



12/1/16

## SAFETY DATA SHEET

According to Regulation (EC) No 1907/2006 (REACH)

### 1. PRODUCT IDENTIFICATION

Trade Name(s): ECOSHIELD-PB, ECOSHIELD-PB/SR, e.shield 205b, e.shield 205b sr

Chemical Family: Bentonite

Synonyms: None

Supplier:

EPRO Services, Inc.

PO Box 347

Derby, KS 67037

800-882-1896 (8:00am – 5:00pm CST)

### 2. HAZARD(S) IDENTIFICATION

Emergency Overview: Generally not required under normal conditions of use.

#### Acute Potential Health Effects/ Routes of Entry

Inhalation: Not applicable under normal conditions of use.

Eyes: Not applicable under normal conditions of use.

Ingestion: Not applicable under normal conditions of use.

Skin: May cause mild irritation.

#### Aggravated Medical Conditions

Pre-existing eye, skin and respiratory disorders may be aggravated by exposure.

#### Chronic Health Effects

This product contains granular materials which may cause mechanical skin, eye or respiratory irritation.

Inhalation of crystalline silica (quartz) can cause cancer based on animal data, and IARC concludes sufficient evidence in humans (Group 1). Prolonged and repeated overexposure to free crystalline silica dust above the TLV level may cause scarring of the lungs with cough and shortness of breath. A delayed lung injury, silicosis may result from breathing free silica.

Target Organs: Skin, Eye, Lung.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS-No.</u>	<u>Weight%</u>
Bentonite	1302-78-9	>60.0
Water	7732-18-5	10.0-30.0
Polyethylene-cross –laminated high density	9002-88-4	<10%
n-Butyl acrylate resin	9003-49-0	3.0-7.0
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	1.0-5.0
Silica (crystalline-tridymite)	15468-32-3	<1.0
Silica (crystalline-cristobalite)	4464-46-1	<1.0

### 4. FIRST-AID MEASURES

Get immediate medical attention for any significant overexposure.

Inhalation: Generally not required under normal conditions of use.

Eye contact: Generally not required under normal conditions of use.

Skin contact: Clean area of contact thoroughly using soap and water. If irritation, rash or other disorders develop, get medical attention immediately.

Ingestion: Generally not required under normal conditions of use.

### 5. FIRE-FIGHTING MEASURES

Flash Point: N/A

Auto ignition Temperature: N/A

Flammability Limits: NA

Fire Extinguishing Media: All standard firefighting media.

Special Exposure Hazards: N/A

Special Protective Equipment for Fire-Fighters: N/A

NFPA Ratings: Health 0, Flammability 0, Reactivity 0

HMIS Ratings: Health 0, Flammability 0, Reactivity 0

### 6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Use appropriate protective equipment. Avoid creating and breathing dust.

Environmental Precautionary Measures: None known.

Procedure for Cleaning/Absorption: Collect using dustless method and use appropriate methods for collection, storage and disposal.

### 7. HANDLING AND STORAGE

Handling Precautions: Material is slippery when wet.

Storage Information: Store under normal warehouse conditions.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: General ventilation is acceptable.

Respirator Protection: Not required under normal working conditions

Hand Protection: Normal work gloves.

Skin Protection: Wear clothing appropriate for the work environment. Dusty clothing should be laundered before reuse.

Eye Protection: Wear safety glasses or goggles to protect against exposure.

Other Precautions: None known.

