UN Number:** Not regulated.
 - **Transport Hazard Class:** Not classified.
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- **Packing Group:** Not applicable.
- **Environmental Hazards:** None.

SECTION 15: REGULATORY INFORMATION

- **U.S. OSHA Classification:** Non-hazardous
- **TSCA Listing:** Listed
- **EU Classification:** Not classified as hazardous.

SECTION 16: OTHER INFORMATION

- **NFPA Rating:** Health - 1, Flammability - 0, Reactivity - 0
- **Prepared By:** ATDM
- **Date of Issue:** 2025-02-06

Disclaimer: The information in this MSDS is believed to be correct as of the date issued. However, no warranty is made, either express or implied, regarding its accuracy or completeness. Users should make their own investigation to determine the suitability of the information for their particular purposes.

