MATERIAL SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME RediMAXX™ Cement Powder

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, grayish white, buff or yellow colored powder.
May cause nose, throat or respiratory tract irritation.
May cause mild eye and skin irritation.

POTENTIAL HEALTH EFFECTS

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

SKIN Contact may cause irritation 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 can also cause a chronic irreversible lung disorder, silicosis. Some medical reports state inhalation of silica dust may cause lung cancer. Inhalation of calcium carbonate may cause toxic or renal effects.

CHRONIC EFFECTS / CARCINOGENICITY: This product may contain crystalline silica in the form of quartz or crystobalite, 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.

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.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	CAS Registry No.	Percentage (wt/wt)
Cementitious material	Mixture	90 - 95
Crystalline silica	14808-60-7	0 - 1
Inorganic acid	Proprietary	1 - 5

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

MATERIAL SAFETY DATA SHEET

SECTION 4 – FIRST AID MEASURES

EYE	Quickly and gently blot or brush away chemical. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 minutes or until the chemical is removed, while holding the eyelid(s) open. Seek medical attention immediately. Do not rub eyes.
SKIN	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.

SECTION 5 – FIRE FIGHTING MEASURES

Flammable Properties

Flash Point:	Not flammable	Method: N/A
EXTINGUISHING MEDIA	Not flammable	Method: N/A
FIRE & EXPLOSION HAZARDS	Not flammable	Method: N/A
FIRE FIGHTING INSTRUCTIONS	Not flammable	Method: N/A

SECTION 6 – ACCIDENTAL RELEASE MEASURES

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.

SECTION 7 – HANDLING AND STORAGE

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.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS	Provide sufficient ventilation to control dust 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.
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.

EXPOSURE GUIDELINES	OSHA PEL	ACGIH TLV
Crystalline silica	10 mg/m^3 divided by (the percentage of silica in the dust plus 2) (respirable)	0.025 mg/m^3
Nuisance dust	5 mg/m^3 *(respirable fraction)* 15 mg/m^3 *(total dust)*	3 mg/m^3 *(respirable fraction)* 10 mg/m^3 *(total dust)*

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	White,grayish-white, buff or yellowish powder material
ODOR	Odorless
SOLUBILITY IN WATER	Slight
SPECIFIC GRAVITY	Approximately 2.7
pH	12.0 as mixed (estimated)

SECTION 10 – STABILITY AND REACTIVITY

STABILITY	Chemically stable
MATERIALS TO AVOID	Acids, ammonium salts
CONDITIONS TO AVOID	None
HAZARDOUS DECOMPOSITION PRODUCTS	None

SECTION 11 – TOXICOLOGICAL INFORMATION

Inorganic acid: LD50 (oral-rat) >3,000 mg/kg.

Long term animal ingestion studies involving high doses of the inorganic acid have indicated reproductive and developmental effects. The relevance for humans is not known.

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 crystobalite.

SECTION 12 – ECOLOGICAL INFORMATION

ECOTOXICITY: Not determined.

ENVIRONMENTAL FATE: Not determined.

MATERIAL SAFETY DATA SHEET

SECTION 13 – DISPOSAL CONSIDERATIONS

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.

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.

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

SECTION 16 – OTHER INFORMATION

MSDS Status: Original

MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	RediMAXX-mL
MANUFACTURER:	CERATECH Inc. 1500 N. Beauregard St., Ste 320 Alexandria, VA 22311
INFORMATION CONTACT:	800-581-8397 443-524-4412 Fax: 443-524-4411 (Monday-Friday, 8:00 a.m. – 5:00 p.m. EST)
EMERGENCY CONTACT 24 HOURS:	CHEMTREC 1-800-424-9300 INTERNATIONAL: 1-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:	CAUTION! Light yellow liquid. May cause nose, throat or respiratory tract irritation. May cause mild eye and skin irritation.
POTENTIAL HEALTH EFFECTS:	
EYE:	May cause mild irritation. In addition, contact can cause redness, burning, stinging itching and edema.
SKIN:	Prolonged contact may cause irritation in sensitive individuals.
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.
CHRONIC EFFECTS /CARCINOGENICITY:	The components of this product are not listed by OSHA, NTP or IARC.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CAS REGISTRY NO	PERCENTAGE (WT/WT)
Organic salt solution	Mixture	100%

OSHA Regulatory Status: This material is not classified as hazardous under OSHA regulations. Some components of this product may be claimed as trade secret. The hazards of these ingredients, if any, are covered by this material safety data sheet.

