



MSDS - Bentonite

Issued January 1, 2009

Section 1. Product Information

Product Name: Bentonite

Distributed by Pestell Minerals & Ingredients, New Hamburg, ON Canada

24 Hour Emergency Telephone (Canutec): 613-996-6666

Section 2. Hazardous Identification

Emergency Overview: Material can be slippery when wet

Potential Health Effects

Routes of Exposure

Eyes: Dust or powder may irritate eye tissue

Skin: Non irritating to the skin

Inhalation: Repeated or prolonged inhalation may cause toxic effects. For additional information on inhalation hazards, see Section 11 of this safety data sheet.

Target Organs

Lungs: This product has the potential for generation of respirable dust during handling and use. Dust may contain respirable crystalline silica. Over exposure to dust may result in pneumoconiosis, a respiratory disease caused by inhalation of mineral dust, which can lead to fibrotic changes to the lung tissue, or silicosis, a respiratory disease caused by inhalation of silica dust, which can lead to inflammation and fibrosis of the lung tissue. Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

Section 3. Composition/Information on Ingredients

Composition Comments: Bentonite contains naturally occurring crystalline silica (not listed in Annex 1 of Directive 67/548/EEC) in quantities less than 6%.

Section 4. First Aid Measures

Eye Contact: Flush eyes immediately with large amounts of water. If irritation persists get medical attention.

Skin Contact: No special measures required. Get medical attention if irritation develops or persists.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Get medical attention if needed.

Ingestion: No special measures required. If ingestion of a large amount does occur, seek medical attention.

Notes to Physician: Provide general supportive measures and treat symptomatically.

Section 5. Fire Fighting Measures

Flammable Properties: This material will not burn

Unusual Fire & Explosion Hazards: None known

Extinguishing Media: Use any media suitable for the surrounding fires. Dry chemical, CO₂, water spray or regular foam.

Fire Fighting Equipment/Instructions: Material can be slippery when wet

Protective Equipment for Firefighters: As in any fire, wear self contained breathing apparatus pressure demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6. Accidental Release Measures

Personal Precautions: Material can be slippery when wet. Wear a dust mask if dust is generated above exposure limits.

Environmental Precautions: No special environmental precautions required

Methods for Cleaning Up: Avoid the generation of dusts during clean-up. Collect dust or particulates using a vacuum cleaner with a HEPA filter. Reduce airborne dust and prevent scattering by moistening with water.

Section 7. Handling and Storage

Handling: Keep formation of airborne dusts to a minimum. Provide appropriate exhaust ventilation at places where dust is form. In case of insufficient ventilation, wear suitable respiratory equipment.

Storage: Guard against dust accumulation of this material. No special storage conditions required. No special restrictions on storage with other products.

Section 8. Exposure Controls/Personal Protection

Exposure Guidelines: Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

ACGIH - TLV - TWA

Particulates (Inert Dust) RR-0072-6 10mg/m³ TWA (inhalable particles, recommended); 3mg/m³ TWA (respirable particles, recommended)

Canada-Alberta - Occupational Exposure Limits - TWA's

Particulates (Inert Dust) RR-0072-6 10mg/m³ TWA (total particulates); 3mg/m³ TWA (respirable particles)

Canada-British Columbia - Occupational Exposure Limits - TWA's

Particulates (Inert Dust) RR-0072-6 10mg/m³ TWA (total dust); 3mg/m³ TWA (respirable fraction)

Canada-Manitoba - Occupational Exposure Limits - TWA's

Particulates (Inert Dust) RR-0072-6 10mg/m³ TWA (total dust containing no asbestos and <1% free silica)

Canada-Ontario - Occupational Exposure Limits - TWA's

Particulates (Inert Dust) RR-0072-6 10mg/m³ TWAEV (inhalable); 3mg/m³ TWAEV (respirable)

Canada-Quebec - Occupational Exposure Limits - TWA's

Particulates (Inert Dust) RR-0072-6 10mg/m³ TWA (total dust); 3mg/m³ TWA (respirable fraction)

U.S. - OSHA - Final PELs - TWA

Particulates (Inert Dust) RR-0072-6 15mg/m³ TWA (total dust); 5mg/m³ TWA (respirable fraction)

Engineering Controls: If material is ground, cut or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL, suitable respiratory

protection must be worn.

Personal Protective Equipment

Eye/Face Protection: Wear dust goggles. Eye wash fountain is recommended

Respiratory protection: Use a particulate filter respirator for particulate concentrations exceeding the **Occupational Exposure Limit**.

Skin and Body Protection: No special protective equipment required.

General Hygiene Considerations: Use good industrial hygiene practices in handling this material.

Section 9. Physical/Chemical Properties

Color: Various

Form: Granular or Powder

Odor: None

Odor Threshold: Not available

Physical State: Solid

pH: 7 - 11

Melting Point: Not available

Freezing Point: Not available

Boiling Point: 2192°F (1200°C) estimated

Flash Point: Non flammable

Evaporation Rate: Not available

Flammability Limits in Air, Lower % by volume: Non explosive

Flammability Limits in Air, Upper % by volume: Not available

Vapor Pressure: Not available

Vapor Density: Not available

Specific Gravity: 2.6

Solubility (H₂O): Negligible

Octanol/H₂O coeff: Not available

Auto-ignition Temperature: Not available

Decomposition Temperature: Not available

Section 10. Chemical & Reactivity Information

Chemical Stability: Stable at normal conditions

Conditions to Avoid: None known

Incompatible Materials: None known

Hazardous Decomposition Products: None known

Hazardous Polymerization: Will not occur

Section 11. Toxicological Information

Routes of Exposure: Inhalation

Acute Effects: Overexposure to dust may result in pneumoconiosis, a respiratory disease caused by inhalation of mineral dust, which can lead to fibrotic changes to the lung tissue, or silicosis, a respiratory disease caused by

inhalation of silica dust, which can lead to inflammation and fibrosis of the lung tissue.

Eye: Mild irritant to eyes (according to the modified Kay & Calandra criteria)

Skin: According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

Chronic Effects: In 1997, IARC (International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France).

In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003).

According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

Section 12. Ecological Information

Ecotoxicity: This product is not expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

Environmental Effects: Based on the physical properties of this product, significant environmental persistence and bioaccumulation would not be expected.

Section 13. Disposal Considerations

Dispose in accordance with all applicable regulations. Material should be recycled if possible.

Section 14. Transport Information

DOT: Not regulated as dangerous goods

IATA: Not regulated as dangerous goods

IMDG: Not regulated as dangerous goods

Section 15. Regulatory Information

OSHA Process Safety Standard: This material is not known to be hazardous by the OSHA Highly Hazardous Process Safety Standard, 29 CFR 1910.119

WHMIS Classification: D2A - Other Toxic Effects - VERY TOXIC

Disclaimer

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