Chemical Name	CAS Number	Regulation	Limit	Form
Bentonite	1302-78-9	ACGIH TWA:	3 mg/m <sup>3</sup>	Respirable particles.
		ACGIH TWA:	10 mg/m <sup>3</sup>	Inhalable particles.
		OSHA PEL:	15mg/m <sup>3</sup>	Total dust.
		OSHA PEL:	5mg/m <sup>3</sup>	Respirable fraction.
		OSHA TWA:	15 mg/m <sup>3</sup>	Total dust.
		OSHA TWA:	5mg/m <sup>3</sup>	Respirable fraction
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	ACGIH TWA:	0.05 MG/M <sup>3</sup>	Respirable fraction.
		OSHA TWA:	0.1 mg/m <sup>3</sup>	Respirable.
		OSHA TWA:	0.1 mg/mc	Respirable.
		OSHA TWA:	0.3 mg/m <sup>3</sup>	Total dust.
		OSHA PEL:	15 mg/m <sup>3</sup>	Total dust.
		OSHA PEL:	5 mg/m <sup>3</sup>	Respirable fraction.
Silica (crystalline cristobalite)	14464-46-1	ACGIH TWA:	0.05 mg/m <sup>3</sup>	Respirable fraction
		OSHA TWA:	0.05mg/m <sup>3</sup>	Respirable.
		OSHA TWA:	0.15 mg/m <sup>3</sup>	Total dust.
		OSHA PEL:	15 mg/m <sup>3</sup>	Total dust.
		OSHA PEL:	5 mg/m <sup>3</sup>	Respirable fraction.
		OSHA PEL:	5 mg/m <sup>3</sup>	Respirable fraction.
Silica (crystalline tridymite)	15468-32-3	ACGIH TWA:	0.05 mg/m <sup>3</sup>	Respirable fraction.
		OSHA TWA:	0.05 mg/m <sup>3</sup>	Respirable.
		OSHA TWA:	0.15 mg/m <sup>3</sup>	Total dust.
		OSHA PEL:	15 mg/m <sup>3</sup>	Total dust
		OSHA PEL:	5 mg/m <sup>3</sup>	Respirable fraction.
		OSHA PEL:	5 mg/m <sup>3</sup>	Respirable fraction.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Color: Black

Odor: None

pH: Not applicable.

Vapor pressure: Not applicable.

Vapor density: Not applicable.

Melting point/range: Not available.

Freezing point: Not available.

Boiling point/range: Not available.

Water solubility: Gels

Specific Gravity: 1.7

% Volatile Weight: 13 %

## 10. STABILITY AND REACTIVITY

Stability: Stable

Conditions to avoid: None anticipated.

Hazardous Polymerization: Will not occur.

Incompatibility (materials to avoid): Hydrofluoric acid

Hazardous Decomposition or Byproducts: Amorphous silica may transform at elevated temperatures to tridymite (870 C) or cristobalite (1470 C).

Additional Guidelines: N/A

## 11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure: Eye or skin contact, inhalation.

Inhalation: Inhaled crystalline silica in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (IARC, Group 1). There is sufficient evidence in experimental animals for the carcinogenicity of tridymite (IARC, Group 2A). Breathing silica dust may cause irritation of the nose, throat, and respiratory passages. Breathing silica dust may not cause noticeable injury or illness even though permanent lung damage may be occurring. Inhalation of dust may also have serious chronic health effects (See "Chronic Effects/Carcinogenicity" subsection below.)

Skin Contact: May cause mechanical skin irritation.

Eye Contact: May cause eye irritation.

Ingestion: None known.

Aggravated Medical Conditions: Individuals with respiratory disease, including but not limited to asthma and bronchitis, or subject to eye irritation, should not be exposed to quartz dust.

### Chronic Effects / Carcinogenicity

Silicosis: Excessive inhalation of respirable crystalline silica dust may cause a progressive, disabling, and sometimes-fatal lung disease called silicosis. Symptoms include cough, shortness of breath, wheezing, non-specific chest illness, and reduced pulmonary function. This disease is exacerbated by smoking. Individuals with silicosis are predisposed to develop tuberculosis.

Cancer Status: The International Agency for Research on Cancer (IARC) has determined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources can cause lung cancer in humans (Group 1 - carcinogenic to humans) and has determined that there is sufficient evidence in experimental animals for the carcinogenicity of tridymite (Group 2A - possible carcinogen to humans). Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (June 1997) in conjunction with the use of these minerals. The National Toxicology Program classifies respirable crystalline silica as "Known to be a human carcinogen". Refer to the 9th Report on Carcinogens (2000). The American Conference of Governmental Industrial Hygienists (ACGIH) classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

There is some evidence that breathing respirable crystalline silica or the disease silicosis is associated with an increased incidence of significant disease endpoints such as scleroderma (an immune system disorder manifested by scarring of the lungs, skin, and other internal organs) and kidney disease.

### Other Information

For further information consult "Adverse Effects of Crystalline Silica Exposure" published by the American Thoracic Society Medical Section of the American Lung Association, American Journal of Respiratory and Critical Care Medicine, Volume 155, pages 761 -768 (1997).

#### Toxicity Tests

Oral Toxicity: Not determined

Dermal Toxicity: Not determined

Inhalation Toxicity: Not determined

Primary Irritation Effect: Not determined

Carcinogenicity: Refer to IARC Monograph 68, Silica, Some Silicates and Organic Fibres (June 1997).

