

VERMICULITE ORE

Hazard Alert Code:
MODERATE

Chemwatch Material Safety Data Sheet (REVIEW)

Revision No: 3

Chemwatch 4602-28

Issue Date: 17-Mar-2006

CD 2008/3

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

VERMICULITE ORE

SYNONYMS

"vermiculite unexpanded solid concentrate", "hydrated magnesium aluminium iron silicate complex"

PRODUCT USE

Manufacture of exfoliated vermiculite. Manufacture of seals and gaskets where the expansion on heating property is used. Component of gap fillers for fire walls.

SUPPLIER

Company: Bisley & Company Pty Ltd

Address:

PO Box 695

Chatswood

NSW, 2057

AUS

Telephone: +61 2 9413 1333

Fax: +61 2 9413 1319

HAZARD RATINGS

	Min	Max
Flammability:	0	
Toxicity:	0	
Body Contact:	0	
Reactivity:	0	
Chronic:	2	

Min/Nil=0
Low=1
Moderate=2
High=3
Extreme=4

Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

POISONS SCHEDULE

None

RISK

Cumulative effects may result following exposure*.

* (limited evidence).

SAFETY

Do not breathe dust.

Avoid contact with skin.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
vermiculite	1318-00-9	>98
a hydrated magnesium aluminium iron silicate		

Section 4 - FIRST AID MEASURES

SWALLOWED

Rinse mouth out with plenty of water. For advice, contact a Poisons Information Centre or a doctor.

EYE

If this product comes in contact with the eyes:

- Immediately hold eyelids apart and flush the eye continuously with 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.
- Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

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- Transport to hospital or doctor without delay.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

If skin or hair contact occurs:

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

INHALED

- If dust is inhaled, remove from contaminated area.
- Encourage patient to blow nose to ensure clear passage of breathing.
- If irritation or discomfort persists seek medical attention.

NOTES TO PHYSICIAN

Treat symptomatically.

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

There is no restriction on the type of extinguisher which may be used.

- Use extinguishing media suitable for surrounding area.

FIRE FIGHTING

Alert Fire Brigade and tell them location and nature of hazard.
Product is not combustible. No special firefighting procedures required.
Use fire fighting procedures suitable for surrounding area.

FIRE/EXPLOSION HAZARD

- Non combustible.
- Not considered a significant fire risk, however containers may burn.

FIRE INCOMPATIBILITY

No known incompatibility with normal range of industrial materials.

HAZCHEM

None

Section 6 - ACCIDENTAL RELEASE MEASURES

EMERGENCY PROCEDURES

MINOR SPILLS

Clean up all spills immediately.
Wear impervious gloves and safety glasses.
If exposure to workplace dust is not controlled, respiratory protection is required; wear SAA approved dust respirator.
Use dry clean up procedures and avoid generating dust.
Place spilled material in clean, dry, sealable, labelled container.

MAJOR SPILLS

Clear area of personnel and move upwind.
Alert Fire Brigade and tell them location and nature of hazard.
Wear protective clothing, gloves, safety glasses and dust respirator.
Prevent, by any means available, spillage from entering drains or watercourses.
Use dry clean up procedures and avoid generating dust.
Recover uncontaminated product in clean, dry, labelled containers.
Collect residues and seal in labelled drums for disposal.
If contamination of drains or waterways occurs, advise emergency services.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



X: Must not be stored together

O: May be stored together with specific preventions

+: May be stored together

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

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Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

Avoid generating and breathing dust Use good occupational work practice.
Avoid contact with skin and eyes Avoid physical damage to containers.
Wear protective clothing when risk of exposure occurs.
Use in a well-ventilated area.
Wash hands with soap and water after handling.
Launder contaminated clothing before re-use.

SUITABLE CONTAINER

- Packaging as recommended by manufacturer.

Paper bag with sealed plastic liner

NOTE: Bags should be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse.

Multi-ply woven plastic or paper bag with sealed plastic liner

NOTE: Bags should be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse.

- Check that containers are clearly labelled

STORAGE INCOMPATIBILITY

None known.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry area protected from environmental extremes.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations

For major quantities:

- Consider storage in bunded areas - ensure storage areas are isolated from sources of community water (including stormwater, ground water, lakes and streams).
- Ensure that accidental discharge to air or water is the subject of a contingency disaster management plan; this may require consultation with local authorities.

Store away from incompatible materials.

Protect containers against physical damage.

- Check regularly for spills and leaks

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- vermiculite:

CAS:1318-00-9

MATERIAL DATA

Not available. Refer to individual constituents.

