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KR-M9981

MATERIAL SAFETY DATA SHEET

FOR EMERGENCY ASSISTANCE
CALL: 1-800-424-9300 CHEMTREC

FOR ADDITIONAL INFORMATION
CALL: 412-321-9800

SECTION 1: PRODUCT IDENTIFICATION

PRODUCT NAME: KR-M9981
CHEMICAL DESCRIPTION: Bentonite clay and proprietary ingredients
PRODUCT CLASS: Water/wastewater Treatment
VERSION: 9-10-2013

SECTION 2: SECTION 2: INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Weight %	OSHA PEL 8 hr. TWA	ACGIH TLV
Crystalline Silica (SiO ₂) as quartz	14808-60-7	See note below	15 mg/m ^{3*} 5 mg/m ^{3**}	0.025 mg/m ³

The specific chemical identity of this product is being withheld as a trade secret. In the event of a medical emergency it will be provided to a treating medical professional under the provisions of 29 CFR 1910.1200(i).

* - Total Dust - Bentonite

** - Respirable Dust - Bentonite

SECTION 3: HAZARDS IDENTIFICATION

*****EMERGENCY OVERVIEW*****

Bluegray to green as moist solid, light tan to gray as dry powder, no odor
Low concentrations of crystalline silica (SiO₂) in the form of quartz may be present in airborne bentonite dust.

PRIMARY ROUTES OF ENTRY: Eye, skin, Inhalation

TARGET ORGANS: Eye and skin

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Inhalation may aggravate existing respiratory illness.

POTENTIAL HEALTH EFFECTS:

EYE CONTACT: This product may cause irritation.

SKIN CONTACT: This product may cause drying and dermatitis.

INGESTION: Not a likely route of exposure. No adverse effects are expected.

INHALATION: *Acute* (short term) exposure to dust levels exceeding the PEL may cause irritation of respiratory tract resulting in a dry cough. *Chronic* (long term) exposure to airborne bentonite dust containing respirable size ($< 10 \mu$) quartz particles, where respirable quartz particle levels are higher than TLV's, may lead to development of silicosis or other respiratory problems. Persistent dry cough and labored breathing upon exertion may be symptomatic.

CARCINOGENICITY:

Bentonite is not listed by ACGIH, IARC, NTP or OSHA. IARC, 1997, concludes that there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica from occupational sources (IARC Class 1), that carcinogenicity was not detected in all industrial circumstances studied and that carcinogenicity may depend on characteristics of the crystalline silica or on external factors affecting its biological activity. NTP classifies respirable crystalline silica as "known to be a human carcinogen" (NTP 9th Report on Carcinogens – 2000). ACGIH classifies crystalline silica, quartz, as a suspected human carcinogen (A2).

SECTION 4: FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water, lifting upper and lower eyelids to ensure complete rinsing. Seek medical aid if symptoms develop.

SKIN CONTACT: In a timely manner, remove contaminated clothing and wash the affected area thoroughly with plenty of soap and water until clean. If symptoms develop, seek medical advice.

INGESTION: Material is not expected to be harmful if ingested. No specific first aid measures are required.

INHALATION: Material is not expected to be harmful if inhaled. Remove victim to fresh air and treat symptomatically. If symptoms develop, seek medical advice.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: Not Flammable

LOWER FLAMMABLE LIMIT: Not flammable

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UPPER FLAMMABLE LIMIT: Not flammable
AUTO-IGNITION TEMPERATURE: Not available

EXTINGUISHING MEDIA: None for product. Any media can be used for the packaging.
Product becomes slippery when wet.

FIRE-FIGHTING INSTRUCTIONS: Exercise caution when fighting any chemical fire. A self-contained breathing apparatus and protective clothing are essential.
FIRE & EXPLOSION HAZARDS: None. Product will not support combustion.