Genotoxicity: Not determined

Reproductive / Developmental Toxicity: Not determined

## **12. ECOLOGICAL INFORMATION**

Mobility (Water/Soil/Air): Not determined

Persistence/Degradability: Not determined

Bio-accumulation: Not determined

#### Ecotoxicological Information

Acute Fish Toxicity: TLM96: 10000 ppm (Oncorhynchus mykiss)

Acute Crustaceans Toxicity: Not determined

Acute Algae Toxicity: Not determined

Chemical Fate Information: Not determined

Other Information: Not applicable

## **13. DISPOSAL CONSIDERATIONS**

Disposal Method: Bury in a licensed landfill according to federal, state, and local regulations.

Contaminated Packaging: Follow all applicable national or local regulations.

Disposal Method: As purchased, this product, when discarded, is not a listed or characteristic hazardous waste according to Federal regulations (40 CFR 261). Check local, regional, state or provincial regulations for applicable requirements for disposal. Any processing, using, alteration or chemical additions to the product, as purchased, may alter the disposal requirements. Under Federal regulations, it is the generator's responsibility to determine if a waste is a hazardous waste. Empty containers may retain product residue. Do not reuse.

## **14. TRANSPORT INFORMATION**

#### Land Transportation

Dot: Not restricted

Canadian TDG: Not restricted

ADR: Not restricted

#### Air Transportation

ICAO/IATA: Not restricted

#### Sea Transportation

IMDG: Not restricted

## 15. REGULATORY INFORMATION

### US Regulations

US TSCA Inventory: All components listed on inventory.  
EPA SARA Title III Extremely Hazardous Substances: Not applicable  
EPA SARA (311,312) Hazard Class: Acute Health Hazard. Chronic Health Hazard.  
EPA SARA (313) Chemicals: This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).  
EPA CERCLA/Superfund Reportable Spill Quantity: Not applicable.  
EPA RCRA Hazardous Waste Classification: If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.  
California Proposition 65: The California Proposition 65 regulations apply to this product.  
MA Right-to-Know Law: One or more components listed.  
NJ Right-to-Know Law: One or more components listed.  
PA Right-to-Know Law: One or more components listed.

### Canadian Regulations

Canadian DSL Inventory: All components listed on inventory.  
WHMIS Hazard Class: Crystalline silica

### North American Inventories

All components are listed or exempt from the TSCA inventory.  
This product or its components are listed on, or exempt from the Canadian Domestic Substances List.

### U.S. Federal Regulations

SARA 313 Components: None present or none present in regulated quantities.  
SARA 311/312 Hazards: Acute Health Hazard

### OSHA Hazardous Components

Bentonite: 1302-78-9  
Crystalline Silica (Quartz)/ Silica Sand: 14808-60-7  
Silica (crystalline-cristobalite): 14464-46-1  
Silica (crystalline-tridymite): 15468-32-3

### OSHA Status: Considered hazardous based on the following criteria: Irritant

OSHA Flammability: Not Regulated  
Regulatory VOC (less water and exempt solvent): 0 g/l  
VOC Method 310: 0 %

### Chemical is listed as an IARC, NTP, OSHA, or ACGIH Carcinogen

Crystalline Silica (Quartz)/ Silica Sand: 14808-60-7  
Silica (crystalline-cristobalite): 14464-46-1  
Silica (crystalline-tridymite): 15468-32-3

### U.S. State Regulations

MASS RTK Components:	Crystalline Silica (Quartz)/ Silica Sand 14808-60-7
Penn RTK Components:	Bentonite 1302-78-9
	Water 7732-18-5
	n-Butyl acrylate resin 9003-49-0
	Crystalline Silica (Quartz)/ Silica Sand 14808-60-7

NJ RTK Components :	Bentonite	1302-78-9
	Water	7732-18-5
	n-Butyl acrylate resin	9003-49-0
	Crystalline Silica (Quartz)/ Silica Sand	14808-60-7
	Silica (crystalline-tridymite)	15468-32-
	Silica (crystalline-cristobalite)	14464-46-1

Chemicals known to the State of California to cause cancer birth defects and/or other reproductive harm:

14808-60-7	Crystalline Silica (Quartz)/ Silica Sand
14464-46-1	Silica (crystalline-cristobalite)
15468-32-3	Silica (crystalline-tridymite)

**16. OTHER INFORMATION**

HMIS Rating		
Health	1	0 = Minimum
Flammability	1	1 = Slight
Reactivity	0	2 = Moderate
PPE		3 = Serious
		4 = Severe

This information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designated only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.