

**M<sup>2</sup> Polymer Technologies, Inc.**  
**P.O. Box 365**  
**West Dundee, IL 60118**  
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MATERIAL SAFETY DATA SHEET: May be used to comply with OSHA's Hazard Communication Standard, 29 CFR 1910.1200. Standard must be consulted for specific requirements.

**PRODUCT NAME: Bentonite Clay (BaraKade 30 & Others)**

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**SECTION I SUPPLIER'S INFORMATION**

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Telephone Number for Information: 847/836-1393  
Last Update : May 1, 2005

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**SECTION II Composition of Components**

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Components (Specific Chemical Identity: Common Name(s))	OSHA PEL	ACGIH TLV	% (optional)
1. Sodium Bentonite CAS # 1302-78-9	N.A.	N.A.	60-100%
2. Crystalline Quartz (Silica)			
Quartz CAS# 14808-60-7	(10mg/m <sup>3</sup> )(%SiO <sub>2</sub> +2)	0.05 mg/m <sup>3</sup>	1-5%
Cristobalite CAS# 14464-46-1	1/2X(10 mg/m <sup>3</sup> )(%SiO <sub>2</sub> +2)	0.05 mg/m <sup>3</sup>	0-1%
Tridymite CAS# 15468-32-3	1/2X(10 mg/m <sup>3</sup> )(%SiO <sub>2</sub> +2)	0.05 mg/m <sup>3</sup>	0-1%

The OSHA PEL-TWA are from Table Z-3 Mineral Dusts.  
More restrictive exposure limits may be enforced by some States, agencies or authorities.

All components are listed on US TSCA.

Other Limits

Recommended

Recommended Exposure --  
Guideline for Respirable Particulate 0.05mg/m<sup>3</sup>  
(For Particles < 10 µm)

**SARA Section 313 Reportable Toxic Chemicals: NONE**

NFPA/HMIS: Health - 0, Fire - 0, Reactivity - 0, Specific Hazard - None

Dot Class: Not Restricted.

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**SECTION III PHYSICAL/CHEMICAL CHARACTERISTICS**

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Boiling Point	- Solid	Specific gravity (H <sub>2</sub> O = 1)	2.65
Vapor Pressure (mm Hg.)	- Not determined	Melting Point	Greater than 500° F
% Volatile Wt.	- Not determined	Bulk Density	50-70 lbs/ft <sup>3</sup>
Water Solubility	- Insoluble	pH	8 to 10 in 6% slurry
Appearance and Odor	- Gray or tan powder and pellets		

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**SECTION IV FIRE AND EXPLOSION HAZARD DATA**

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Flash Point (Method Used) - NONE  
Flammable Limits - Not Available LEL: Not determined UEL: Not determined  
Extinguishing Media - All standard fire fighting media  
Unusual Fire and Explosion Hazards - NONE

NFPA Ratings: Health 0, Flammability 0, Reactivity 0  
HMIS Ratings: Flammability 0, Reactivity 0, Health 0

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**SECTION V REACTIVITY DATA**

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Stability Stable, avoid extreme heat. Avoid exposure of dust aerosol to spark or open flame.

Incompatibility (Materials to Avoid) - Hydrofluoric Acid (HF). Strong oxidizers.

Hazardous Decomposition Products - Amorphous silica may transform at elevated temperatures to crystalline tridymite (870°C) or Cristobalite (1470°C). May form sulfur oxides, aluminum oxides and sulfuric acid.

Hazardous Polymerization - Will Not Occur - X

Conditions to Avoid - Avoid exposure of dust aerosol to spark or open flame.

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**SECTION VI HEALTH HAZARD DATA**

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Route(s) of Entry:	Inhalation?	Yes	Skin?	Yes	Ingestion?	Yes
Health Hazards (Acute and Chronic)	-		Inhalation.		Contact with eyes, skin or clothing may cause irritation.	
CAUTION! Acute Health Hazard -			May cause eye and respiratory irritation.			
DANGER! Chronic Health Hazard -			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 to 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.			
Skin contact:			May cause mechanical skin irritation.			
Eye contact:			May cause eye irritation.			
Ingestion:			None known.			
Signs and Symptoms of Exposure			-Reddening, drying of affected area with possible itching, burning or other discomfort. Irritation of the upper respiratory tract.			
Medical Conditions Generally Aggravated by Exposure			Individuals with respiratory disease, including but not limited to asthma and bronchitis, or subject to eye irritation, should not be exposed to quartz dust.			
Emergency and First Aid Procedures -			Flush eyes with large quantity of water. Wash skin with soap and water. If inhaled, move to fresh air. Consult physician regarding any continued discomfort.			

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**SECTION VII PRECAUTIONS FOR SAFE HANDLING AND USE**

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Steps to be taken in Case Material is Released or Spilled: Collect material. Avoid generating airborne dust.

Waste Disposal Method: Dispose of in accordance with Local, Federal, and State regulations. Non-hazardous waste material suitable for approved solid waste landfill. Suitable for incineration also.

Precautions to be taken in Handling and Storing: Handle as a dust and as an eye irritant. Store in a cool, dry place. Do not ingest. Avoid breathing powder. Avoid skin and eye contact.

Other Precautions: Dusty conditions may irritate eyes and respiratory system.

Shelf life: 60 months

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**SECTION VIII CONTROL MEASURES**

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Respiratory Protection (Specify Type) - Where a NIOSH specified, European Standard EN-149 or equivalent respirator when handling this product.

Ventilation - Local Exhaust Ensure removal of airborne particles.  
- Mechanical (General) Recommended. Other - Not required.

Protective Gloves - Recommended. Eye Protection - Safety goggles

Other Protective Clothing or Equipment - None

Work/Hygienic Practices - Wash thoroughly after handling.