Material Safety Data Sheet
Bentonite

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Bentonite  
**Synonyms:** Bentonite magma; Southern bentonite; tixoton; volclay; volclay bentonite BC; Wilkinite

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1302-78-9</td>
<td>BENTONITE</td>
<td>100</td>
<td>215-108-5</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: cream to gray brown powder.  
**Warning!** Causes eye, skin, and respiratory tract irritation. May cause cancer based on animal studies. Hygroscopic (absorbs moisture from the air). The toxicological properties of this material have not been fully investigated.  
**Target Organs:** Respiratory system, eyes, skin.

**Potential Health Effects**  
**Eye:** Causes eye irritation. May cause chemical conjunctivitis.  
**Skin:** Causes skin irritation.  
**Ingestion:** Ingestion of large amounts may cause gastrointestinal irritation. The toxicological properties of this substance have not been fully investigated.  
**Inhalation:** Causes respiratory tract irritation. The toxicological properties of this substance have not been fully investigated. When inhaled as a dust or fume, may cause benign pneumoconiosis. Can produce delayed pulmonary edema.  
**Chronic:** May cause cancer according to animal studies. Effects may be delayed. Chronic inhalation may cause lung changes, chest pain, breath shortness, and bronchitis.

Section 4 - First Aid Measures
**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

**Ingestion:** Never give anything by mouth to an unconscious person. Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Inhalation:** Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

**Notes to Physician:** Treat symptomatically and supportively.

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### Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Extinguishing Media:** Use water spray, dry chemical, carbon dioxide, or appropriate foam.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 2; Flammability: 0; Instability: 0

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### Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

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### Section 7 - Handling and Storage

**Handling:** Use with adequate ventilation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Wash clothing before reuse.

**Storage:** Store in a cool, dry place. Store in a tightly closed container. Store protected from moisture.

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### Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash
facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENTONITE</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA’s eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to minimize contact with skin.

Section 9 - Physical and Chemical Properties

**Physical State:** Powder

**Appearance:** cream to gray brown

**Odor:** odorless

**pH:** Not available.

**Vapor Pressure:** Not available.

**Vapor Density:** Not available.

**Evaporation Rate:** Not applicable.

**Viscosity:** Not available.

**Boiling Point:** Not available.

**Freezing/Melting Point:** Not available.

**Decomposition Temperature:** Not available.

**Solubility:** Insoluble in water.

**Specific Gravity/Density:** Not available.

**Molecular Formula:** Not applicable.

**Molecular Weight:** Not available.

Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures. Hygroscopic: absorbs moisture or water from the air.

**Conditions to Avoid:** Incompatible materials, excess heat, exposure to moist air or water.

**Incompatibilities with Other Materials:** Moisture, Increase volume significantly when water is added..

**Hazardous Decomposition Products:** Irritating and toxic fumes and gases.

**Hazardous Polymerization:** Has not been reported.

Section 11 - Toxicological Information

**RTECS#:**
CAS# 1302-78-9: CT9450000
LD50/LC50: Not available.

Carcinogenicity:
CAS# 1302-78-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information found
Effects of Bentonite in workers in processing plant experienced a very high incidence of bronchial asthma, (25%) in workers examined. This was attributed to the irritating action of the bentonite dust on the bronchial epithelium.

Teratogenicity: No information found

Reproductive Effects: No information found

Mutagenicity: No information found

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.
RCRA U-Series: None listed.

Section 14 - Transport Information

<table>
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<tr>
<th>IATA</th>
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<tbody>
<tr>
<td><strong>Shipping Name:</strong> Not regulated as a hazardous material</td>
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<tr>
<td><strong>Hazard Class:</strong></td>
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<tr>
<td><strong>UN Number:</strong></td>
</tr>
<tr>
<td><strong>Packing Group:</strong></td>
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</tbody>
</table>

Section 15 - Regulatory Information

Hazard Symbols:

XI
Risk Phrases:
R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:
S 24/25 Avoid contact with skin and eyes.

Section 16 - Additional Information

MSDS Creation Date: 12/12/1997
Revision #6 Date: 10/03/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall INDO GULF GROUP be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if INDO GULF GROUP has been advised of the possibility of such damages.