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MATERIAL SAFETY DATA SHEET

Trade Name: BARACLEAR®, AquaBlok+™

Section I — General Information

Item Name:	BARACLEAR® Composite Particle
Supplier:	AquaBlok, Ltd. 3401 Glendale Avenue, Suite 300 Toledo, Ohio 43614 Phone: (800) 688-2649 Fax: (419) 385-2990 email: services@aquablokinfo.com
Date MSDS Prepared:	August 15, 2008
Last Review Date:	March 11, 2009
MSDS Preparer's Name/Address:	Prepared by supplier.
Unit of Issue/Container Type:	One to five-gallon pails, or one to two-ton bulk bags
Product Description:	Aluminum Sulfate (Alum)/clay mineral, calcium carbonate aggregate composite particle material.

Section II — Ingredient/Identity Information

Proprietary (Y/N): Y

Ingredient	Composition (%)	CAS#	Exposure Limits (TWA)
Aluminum Sulfate	10-60%	10043-01-3	N/A
Bentonite (clay mineral)	10-40%	1302-78-9	N/A
Calcium carbonate (limestone)	30-70%	1317-65-3	N/A

Section III — Physical/Chemical Characteristics

Appearance and Odor:	Grayish/white pebble, various sizes.
Boiling Point:	n/a
Melting Point:	n/a
Vapor Pressure:	n/a
Vapor Density:	n/a
Specific Gravity:	n/a
Decomposition Temperature:	n/a
Evaporation Rate:	n/a
Solubility (H_20):	n/a
Percent Volatiles by Volume:	0
Viscosity:	n/a

Section III (cont.)	**Physical/Chemical Characteristics (cont.)**
pH:	n/a
Radioactive (Y/N):	N
Ferromagnetic (Y/N):	N

Section IV	**Fire and Explosion Hazard Data**
Flash Point:	n/a
Lower Explosive Limit:	n/a
Upper Explosive Limit:	n/a
Extinguishing Media/Methods:	n/a
Special Fire Fighting Precautions:	n/a
Unusual Fire/Explosive Hazards:	n/a

Section V	**Reactivity Data**
Stable (Y/N):	Y
Conditions to Avoid:	none known
Materials to Avoid:	n/a
Keep away from Oxidizers:	n/a
Hazardous Decomposition Products:	n/a

Section VI	**Health Hazard Data**
Routes of Entry	
Inhalation (Y/N):	Y; avoid long-term dust exposure.
Skin (Y/N):	Y; avoid long-term contact.
Ingestion (Y/N):	Y ; avoid ingestion.
Other:	N
Contact Eye/Skin Hazards:	Y; dust may cause eye irritation.
Acute Overexposure Symptoms:	Clay minerals can irritate eyes and respiratory system. Alum is a mild irritant to eyes and respiratory system. It is an allergen and could cause contact dermatitis.
Chronic Overexposure Symptoms:	The clay minerals components may contain low levels of crystalline silica. Breathing crystalline silica can cause lung disease, including silicosis and lung cancer. Crystalline silica has also been associated with scleroderma and kidney disease. Crystalline silica contains quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud.

Section VI (cont.) **Health Hazard Data (cont.)**

Avoid breathing dust. Avoid creating dusty conditions. Use only with adequate ventilation to keep exposures below recommended exposure limits. Wear a NIOSH certified, European Standard EN 149, or equivalent respirator when using this product. Review the MSDS for this product.

Carcinogenicity Data: Clay minerals contain trace amounts of free crystalline silica (including quartz, tridymite and cristobalite), which, according to the International Agency for Research on Cancer (IARC), has limited evidence of carcinogenicity in humans.

Emergency Treatment/
First Aid Procedures:

Gross Inhalation - n/a
Gross Ingestion - No oral toxicity known. May cause intestinal blockage. Give plenty of water to drink.
Skin Contact - wash affected areas with soap and water.
Severe Eye Contact - Flush eyes with water for minutes. Seek medical attention.

Additional Toxicological Information:

Clay Mineral Component

Principle Route of Exposure: Eye, skin contact, and 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.

Section VI (cont.) **Health Hazard Data (cont.)**

Cancer Status: The 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 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/Development Toxicity:	Not determined.

Aluminum Sulfate Component

Principle Route of Exposure:	Eye, skin contact, inhalation, ingestion.
Inhalation:	Causes irritation to the respiratory tract. Symptoms may include coughing and shortness of breath.
Skin Contact:	May cause skin irritation, dermatitis, redness, itching, and pain.

Section VI (cont.) **Health Hazard Data (cont.)**

Eye Contact:	May cause eye irritation, redness and pain.
Ingestion:	May form acid in digestive system, to irritate the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. There have been two cases of fatal poisoning from ingestion of 30 grams of alum.
Chronic Effects/Carcinogenicity:	None known.
Other Information:	For further information consult the International Chemical Safety Card #1191 (attached).
Toxicity Tests:	
Oral Toxicity:	Not determined.
Dermal Toxicity:	Not determined.
Inhalation Toxicity:	Not determined.
Primary Irritation Effect:	Not determined.
Carcinogenicity:	Not determined.
Genotoxicity:	Not determined.
Reproductive/Development Toxicity:	Not determined.

Section VII **Precautions for Safe Handling and Use**

Personal Protective Equipment (Routine Use):

Respiratory Protection:	Respirators are not required when using this product under routine outdoor conditions.
Gloves:	Recommended.
Eye Protection:	Safety goggles or glasses recommended.
Other:	Recommend coveralls.
Work Practices:	This product is typically to be used in outdoor environments.
Minimize	Dusting whenever possible.
Ventilation:	If indoor use is required, or in the presence of excess dust generation, local exhaust ventilation is recommended.
Spill/Release Procedures:	Control dust.
Neutralization Procedures:	Add water, self neutralizes.
Waste Disposal Procedures:	This material is not a listed hazardous waste, nor does it exhibit any hazardous waste characteristics. Recycle or dispose of waste materials and containers in accordance with local, state and federal regulations.

Section VII (cont.)	**Precautions for Safe Handling and Use**
Storage/Handling Procedures:	Store product in a dry environment. Do not store with strong basic materials.
Other Health Hazard Precautions:	n/a

Section VIII	**Regulatory Information**
U.S. Regulations	
U.S. 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 for this Product:	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 U.S. EPA.

Additional Information:	For additional information on the use of this product, contact an AquaBlok, Ltd. representative. For questions about the Material Safety Data Sheet for this or other AquaBlok, Ltd. products, contact AquaBlok, Ltd. at (800) 688-2649.
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