

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION				
PRODUCT TRADE NAME	Celatom Perlite (all grades)			
MANUFACTURER	EP Minerals, LLC., 9875 Gateway Dr., Suite 1000, Reno, NV 89521			
TELEPHONE NO.	(775) 824 7600 (Monday – Friday 8:00 am PST – 5:00 pm PST)			
CHEMICAL NAME	Sodium Potassium Aluminum Silicate			
CHEMICAL FAMILY	Silicate			
MATERIAL USE	Filter aid, Functional additive			
DATE OF PREPARATION	April 5, 2007			
SECTION 2: HAZARDS IDENTIFICATION				
EMERGENCY OVERVIEW: Appearance/Color/Odor	A white to off-white, low density powder. There is no distinctive odor.			
OSHA REGULATORY STATUS	This material is not considered hazardous by the OSHA Hazard Communication Standard (29CFR 1910.1200)			
POTENTIAL HEALTH EFFECTS	See below and Section 11 for additional information			
Likely Routes of Exposure	See below			
EYE	May cause irritation (tear formation and redness) if dust gets in eyes.			
SKIN	Not absorbed by the skin, but may cause dryness if prolonged exposure.			
INGESTION	Ingestion of small to moderate quantities is not considered harmful, but may cause irritation of the mouth, throat and stomach.			
INHALATION	Acute inhalation can cause dryness of the nasal passage and lung congestion, coughing and general throat irritation. Chronic inhalation of dust should be avoided.			
CHRONIC EFFECTS	<p>Perlite is a naturally occurring volcanic glass consisting of fused sodium – potassium – aluminum silicate. Tests conducted on Celatom Perlite have not identified crystalline silica as being present above the detection limit (0.05%).</p> <p>Although there are no published reports of adverse health effects from exposure to perlite dust, dust levels should be maintained below the OSHA Permissible Exposure Limit for perlite and respirators used when airborne dust is present.</p>			
CONDITIONS AGGRAVATED BY EXPOSURE	Pre-existing diseases of the upper respiratory tract and lung such as bronchitis, emphysema, and asthma.			
ENVIRONMENTAL EFFECTS	There are no significant environmental effects.			
SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS				
INGREDIENT IDENTIFICATION	APPROXIMATE CONCENTRATION (%)	C.A.S. NUMBERS	EINECS	R Factors
Perlite	100%	93763-70-3	Not listed	R48/20
SECTION 4: FIRST AID MEASURES				
EYE	Flush eyes with generous quantities of water or eye rinse solution. Consult physician if irritation persists.			
SKIN	Use moisture renewing lotions if dryness occurs.			
INGESTION	Drink generous amounts of water to reduce bulk and drying effects.			
INHALATION	Remove to fresh air. Blow nose to evacuate dust.			
NOTE TO PHYSICIANS	No special notes.			
ANTIDOTE	Not applicable			

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SECTION 5: FIRE FIGHTING MEASURES

FLAMMABILITY	This material is not flammable.
EXTINGUISHING MEDIA	Not applicable, the material is not flammable.
FIRE-FIGHTING PROCEDURES	Not applicable, the material is not flammable.
PROTECTIVE EQUIPMENT	Not applicable, the material is not flammable
HAZARDOUS COMBUSTION PRODUCTS	Not applicable, the material does not combust.
SPECIFIC PHYSICAL AND CHEMICAL HAZARDS	Not applicable, the material is not flammable.
EXPLOSION DATA	Not applicable, the material is not explosive.

SECTION 6: ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	If dust is present, use respirator fitted with particulate filter as specified in Section 8. Protect eyes with goggles.
ENVIRONMENTAL PRECAUTIONS	This material is not a significant environmental concern.
CONTAINMENT AND CLEANUP	Vacuum clean spillage, wet sweep or wash away. Avoid creating dust.

SECTION 7: HANDLING AND STORAGE

HANDLING	Minimize dust generation. Avoid contact with eyes. Avoid breathing dust. Repair or dispose of broken bags.
STORAGE	Store in a dry place to maintain packaging integrity and product quality. Do not store near hydrofluoric acid. Observe all label precautions and warnings.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:				
Component	OSHA PEL	ACGIH TLV	MSHA PEL	NIOSH REL
Diatomaceous Earth, Natural (kieselguhr)	15 mg/m ³ total dust for products containing < 1% quartz	10 mg/m ³ total dust	5 mg/m ³	6 mg/m ³
ENGINEERING CONTROLS	Local – Control dust within recommended TLV/PEL. Refer to ACGIH publication “Industrial Ventilation” or similar publications for design of ventilation systems.			
PERSONAL PROTECTIVE EQUIPMENT:	See below			
EYE / FACE	Goggles to protect from dust			
SKIN	No special equipment is needed.			
RESPIRATORY	Respirators fitted with filters certified to standard 42CFR84 under series N95 should be worn when dust is present. If the dust concentration is less than ten (10) times the Permissible Exposure Limit (PEL) use a quarter or half-mask respirator with a N95 dust filter or a single use dust mask rated N95. If dust concentration is greater than ten (10) times and less than fifty (50) times the PEL, a full-face piece respirator fitted with replaceable N95 filters is recommended. If dust concentration is greater than fifty (50) and less than two hundred (200) times the PEL use a power air-purifying (positive pressure) respirator with a replaceable N95 filter. If dust concentration is greater than two hundred (200) times the PEL use a type C, supplied air respirator (continuous flow, positive pressure), with full face piece, hood or helmet.			
GENERAL HYGIENE	Avoid breathing dust. Avoid contact with eyes. Wash hands after handling and before eating or drinking.			