SECTION 4: FIRST AID MEASURES

EYE:	Quickly and gently blot or brush away chemical. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 minutes or until the chemical is removed, while holding the eyelid(s) open. Seek medical attention immediately. Do not rub eyes.
SKIN:	Quickly and gently, blot or brush away excess chemical. Remove contaminated clothing, shoes and leather goods. Wash with lukewarm, gently flowing soap & 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.

MATERIAL SAFETY DATA SHEET

SECTION 5: FIRE FIGHTING MEASURES

Flammable Properties		
Flash Point:	Not flammable	Method: N/A
Extinguishing Media:	Not flammable	Method: N/A
Fire & Explosion Hazards:	Not flammable	Method: N/A
Fire Fighting Instructions:	Not flammable	Method: N/A

SECTION 6: ACCIDENTAL RELEASE MEASURES

Small Spills:	Dilute with water and mop up or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spills:	Absorb with an inert material and put the spilled material in appropriate waste disposal containers. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Advise local authorities that none of the affected water should be used in irrigation or for the abstraction of potable water until natural dilution returns the boron level to its normal environmental background.
Containment:	For large spills, prevent release to sewers or waterways.
Cleanup:	Residual amounts of material can be flushed with large amounts of water.

SECTION 7: HANDLING AND STORAGE

Handling:	Keep in tightly closed containers. Protect containers from physical damage. Avoid direct skin contact with the material. Prevent contact with eyes.
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.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:	Provide sufficient ventilation to control airborne concentrations of vapors 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.
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.
Exposure Guidelines:	OSHA PEL: N/A — ACGIH TLV: N/A

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light yellow liquid
Odor:	Odorless
Solubility in Water:	Complete
Specific Gravity:	1.33 - 1.38
pH	7.0 - 9.0

MATERIAL SAFETY DATA SHEET

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Chemically stable
MATERIALS TO AVOID:	None
CONDITIONS TO AVOID:	None
HAZARDOUS DECOMPOSITION PRODUCTS:	None

SECTION 11: TOXICOLOGICAL INFORMATION

No LD50s or LC50 have been identified for this product's components.

CHRONIC EFFECTS / CARCINOGENICITY: The components of this product are not listed by OSHA, NTP or IARC. Follow the recommendations in Section 8 for personal protective equipment.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY:	Not determined.
ENVIRONMENTAL FATE:	Not determined.

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable federal, state, and local environmental regulations. If this product is 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.

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.

HMIS: Health Risks 0, Flammability 0, Reactivity 0
NFPA: Health Hazard 0, Fire Hazard 0, Reactivity 0

SECTION 16: OTHER INFORMATION

MSDS Status: Original

CeraTech, Inc. makes no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

MATERIAL SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME:	RediMAXX-aL
MANUFACTURER:	CERATECH Inc. 1500 N. Beauregard St., Ste 320 Alexandria, VA 22311
INFORMATION CONTACT:	800-581-8397 443-524-4412 Fax: 443-524-4411 (Monday-Friday, 8:00 a.m. – 5:00 p.m. EST)
EMERGENCY CONTACT 24 HOURS:	CHEMTREC 1-800-424-9300 INTERNATIONAL: 1-703-527-3887

SECTION 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:	CAUTION! Light brown liquid. May cause mild eye and skin irritation.
POTENTIAL HEALTH EFFECTS:	
EYE:	May cause mild irritation. In addition, contact can cause redness, burning, stinging itching and edema.
SKIN:	Prolonged contact may cause irritation in sensitive individuals.
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.
CHRONIC EFFECTS /CARCINOGENICITY:	The components of this product are not listed by OSHA, NTP or IARC.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CAS REGISTRY NO	PERCENTAGE (WT/WT)
Proprietary	Proprietary	50 - 99%

OSHA Regulatory Status: This material is not classified as hazardous under OSHA regulations. Some components of this product may be claimed as trade secret. The hazards of these ingredients, if any, are covered by this material safety data sheet.