INGREDIENT DATA

VERMICULITE:

The concentration of respirable dust for application of this limit is to be determined from the fraction that penetrates a separator whose size collection efficiency is described by a cumulative lognormal function with a median aerodynamic volume of 4.0 μm (+-) 0.3 μm and with a geometric standard deviation of 1.5 μm (+-) 0.1 μm , i.e.. less than 5 μm .

The TLV-TWA is thought to be sufficiently low to prevent changes in pre- employment chest X-ray findings in exposed employees, in some cases following decades of exposure. The limit is thought to be protective against disabling pneumoconiosis.

PERSONAL PROTECTION



EYE

- Safety glasses with side shields; or as required,
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first

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signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59]

HANDS/FEET

Wear general protective gloves: i.e. Disposable polythene gloves or Cotton gloves or Light weight rubber gloves, with Barrier cream preferably Safety footwear.

OTHER

Overalls.

- Eyewash unit.

If exposure is regular use

RESPIRATOR

Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
10 x ES	P1 Air-line*	- -	PAPR-P1 -
50 x ES	Air-line**	P2	PAPR-P2
100 x ES	-	P3	-
		Air-line*	-
100+ x ES	-	Air-line**	PAPR-P3

* - Negative pressure demand ** - Continuous flow.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

None required when handling small quantities Use in a well-ventilated area.

If exposure to workplace dust is not controlled, respiratory protection is required; wear SAA approved dust respirator.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

White to grey mica-like flakes, ranging in size from around 0.5-16mm. Insoluble in water.

PHYSICAL PROPERTIES

Solid.

Does not mix with water.

Sinks in water.

Molecular Weight: Not applicable

Melting Range (°C): 900 approx.

Solubility in water (g/L): Immiscible

pH (1% solution): Not applicable

Volatile Component (%vol): Nil @ 38 C.

Relative Vapour Density (air=1): Not applicable

Lower Explosive Limit (%): Not applicable

Autoignition Temp (°C): Not applicable

State: Divided solid

Boiling Range (°C): Not applicable.

Specific Gravity (water=1): 2.6-3.2

pH (as supplied): Not applicable

Vapour Pressure (kPa): Negligible

Evaporation Rate: Non Volatile

Flash Point (°C): Non Flammable

Upper Explosive Limit (%): Not applicable

Decomposition Temp (°C): Not available

Viscosity: Not available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

- Presence of incompatible materials.
- Product is considered stable.
- Hazardous polymerisation will not occur.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

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

Not normally a hazard due to the physical form of product. The material is a physical irritant to the gastro-intestinal tract and regarded as non-toxic if swallowed.

EYE

The solid/dust is discomforting and may be abrasive to the eyes.

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SKIN

Not considered an irritant through normal use.

Irritation and skin reactions are possible with sensitive skin.

The material may be slightly abrasive to the skin and may cause drying of the skin, which may lead to dermatitis.

INHALED

The dust may be discomfiting to the upper respiratory tract and lungs if inhaled and if exposure is prolonged.

CHRONIC HEALTH EFFECTS

Principal routes of exposure are usually by inhalation of generated dust and skin contact with the material.

Repeated exposures, in an occupational setting, to high levels of fine- divided dusts may produce a condition known as pneumoconiosis which is the lodgement of any inhaled dusts in the lung irrespective of the effect. This is particularly true when a significant number of particles less than 0.5 microns (1/50,000 inch), are present. Lung shadows are seen in the X-ray. Symptoms of pneumoconiosis may include a progressive dry cough, shortness of breath on exertion, increased chest expansion, weakness and weight loss. As the disease progresses the cough produces a stringy mucous, vital capacity decreases further and shortness of breath becomes more severe. Pneumoconiosis is the accumulation of dusts in the lungs and the tissue reaction in its presence. It is further classified as being of noncollagenous or collagenous types. Noncollagenous pneumoconiosis, the benign form, is identified by minimal stromal reaction, consists mainly of reticulin fibres, an intact alveolar architecture and is potentially reversible.

TOXICITY AND IRRITATION

Not available. Refer to individual constituents.

VERMICULITE:

Not available. Refer to individual constituents.

Section 12 - ECOLOGICAL INFORMATION

No data for Vermiculite Ore.

Refer to data for ingredients, which follows:

VERMICULITE:

DO NOT discharge into sewer or waterways.

Section 13 - DISPOSAL CONSIDERATIONS

Recycle wherever possible.

Consult State Land Waste Management Authority for disposal.

Bury residue in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None (ADG6)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE

None

REGULATIONS

Vermiculite Ore (CAS: None):

No regulations applicable

vermiculite (CAS: 1318- 00- 9) is found on the following regulatory lists;

Australia Inventory of Chemical Substances (AICS)

Section 16 - OTHER INFORMATION

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references.

The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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