

# MATERIAL SAFETY DATA SHEET

## BENTONITE

### SECTION 1 - PRODUCT IDENTIFICATION

**Trade Name:** IBEX BENTONITE  
**Synonym:** Montmorillonite  
**Chemical Family:** Alumino Silicate  
**Formula:**  $A1_2 O_3 SiO_2 H_2O$   
**CAS Number:** 1302-76-7  
**HMIS:** HO\* FO RO

### SECTION 2 - HAZARDOUS INGREDIENTS

Bentonite contains free silica. The current OSHA standard, 8 hour TWA (Respirable Dust) is determined by the formula:

$$10 \text{ mg/M}^3 / \%SiO_2 + 2 \text{ or } 50 \text{ mppcf} / \%SiO_2 + 5$$

ACGIH is proposing a TLV of 0.1 mg/M<sup>3</sup> (Respirable Dust) or 0.3 mg/M<sup>3</sup> (Total Dust). NIOSH has recommended a Permissible Exposure Level of 0.05 mg/M<sup>3</sup>.

### SECTION 3 - PHYSICAL DATA

**Boiling Point (°F):** Not Applicable  
**Vapor Pressure (mm Hg):** Not Applicable  
**Vapor Density:** Not Applicable  
**Solubility in Water:** Insoluble  
**Specific Gravity (H<sub>2</sub>O+1):** 2.58  
**Percent Volatile by Weight:** 0  
**Evaporation Rate:** 0  
**Appearance and Odor:** White Powder, No Odor

### SECTION 4 - FIRE AND EXPLOSIVE HAZARD DATA

**Flash Point (Method Used):** Non-flammable  
**Flammable Limits:** LEL - Non-flammable  
UEL - Non-flammable  
**Extinguishing Media:** Water  
**Special Fire Fighting Procedures:** None  
**Unusual Fire and Explosion Hazards:** None

**SECTION 5 - HEALTH HAZARD DATA**

**Threshold Limit Values:** Silica- 10 mg/M<sup>3</sup> / %SiO<sub>2</sub> + 21 or  
50 mppcf / %SiO<sub>2</sub> + 5 (OSHA)  
0.1 mg/ M<sup>3</sup>, Respirable Dust (ACGIH)  
0.3 mg/M<sup>3</sup>, Total Dust (ACGIH)  
0.05 mg/M<sup>3</sup> Recommended PEL (NIOSH)

**Effects of Overexposure:** Short term overexposure to silica can produce cough, wheezing and dyspnea. Long term overexposure to silica causes silicosis, a form of pulmonary fibrosis. Continued exposure to silica can lead to cardiopulmonary impairment.

**Emergency and First Aid Procedures:** Wash dust from skin with soap and water. Flush out eyes with generous amounts of water for at least 15 minutes. See a Physician if irritation persists.

**SECTION 6 - REACTIVITY DATA**

**Product is stable.**

**Incompatibility:** None

**Hazardous Decomposition Products:** None

**Hazardous Polymerization will not occur.**

**SECTION 7 - SPILL OR LEAK PROCEDURES**

**Steps to be Taken in Case Material is Released or Spilled:** Notify Safety Personnel of major spills. Provide ventilation. Clean-up personnel need protection against eye contact and inhalation of dust. Pick up spills taking care to avoid raising dust clouds (vacuum or wet sweeping is recommended). Place in closed container for disposal.

**Waste Disposal Method:** Dispose in approved landfill. Disposal must be made in accordance with Federal, State and Local regulations.

**SECTION 8 - SPECIAL PROTECTION INFORMATION**

**Eye Protection:** (Use Most Appropriate): Safety Glasses, Goggles, Face Shield.

**Skin Protection:** Leather or Rubber Gloves

**Respiratory Protection:** Use of dust respirator is recommended when exposure limits may be exceeded.

**Ventilation:** Local exhaust ventilation to collector or containment recommended to control dust to below exposure limits.

**SECTION 9 - SPECIAL PRECAUTIONS**

Engineering controls should be used to maintain free silica dust exposures below the TLV. When the limits cannot be met, then the employee must utilize a respiratory protection program.

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