SAFETY DATA SHEET
RIGIDIZER

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: Colloidal Silica Rigidizer

Other Names: Rigidizer
2600°F Rigidizer

Recommended Use: Generally used to increase the durability and surface erosion resistance of blanket and board products.

Distributor/Manufacturer:

CeraMaterials
525 Silver Lake Rd
Dingmans Ferry, PA 18328
Emergency Contact: Jeff Optiz
Product Stewardship: 518.701.6722

24hr Emergency Contact Info:

CHEMTREC US Transportation:	800.424.9300
CHEMTREC International Transportation:	703.741.5500

SECTION 2 - HAZARDS IDENTIFICATION

Classification of the substance/mixture:
Not classifiable per US OSHA HCS 2012, Canada WHMIS 2015, EU CLP and GHS.

Labeling elements:
Not applicable per US OSHA HCS 2012, Canada WHMIS 2015, EU CLP and GHS.

Caution!
May be harmful if swallowed. May cause skin, eye, and respiratory tract irritation.

SECTION 3 - COMPOSITION

Chemical & Common Name	CAS#	% By Weight
Water	7732-18-5	65-73
Silica (amorphous)	7631-86-9	27-35

SECTION 4 - FIRST AID MEASURES

Description of necessary measures, subdivided according to the different routes of exposure, i.e., inhalation, skin, and eye contact, and ingestion.

Skin:
Handling of this material may generate temporary, mild mechanical skin irritation. If this occurs, rinse affected areas with water and wash gently. Do not rub or scratch exposed skin.

Eyes:
In case of eye contact flush abundantly with water; have eye bath available. Do not rub eyes.

Nose & Throat:
If these become irritated move to a dust free area, drink water and blow nose. If symptoms persist, seek medical advise.

Most important symptoms/effects, acute and delayed.
Mild mechanical irritation to skin, eyes and upper respiratory system may result from exposure. These effects are usually temporary.

Indication of immediate medical attention and special treatment needed, if necessary.

Notes to Physicians:
Skin and respiratory effects are the result of temporary, mild mechanical irritation; exposure does not result in allergic manifestations.

SECTION 5 - FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media.
Use extinguishing agent suitable for surrounding combustible materials.

Specific hazards arising from the chemical

(e.g., nature of any hazardous combustion products).

Non-combustible products, class of reaction to fire is zero. Packaging and surrounding materials may be combustible.

Special protective equipment and precautions for fire-fighters.

NFPA Codes: Flammability: 0 Health: 1 Reactivity: 0 Special: 0

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures.

Minimize airborne dust. Compressed air or dry sweeping should not be used for cleaning. See section 8 "Exposure Controls / Personal Protection" for exposure guidelines.

Methods and materials for containment and cleaning up.

Do not walk through spilled materials. Shovel into a container for later disposal. Avoid cleanup procedures that may result in water pollution. For dried product, frequently clean the work area with vacuum or wet sweeping to minimize the accumulation of debris. Do not use compressed air for clean-up.

Empty containers.

Product packaging may contain residue. Do not reuse.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling.

Normal conditions of use and application are not expected to release respirable particulates. Removal of used product, sanding, scraping, or otherwise destroying the integrity of the dried product may result in the release of particulates. During such operations, appropriate respiratory protection should be provided as discussed below and in Section 8 under Respiratory Protection.

Minimize airborne dusts by avoiding the unnecessary disturbance of materials. Limit use of power tools unless in conjunction with local exhaust ventilation. Use hand tools whenever possible.

Removal and clean up of after service product may result in exposure to a crystalline phase silica (Section Section 16 for more details). Depending on the products use, other contaminants may also be present. During removal, the exposed material should be

frequently misted with water to minimize airborne dust. A surfactant may be added to the water to improve the wetting process. Use only enough water to wet the insulation. Do not allow water to accumulate on the floors.

Clean up.

Dust suppressing cleaning methods such as wet sweeping or vacuuming should be used to clean the work area. Compressed air or dry sweeping should not be used for cleaning. Dust suppressing compounds may be used to clean up light dust.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Guidelines.

