



Tiam Earth Advanced Materials

Revision No.: 6.2  
Revision Date: 20.04.2021  
Document Code: TE-101-207



## Material Safety Datasheet

# BENTONITE API

[www.teamchem.co](http://www.teamchem.co)

### 1. DESCRIPTION

**Trade Name:** BENTONITE API

**Chemical CLASS:** Mineral

**Chemical Name:** Bentonite (Crystalline silica, quartz <15%), "API Bentonite", "sodium montmorillonite"

**Application:** Viscosifier and fluid loss controller in drilling fluid

**Supplier:** TEAM Chemicals

**Telephone:** +44 (0)207 408 7700 - +98 912 3717539

**Address:** No. 43, Souri St., 43 Ashrafi Esfahani Expressway

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name barium sulfate

CAS 7727- 43- 7, 8054- 35- 1, 12751- 32- 5

### 3. HAZARD IDENTIFICATION

**EMERGENCY OVERVIEW:** IARC Monographs, Vol 68, 1997, concludes that there is sufficient evidence that inhaled crystalline silica in the form of quartz or cristobalite from occupational sources causes cancer in humans. IARC classification Group 1. Because of quantity and composition, the health hazard is small.

**Potential Acute Health Effects:**

#### SWALLOWED

Considered an unlikely route of entry in commercial/industrial environments.

The solid/dust is slightly discomforting to the gastro-intestinal tract.

#### EYE

The dust may produce eye discomfort and abrasive eye inflammation.

#### SKIN

The material may be Abrasive. to the skin.

#### INHALED

The dust is discomforting to the upper respiratory tract.

Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

**Potential Chronic Health Effects:**

Principal routes of exposure are by accidental skin and eye contact and inhalation of generated dusts.

Chronic dust inhalation has been associated with lung disease.

(Source: NIOSHTIC). Symptoms are those of nodular fibrosis and respiratory impairment is characterized by obstruction and restriction of lung function. (Source: Occupational Diseases) Clays may contain a significant level of respirable crystalline silicas.

**Irritant** Yes

**Flammable** No

**Carcinogenic** No

**Oxidant** No

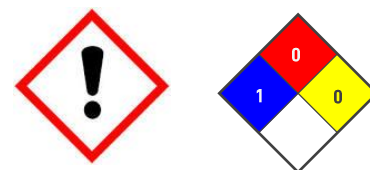
**Explosive** No

**Environmental Hazard** No

**Corrosive** No

**(Risk-Phrases)** For silica: R-20

**(Safety-Phrases)** S-22-25

**4. FIRST AID MEASURES****Eye Contact:**

If this product comes in contact with the eyes:

- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- If pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel

**Skin Contact:**

Brush off dust.

If skin or hair contact occurs:

- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

**Inhalation:**

If dust is inhaled, remove from contaminated area.

- Encourage patient to blow nose to ensure clear breathing passages.
- Ask patient to rinse mouth with water but to not drink water.
- Seek immediate medical attention.

**Ingestion:**

- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

## 5. FIRE FIGHTING MEASURES

**EXTINGUISHING MEDIA** The product is non-combustible. Use fire-extinguishing media appropriate for surrounding materials.

**FIRE FIGHTING** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

**FIRE/EXPLOSION HAZARD** Not determined

**FIRE INCOMPATIBILITY** Not determined

**PERSONAL PROTECTION** Not determined

## 6. ACCIDENTAL RELEASE MEASURES

**Small Spill:** Shovel into dry containers. Cover and move the containers. Flush the area with water. Be aware of the potential for surfaces to become slippery when wet.

**Large Spill:** Shovel into dry containers. Cover and move the containers. Flush the area with water. Be aware of the potential for surfaces to become slippery when wet.

## 7. HANDLING AND STORAGE

**HANDLING Precautions:** Avoid handling which leads to dust formation. Provide good ventilation. Mechanical ventilation or local exhaust ventilation may be required. Do not use contact lenses.

**Storage Precautions:** Store in tightly closed original container in a dry, cool and well-ventilated place.



## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredient	
Bentonite	LT
	4 mg/m <sub>3</sub>
Silica, crystalline, quartz	0.1 mg/m <sub>3</sub>

### PERSONAL PROTECTION

**RESPIRATOR** Respiratory protection must be used if air contamination exceeds acceptable level.

**EYE** Wear dust resistant safety goggles where there is danger of eye contact.

**HAND/FEET** PVC gloves.

### OTHER

No special equipment needed when handling small quantities.

OTHERWISE:

- Overalls.
- Barrier cream.
- Eyewash unit

### ENGINEERING CONTROLS

Use in a well-ventilated area.

- Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powered by mutual friction.
- Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.
- If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered. Such protection might consist of:
  - (a): particle dust respirators, if necessary, combined with an absorption cartridge;
  - (b): filter respirators with absorption cartridge or canister of the right type;
  - (c): fresh-air hoods or masks

## 9. PHYSICAL & CHEMICAL PROPERTIES

**Color:** Light tan/gray powder

**Odor:** Odorless

**pH:** 9-10.5

**Boiling Point:** Not applicable

**Melting/Freezing Point:** Not applicable

**Specific Gravity:** 2.3 – 2.6

**Solubility (Water):** Insoluble



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### 10. STABILITY & REACTIVITY

**Chemical Stability:** Stable

**Conditions to Avoid:** Avoid wet and humid conditions

**Materials to Avoid:** Not determined

**Special Remarks on Reactivity:** Not determined

**Special Remarks on Corrosivity:** Not determined

### 11. TOXICOLOGICAL INFORMATION

**Silica, crystalline, quartz:** This product contains small quantities of quartz. Prolonged inhalation of high concentrations may damage respiratory system. Because of quantity and composition, the health hazard is small.

### 12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Contact TEAM Environmental Affairs for ecological data.

### 13. DISPOSAL CONSIDERATION

**WASTE MANAGEMENT:** Not Determined

**DISPOSAL METHODS:** Recycle wherever possible.

Bury residue in an authorized landfill.

Recycle containers if possible, or dispose of in an authorized landfill.

### 14. TRANSPORT INFORMATION

**U.S. DOT** Not determined

**U.S. DOT CLASS:** Not determined

**Shipping Description:** The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).



## 15. REGULATORY INFORMATION

### Classification:

**Poisons Schedule (SUSMP):** None

### REGULATIONS

bentonite (CAS: 1302-78-9) is found on the following regulatory lists;

Australia High Volume Industrial Chemical List (HVICL)

Australia Inventory of Chemical Substances (AICS)

OECD Representative List of High Production Volume (HPV) Chemicals

bentonite (CAS: 11004-12-9) is found on the following regulatory lists;

Australia Inventory of Chemical Substances (AICS)

No data available for bentonite as CAS: 10043-07-9, CAS: 115628-71-2, CAS: 37320-72-2,

CAS: 52623-66-2, CAS: 850872-77-4, CAS: 135945-01-6, CAS: 12199-69-8,

CAS: 12198-92-4.

## 16. ADDITIONAL INFORMATION

Ingredient Name: Bentonite

CAS: 1302- 78- 9, 11004- 12- 9, 10043- 07- 9, 115628-71- 2, 37320- 72- 2, 52623- 66- 2, 850872- 77-4, 135945- 01- 6, 12199- 69- 8, 12198- 92- 4

3 Yearly Revised Primary MSDS

Update in Toxicological Information

Update in Ecological Information