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**MATERIAL SAFETY DATA SHEET**

**SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION**

PRODUCT NAME           KEMROK™ Cementitious Material

MANUFACTURER:        CERATECH, INC.  
                                   3501 Brehms Lane  
                                   Baltimore, MD 21213

TELEPHONE:           (443) 524-4410                   FAX:                   (433) 524-4411

EMERGENCY (24 HOUR)

CHEMTREC:            1-800-424-9300               INTERNATIONAL: 1-703-527-3887

**SECTION 2 – HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW   **CAUTION!** Odorless white or grayish-white powder. May cause nose, throat or respiratory tract irritation. Prolonged or repeated contact may dry skin or cause irritation. May contain silica which is a cancer hazard.

POTENTIAL HEALTH EFFECTS

EYE                    Abrasive action may cause severe irritation. In addition, contact can cause redness, burning, stinging or itching.

SKIN                   Contact may cause irritation or burning sensation in sensitive individuals, especially in the presence of moisture. Prolonged or repeated contact may cause drying or cracking. Not readily absorbed through skin.

INGESTION            Ingestion is not likely to be a significant route of exposure. May cause irritation, nausea, vomiting, diarrhea, and abdominal cramps, if swallowed.

INHALATION           May cause upper respiratory tract irritation. If inhaled as dust, this product can cause irritation of the respiratory system resulting in coughing and/or sneezing. Higher exposures may cause a build-up of fluid in the lungs with severe shortness of breath. Inhalation of silica (dust from sand) can also cause a chronic irreversible lung disorder, silicosis. Some medical reports state inhalation of silica dust may cause lung cancer.

CHRONIC EFFECTS / CARCINOGENICITY: This product may contain crystalline silica in the form of quartz or cristobalite, which has been classified by IARC as (Group I) carcinogenic to humans when inhaled. Silicosis, cancer, scleroderma, tuberculosis, nephrotoxicity and arthritis are potential chronic effects. [NOTE: This product has been tested and the particle sizes are equal to or above 80 microns.]

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: The condition of individuals with lung disease (e.g., bronchitis, emphysema, chronic obstructive pulmonary disease) can be aggravated by exposure. See Section 11 for additional detail on potential adverse health effects.

**SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS**

<u>Hazardous Ingredients</u>	<u>CAS Registry No.</u>	<u>Percentage (wt/wt)</u>
Cementitious material	Mixture	10-30
Various oxides (1)	Mixture	5-10

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations. Some components of this product are claimed as trade secret. The hazards of these ingredients, if any, are covered by this material safety data sheet.

(1) Oxides may include Al, Ca, and/or Mg.

**SECTION 4 – FIRST AID MEASURES**

EYE                    Quickly and gently blot or brush away chemical. Immediately flush the contaminated eye(s)

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SKIN	with lukewarm, gently flowing water for 5 minutes or until the chemical is removed, while holding the eyelid(s) open. Seek medical attention immediately. Do not rub eyes. Quickly and gently, blot or brush away excess chemical. Remove contaminated clothing, shoes and leather goods. Flush contaminated area with lukewarm, gently flowing water for at least 5 minutes. If irritation persists, repeat flushing. Seek medical attention immediately.
INGESTION	Never give anything by mouth if the victim is rapidly losing consciousness, or is unconscious or convulsing. If irritation or discomfort occurs, obtain medical advice immediately.
INHALATION	Move victim to fresh air. Seek medical attention if necessary. If breathing has stopped, give artificial respiration.

<b>SECTION 5 – FIRE FIGHTING MEASURES</b>
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Flammable Properties	
Flash Point: Not flammable	Method: N/A
EXTINGUISHING MEDIA	Use dry chemical fire extinguisher. Do not use water or halogenated compounds.
FIRE & EXPLOSION HAZARDS	None known.
FIRE FIGHTING INSTRUCTIONS	Keep personnel away from and upwind of fire. Wear full fire-fighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).