DECOMPOSITION PRODUCTS: Thermal decomposition may produce CO_x, NO_x, and NH_x

NFPA RATINGS: Health = 0 Flammability = 0 Reactivity = 0 Special Hazard = None

Hazard rating scale: 0=Minimal; 1=Slight; 2=Moderate; 3=Serious; 4=Severe

SECTION 6: ACCIDENTAL RELEASE MEASURES

METHODS FOR CLEAN-UP:

Avoid breathing dust; wear respirator approved for silica bearing dust. Vacuum up to avoid generating airborne dust. Avoid using water. Product slippery when wetted.

NOTE: Water in contact with this product will cause slippery floor conditions.

SECTION 7: HANDLING AND STORAGE

HANDLING: Use NIOSH/MSHA respirators approved for silica bearing dust when free silica containing airborne bentonite dust levels exceed PEL/TLV's. Clean up spills promptly to avoid making dust. Storage area floors may become slippery if wetted

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE/FACE PROTECTION: Generally not necessary. Personal preference.

HAND PROTECTION: Generally not necessary. Personal preference.

SKIN PROTECTION: Wear standard protective clothing.

RESPIRATORY PROTECTION: Use respirators approved by NIOSH/MSHA for silica bearing dust.

ENGINEERING CONTROLS: General ventilation is recommended to maintain PEL's/TLV's.

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WORK PRACTICES: An eye wash station and safety shower should be accessible in the immediate area of use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

pH: 9.5 – 11.5 (5% aqueous suspension)

SPECIFIC GRAVITY: 2.45 – 2.55

DENSITY: 64 lbs./cu. Ft. as product

SOLUBILITY IN WATER: Insoluble, forms colloidal suspension

MELTING POINT: Approx. 1450 °C

VAPOR PRESSURE: Not applicable

VAPOR DENSITY: Not applicable

APPEARANCE/ODOR: Blackish as moist solid, grayish black as dry powder, no odor

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur

CONDITIONS TO AVOID: None known

MATERIALS TO AVOID: None known

DECOMPOSITION PRODUCTS: Thermal decomposition may produce CO_x, NO_x, and NH_x

SECTION 11: TOXICOLOGICAL INFORMATION

Test Material	Oral LD50 (rat)	Dermal LD50 (rabbit)	Inhalation LC50 (rat)
Product	No data available	No data available	No data available

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SECTION 12: ECOLOGICAL INFORMATION

Chemical Name	Aquatic Toxicity Data
Product	48 hr LC50 – Daphnia magna = 42.51 mg/L
Product	96 hr LC50 – Pimephales promelas (fathead minnow) = 333.38 mg/L

SECTION 13: DISPOSAL CONSIDERATIONS

Discarded product, as sold, would not be considered a RCRA Hazardous Waste (40 CFR 261), since it does not have the characteristics of Subpart C, nor is it listed under Subpart D.

Consult state or local regulation for any additional handling, treatment, or disposal requirements.

SECTION 14: TRANSPORTATION INFORMATION

DOT CLASSIFICATION: Not regulated
 Proper Shipping Name: Not applicable
 Primary Hazard Class/Division: Not restricted
 UN Number: Not applicable
 Packing Group: Not applicable
 Label: None

SECTION 15: REGULATORY INFORMATION

OSHA Hazard Communication Status: Nonhazardous

TSCA: The ingredients of this product are listed on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory.

CERCLA: EPA Hazardous Substances (40 CFR 302):

<u>Chemical Name</u>	<u>CERCLA Reportable Quantity (RQ)</u>
None	

SARA TITLE III (Sections 302, 311, 312, and 313):

Section 302 Extremely Hazardous Substances (40 CFR 355):

<u>Chemical Name</u>	<u>CAS#</u>	<u>RQ</u>	<u>TPQ</u>
None			

Section 311 and 312 Health and Physical Hazards:

<u>Immediate</u>	<u>Delayed</u>	<u>Fire</u>	<u>Pressure</u>	<u>Reactivity</u>
no	no	no	no	no

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Section 313 Toxic Chemicals (40 CFR 372):

Chemical NameCAS NumberPercent by Weight

None

SECTION 16: OTHER INFORMATION

HMIS RATINGS: Health = 0 Flammability = 0 Reactivity = 0

Hazard Rating Scale: 0=Minimal; 1=Slight; 2=Moderate; 3=Serious; 4=Severe

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