



MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Material name VOLCLAY WATERSTOPPAGE®
Version No. 06
Revision date 28-June-2012
CAS # 1302-78-9
Manufacturer information AMCOL Australia Pty Ltd.
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2. HAZARDS IDENTIFICATION

NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS #	Percent
Bentonite	1302-78-9	100

Constituents	CAS #	Percent
SMECTITE GROUP MINERALS	1318-93-0	
Calcium carbonate	471-34-1	
Quartz	14808-60-7	<= 8
Cristobalite	14464-46-1	<= 2

Composition comments The purity of the product is 100% w/w. Impurities are not applicable for a UVCB substance.

4. FIRST-AID MEASURES

Inhalation No specific first aid measures noted. Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact No specific first aid measures noted. Wash skin with soap and water. Get medical attention if irritation develops and persists.

Eye contact No specific first aid measures noted. Flush thoroughly with water. If irritation occurs, get medical assistance.

Ingestion No specific first aid measures noted. Rinse mouth thoroughly. Get medical attention if any discomfort occurs.

General advice No hazards which require special first aid measures. Provide general supportive measures and treat symptomatically.

Notes to physician Provide general supportive measures and treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Use any media suitable for the surrounding fires.

Extinguishing media which must not be used for safety reasons Not applicable, non-combustible.

Unusual fire & explosion hazards The product is not flammable.

Specific hazards None known. The product itself does not burn.

Special protective equipment for fire-fighters None known.

Hazchem Code None

6. ACCIDENTAL RELEASE MEASURES

Personal precautions No special precautions are necessary beyond normal good hygiene practices. See Section 8 for additional personal protection advice when handling this product.

Environmental precautions No special environmental precautions required. Prevent further leakage or spillage if safe to do so.

7. HANDLING AND STORAGE

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

Storage Store in a dry area. Keep the container dry. No special restrictions on storage with other products.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure limits

US. ACGIH Threshold Limit Values

Constituents	Type	Value	Form
INERT OR NUISANCE DUSTS (SEQ250)	TWA	3 mg/m ³	Respirable particles.
		10 mg/m ³	Inhalable particles.

Recommended monitoring procedures

Additional exposure data No Exposure standards allocated.

Engineering measures Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn.

Personal protective equipment

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

Hand protection No protection is ordinarily required under normal conditions of use.

Eye protection Wear dust-resistant safety goggles where there is danger of eye contact.

Skin and body protection No special protective equipment required. Normal work clothing (long sleeved shirts and long pants) is recommended.

General Applicable for industrial settings only:

Environmental exposure controls Contain spills and prevent releases and observe national regulations on emissions.

Hygiene measures Use good industrial hygiene practices in handling this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Lump, granular or fine powder.

Physical state Solid.

Form Various.

Colour Various.

Odour None.

Odour threshold Not applicable.

pH 8.5 - 11

Vapour pressure Not applicable.

Vapour density Not applicable.

Boiling point Not applicable.

Melting point/freezing point > 450 °C (> 842 °F) / Not applicable.

Solubility (water) < 0.9 mg/l

Specific gravity Not applicable.

Flash point Not applicable.

Flammability limits in air, upper, % by volume	Not applicable.
Flammability limits in air, lower, % by volume	Not applicable.
Auto-ignition temperature	Not applicable.
VOC	0 %
Viscosity	Not applicable.
Viscosity temperature	Not applicable.
Percent volatile	0 %
Partition coefficient (n-octanol/water)	Not applicable. Not applicable.
Flammability (Train fire)	Not applicable.
Bulk density	0.9 - 1.4 g/cm ³
Molecular weight	Not applicable.
Molecular formula	UVCB Substance
Other data	
Decomposition temperature	> 500 °C (> 932 °F)
Explosive limit	Not applicable.
Explosive properties	Not explosive
Explosivity	Not applicable.
Flame extension	Not applicable.
Flammability	Not applicable.
Flammability (flash back)	Not applicable.
Flammability (Heat of combustion)	Not applicable.
Flammability (solid, gas)	This product is not flammable.
Flammability class	Not applicable.
Flash point class	Not flammable
Oxidizing properties	None.
pH in aqueous solution	8.5 - 11
Relative density	2.6 g/cm ³

10. STABILITY AND REACTIVITY

Chemical stability	Stable at normal conditions.
Conditions to avoid	Moisture.
Materials to avoid	None known.
Hazardous decomposition products	None.
Hazardous polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological data

Product	Species	Test results
Bentonite (1302-78-9)		
Acute		
<i>Inhalation</i>		
LC50	Rat	> 5.27 mg/l, 4 hr, OECD 436
<i>Oral</i>		
LD50	Rat	> 2000 mg/kg, OECD 425
Acute toxicity	Not classified.	

Sensitisation	Not classified.
Carcinogenicity	No carcinogenicity data available for this product. Sepiolite was evaluated by IARC as class 3 ("Cannot be classified as to carcinogenicity to humans"). Based on read-across with sepiolite, bentonite was assessed as non-carcinogenic. Therefore classification of bentonite for carcinogenicity is not warranted.
Mutagenicity	Not classified.
Reproductivity	Not classified.
Symptoms and target organs	None known.

12. ECOLOGICAL INFORMATION

Ecotoxicological data

Product		Species	Test results
Bentonite (1302-78-9)			
Crustacea	EC50	Daphnia	> 100 mg/l, 48 hours
Other	EC50	Freshwater algae	> 100 mg/l, 72 hours
	LC50	Freshwater fish	16000 mg/l, 96 hours
		Marine water fish	2800 - 3200 mg/l, 24 hours
Aquatic			
Crustacea	EC50	Coon stripe shrimp (<i>Pandalus danae</i>)	24.8 mg/l, 96 hours
		Dungeness or edible crab (<i>Cancer magister</i>)	81.6 mg/l, 96 hours
Fish	LC50	Rainbow trout, donaldson trout (<i>Oncorhynchus mykiss</i>)	19000 mg/l, 96 hours

Persistence and degradability Not relevant for inorganic substances

Mobility Low water solubility, expected to sink and migrate into the sediment. Expected to partition to sediment and wastewater solids.

Bioaccumulation Will not bio-accumulate.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. DISPOSAL CONSIDERATIONS

Disposal instructions Dispose in accordance with all applicable regulations.

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated packaging Store containers and offer for recycling of material when in accordance with the local regulations.

14. TRANSPORT INFORMATION

ADG

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Hazchem Code None

15. REGULATORY INFORMATION

National regulations This Material Safety Data Sheet was prepared in accordance with the Australia National Code of Practice for the Preparation of Material Safety Data Sheets (NOHSC: 2011.) No poison schedule number allocated.

Australia HVIC: Listed substance

Bentonite (CAS 1302-78-9) Listed.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. OTHER INFORMATION

Recommended restrictions None known.

Further information This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

Bibliography For any information on literature references or toxicity/ecotoxicity studies, please contact the supplier.

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This data sheet contains changes from the previous version in section(s): This document has undergone significant changes and should be reviewed in its entirety.