<b>SECTION 6 – ACCIDENTAL RELEASE MEASURES</b>
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SPILL /LEAK PROCEDURES	Do NOT use water on bulk material spills. Use proper protective equipment.
SMALL SPILLS	Use dry methods to collect spilled materials. Avoid generating dust. Do not clean up with compressed air. Store collected materials in dry, sealed plastic or metal containers. Residue on surfaces may be water washed.
LARGE SPILLS	Use dry methods to collect spilled materials. Evacuate area downwind of clean-up operations to minimize dust exposure. Store spilled materials in dry, sealed plastic or metal containers.
CONTAINMENT	For large spills, as much as possible, avoid the generation of dusts. Prevent release to sewers or waterways.
CLEANUP	Residual amounts of material can be flushed with large amounts of water.

<b>SECTION 7 – HANDLING AND STORAGE</b>
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HANDLING	Keep in tightly closed containers. Protect containers from physical damage. Avoid direct skin contact with the material.
STORAGE	Store in a cool, dry, and well-ventilated location. Do not store near incompatible materials. (See Section 10 for list of incompatible materials.) Keep away from moisture.

<b>SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION</b>
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ENGINEERING CONTROLS	Provide sufficient ventilation to control dust/mist concentrations below exposure limits.
RESPIRATORY PROTECTION	Use NIOSH/MSHA approved respirators if airborne concentration exceeds PEL.
SKIN PROTECTION	Use appropriate gloves to prevent skin contact. Clothing should fully cover arms and legs.

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**EYE PROTECTION**                      Eye and face protection requirements will vary dependent upon work environment and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material. It is generally considered good practice to wear a minimum of safety glasses with side shields when working in industrial environments.

<b>EXPOSURE GUIDELINES</b>	<b>OSHA PEL</b>	<b>ACGIH TLV</b>
Calcium oxide	5 mg/m <sup>3</sup>	2 mg/m <sup>3</sup>
Nuisance dust*	5 mg/m <sup>3</sup> (respirable fraction)	3 mg/m <sup>3</sup> (respirable fraction)
	15 mg/m <sup>3</sup> (total dust)	10 mg/m <sup>3</sup> (total dust)

\*This product has been tested and particle sizes were found to be equal to or greater than 80 microns.

<b>SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES</b>
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<b>APPEARANCE</b>	White or grayish-white material
<b>ODOR</b>	Odorless
<b>SOLUBILITY IN WATER</b>	Slight
<b>SPECIFIC GRAVITY</b>	2.63
<b>pH</b>	8.5 (as mixed with water for use)

<b>SECTION 10 – STABILITY AND REACTIVITY</b>
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<b>STABILITY</b>	Chemically stable
<b>MATERIALS TO AVOID</b>	Acids, ammonium salts, aluminum metal
<b>CONDITIONS TO AVOID</b>	None
<b>HAZARDOUS DECOMPOSITION PRODUCTS</b>	None

<b>SECTION 11 – TOXICOLOGICAL INFORMATION</b>
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No LD50s or LC50 have been identified for this product's components.

This product may contain crystalline silica, which has been classified by IARC as (Group I) carcinogenic to humans when inhaled in the form of quartz or cristobalite.

<b>SECTION 12 – ECOLOGICAL INFORMATION</b>
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**ECOTOXICITY:** Not determined.

**ENVIRONMENTAL FATE:** Not determined.

<b>SECTION 13 – DISPOSAL CONSIDERATIONS</b>
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Dispose of in accordance with all applicable federal, state, and local environmental regulations. If this product as supplied, and unmixed, becomes a waste, it will not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act.

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**SECTION 14 – TRANSPORT INFORMATION**

US DOT Not Regulated

**SECTION 15 – REGULATORY INFORMATION**

United States  
All chemical ingredients are listed on the U.S. TSCA Inventory List.

**SECTION 16 – OTHER INFORMATION**

**HMIS:** Health Risks 1\*, Flammability 0, Reactivity 0  
**NFPA:** Health Hazard 1, Fire Hazard 0, Reactivity 0

MSDS Status: Replaces October 14, 2008 version. Revisions in Section 1, 2, 3, 8, 11

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