For sampling silica dusts refer to NIOSH Analytical Method 7500 or OSHA method ID 142

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE, COLOR	White to off white powder	ODOR	Odorless
PHYSICAL STATE	Solid	pH (10% SUSPENSION)	7
VAPOR PRESSURE	Not applicable	VAPOR DENSITY	Not applicable
BOILING POINT	Not applicable	MELTING POINT	> 800 °C
FLASH POINT	Not applicable	FLAMMABILITY	Not applicable
FLAMMABILITY LIMITS	Not applicable	AUTOIGNITION TEMPERATURE	Not applicable
DECOMPOSITION TEMPERATURE	> 800 °C	SPEC. GRAVITY / REL. DENSITY	2.3
EVAPORATION RATE	Not applicable	COEFF. – WATER / OIL	Not applicable
ODOR THRESHOLD	Not applicable	SOLUBILITY – WATER	< 1%
PARTITION COEFFICIENT	Not applicable		

SECTION 10: STABILITY AND REACTIVITY

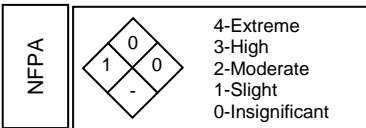
CHEMICAL STABILITY	Material is stable.
PHYSICAL HAZARDS	Material is not reactive.
CONDITIONS TO AVOID	Not applicable
INCOMPATIBLE MATERIALS	Hydrofluoric acid. Products containing silica may react violently with hydrofluoric acid.
HAZARDOUS DECOMPOSITION PRODUCTS	Not applicable

SECTION 11: TOXICOLOGICAL INFORMATION

CHRONIC EFFECTS / CARCINOGENICITY	<p>Although there are no reports of adverse health effects from exposure to perlite dust, inhalation of high concentrations of perlite dust or any other particulates for prolonged periods of time may cause lung damage.</p> <p>Analyses of these products by X-ray diffraction have not identified any phases of crystalline silica to be present above the detection limit (0.05%).</p>
ROUTE OF EXPOSURE	Inhalation (chronic)
SYMPTOMS	Not available
LD50	Not available
IMMEDIATE AND DELAYED EFFECTS	No immediate effects. See CHRONIC EFFECTS for potential long-term effects when prolonged exposure to levels of dust in excess of OSHA PEL and ACGIH TLV.
CORROSIVENESS, SENSITIZATION, IRRITANCY	Not applicable
REPRODUCTIVE TOXICITY	Not available
TERATOGENICITY, MUTAGENICITY	Not available
TOXICOLOGICALLY SYNERGISTIC PRODUCTS	Inhaled smoke from tobacco products (chronic).

SECTION 12: ECOLOGICAL INFORMATION

CHARACTERISTICS	Non-biodegradable, inert, with little potential for bioaccumulation.
POSSIBLE EFFECTS	These products have no demonstrated toxicity in regards to aquatic or terrestrial life.

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SECTION 13: DISPOSAL CONSIDERATIONS							
WASTE DISPOSAL	If this material as supplied becomes a waste, use solid waste disposal common to landfill type operations or in slurry to sumps. Not considered a hazardous waste under RCRA (40CFR Part 261).						
PACKAGING DISPOSAL	Dispose of in accordance with applicable laws and regulations, typically solid waste disposal common to landfill type operations.						
SECTION 14: TRANSPORT INFORMATION							
BASIC SHIPPING INFORMATION	DOT shipping classification 55 (no restrictions). Technical name is "Perlite".						
ADDITIONAL INFORMATION	No special requirements or placarding necessary.						
SECTION 15: REGULATORY INFORMATION							
U.S. FEDERAL:							
OSHA	Perlite is not classified as a toxic and hazardous substance.						
TSCA	Not listed.						
CERCLA	Perlite is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR 302.						
SARA TITLE III	Not listed.						
NTP	Not listed.						
INTERNATIONAL:							
IARC	Not classified.						
WHMIS Classification	These products are not regulated by WHMIS						
WHMIS Ingredient Disclosure List	Crystalline silica Included for disclosure at 1% or greater, does not apply for these products.						
EEC Label (Risk/Safety Phrases)	R48/20, S22, S38						
SECTION 16: OTHER INFORMATION							
		<table border="1"> <tr> <td rowspan="4" style="writing-mode: vertical-rl; transform: rotate(180deg);">HMIS</td> <td>* Health</td> </tr> <tr> <td>0 Flammability</td> </tr> <tr> <td>0 Reactivity</td> </tr> <tr> <td>E Protective Equipment</td> </tr> </table>	HMIS	* Health	0 Flammability	0 Reactivity	E Protective Equipment
HMIS	* Health						
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ORIGINAL ISSUE DATE	May 26, 1993						
REVISION DATE	April 5, 2007						
REVISION NO.	5						

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