Boric Acid	1303 - 86 - 2	1 - 50%

SECTION 4: FIRST AID MEASURES

EYE:	Quickly and gently blot or brush away chemical. Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 minutes or until the chemical is removed, while holding the eyelid(s) open. Seek medical attention immediately. Do not rub eyes.
SKIN:	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 if irritation persists.
INGESTION:	Products containing boric acid are not intended for ingestion. Boric acid has a low acute toxicity. Small amounts swallowed accidentally are not likely to cause effects. Swallowing large amounts may cause gastro intestinal symptoms. Seek medical attention if ingested. 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:	Not a likely route of exposure.

SECTION 5: FIRE FIGHTING MEASURES

Flammable Properties		
Flash Point:	Not flammable	Method: N/A
Extinguishing Media:	Not flammable	Method: N/A
Fire & Explosion Hazards:	Not flammable	Method: N/A
Fire Fighting Instructions:	Not flammable	Method: N/A

SECTION 6: ACCIDENTAL RELEASE MEASURES

Small Spills:	Dilute with water and mop up or absorb with an inert dry material and place in an appropriate waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spills:	Absorb with an inert material and put the spilled material in appropriate waste disposal containers. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Advise local authorities that none of the affected water should be used in irrigation or for the abstraction of potable water until natural dilution returns the boron level to its normal environmental background.
Containment:	For large spills, prevent release to sewers or waterways.
Cleanup:	Residual amounts of material can be flushed with large amounts of water.

SECTION 7: HANDLING AND STORAGE

Handling:	Keep in tightly closed containers. Protect containers from physical damage. Avoid direct skin contact with the material. Prevent contact with eyes.
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.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:	Provide sufficient ventilation to control 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.
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.

Exposure Guidelines:	OSHA PEL	ACGIH TLV
	N/A	N/A

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light brown liquid
Odor:	Odorless
Solubility in Water:	Complete
Specific Gravity:	1.34 - 1.36
pH	7.5 - 9.5

MATERIAL SAFETY DATA SHEET

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Chemically stable
MATERIALS TO AVOID:	None
CONDITIONS TO AVOID:	None
HAZARDOUS DECOMPOSITION PRODUCTS:	None

SECTION 11: TOXICOLOGICAL INFORMATION

No LD50s or LC50 have been identified for this product's components.

CHRONIC EFFECTS / CARCINOGENICITY: The components of this product are not listed by OSHA, NTP or IARC. Follow the recommendations in Section 8 for personal protective equipment.

SECTION 12: ECOLOGICAL INFORMATION

Care should be taken to minimize the amount of Boric Oxide released to the environment.

Algae Toxicity:

Green algae,

96-hr EC_{10} - 24 mg B/T†

Invertebrate toxicity:

Daphnids,

48-hr LC_{50} - 133 mg B/T‡

21-day NOEC-LOEC - 6-13 mg B/T‡

Fish toxicity:

(Sea Water)

Dab,

96-hour LC_{50} -74 mg B/T†

(Fresh Water)

Rainbow Trout,

24-day LC_{50} -150 mg B/T‡

32-day LC_{50} -100 mg B/T‡

Goldfish,

7-day LC_{50} -46 mg B/T‡

3-day LC_{50} -178 mg B/T‡

Environmental fate data

Persistence / degradation:

Boric oxide decomposes in the environment to natural borate.

Octanol/water partition coefficient: Log P_{OW} - 0.7570 at 25˚C Boric oxide reacts with water to form boric acid.

Soil mobility: Boric oxide is soluble in water and is leachable through normal soil.

Test substance: **† sodium tetraborate**
‡ boric acid

MATERIAL SAFETY DATA SHEET

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with all applicable federal, state, and local environmental regulations. If this product is 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.

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.

HMIS: Health Risks 0, Flammability 0, Reactivity 0
NFPA: Health Hazard 0, Fire Hazard 0, Reactivity 0

SECTION 16: OTHER INFORMATION

MSDS Status: Original

CeraTech, Inc. makes no warranty, expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.