COMPONENTS	OSHA PEL	NIOSH REL	ACGIH TLV	MFG REG
Water	None established		None established	None established
Silica (amorphous)	20 mmpcf or 30 mg/m^3 / % SiO2		10 mg/m^3 inhalable particulate, 3 mg/m^3 respirable particulate	None established

Engineering Controls.

Dust suppressing control technologies such as local exhaust ventilation, point of generation dust collection, down draft work stations, emission controlling tool designs, and materials handling equipment are effective means of minimizing airborne particulate emissions.

Personal Protective Equipment.

Eye Protection:

Wear safety glasses with side shields or chemical goggles to prevent eye contact. Do not wear contact lenses unless chemical goggles are also worn. Do not touch eyes with soiled body parts or materials. Have eye washing facilities readily available where eye contact can occur.

Skin Protection:

Wear personal protective equipment (e.g gloves), as necessary to prevent skin irritation. Washable or disposable clothing may by used. If possible, do not take unwashed clothing home. If soiled work clothing must be taken home, employees should be informed on best practices to minimize non-work dust exposure (e.g., vacuum cloths before leaving the work area, wash work clothing separately, and rinse washer before washing other household clothes.)

Respiratory Protection:

When engineering and/pr administrative controls are insufficient to maintain workplace concentrations below a regulatory OEL, the use of appropriate respiratory protection, pursuant to the requirements of OSHA 1910.134 and 29 CFR 1926.103, is recommended. The evaluation of workplace hazards and the identification of appropriate respiratory protection is best performed, on a case by case basis, by a qualified Industrial Hygienist.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Pink liquid	**pH:**	10.1-10.5
Odor:	Odorless	**Vapor pressure:**	17.5 @ 68°F | 20°C
Odor thresold:	None	**Vapor density:**	1.0
Melting point:	Not applicable	**Relative density:**	1.3
Initial boiling point / range:	212°F | 100°C	**Solubility:**	Not applicable
Flash point:	Not applicable	**Auto-ignition temperature:**	Not applicable
Evaporation rate:	Not applicable	**Decomposition temperature:**	Not applicable
Flammability:	Not applicable	**Viscosity:**	Not applicable
Upper/lower flammability or explosive limits:	Not applicable	**Partition coefficient (n-octanol/water):**	Not applicable

SECTION 10 - STABILITY AND REACTIVITY

Reactivity:	Non-reactive
Chemical stability:	As supplied product is stable and inert
Possibility of hazardous reactions:	None
Conditions to avoid:	Please refer to handling and storage in Section 7
Incompatible materials:	None
Hazardous decomposition products:	None

SECTION 11 - TOXICOLOGICAL INFORMATION

Epidemiology:

IARC noted that "very little epidemiological evidence was available" for amorphous silica. In evaluating the results of three community-based case-control studies, IARC concluded that "no association was detected for mesothelioma with biogenic amorphous silica fibres." (IARC Monograph 68, June 1997, p. 208).

Toxicology:
A food-grade miconized synthetic amorphous silica was tested by oral administration to mice and rats. No increased incidence of tumors was seen. In another study in rats, using intrapleural of two different preparations of synthetic amorphous silica, no increased incidence of tumors were observed (IARC Monograph 68, June 1997, p. 209).

The International Agency for Research on Cancer (IARC), has concluded that amorphous silica is "not classifiable as to its carcinogenicity to humans (Group 3)" based on "inadequate evidence in humans for the carcinogenicity of amorphous silica" and "inadequate evidence in experimental animals for the carcinogenicity of synthetic amorphous silica" (IARC Monograph 68, June 1997, p. 210-211).

Amorphous silica is not listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) and has not been found to be a potential carcinogen by OSHA.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity (aquatic & terrestrial, where available):	No known aquatic toxicity.
Persistence and degradability:	These products are insoluble materials that remain stable over time and are chemically identical to inorganic compounds found in the soil and sediment; they remain inert in the natural environment.
Bioaccumulative potential:	No bioaccumulative potential.
Mobility in soil:	No mobility in soil.
Other adverse effects (such as hazardous to the ozone layer)	No adverse effects of this material on the environment are anticipated.

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal:
This product is not classified as a hazardous waste according to Federal regulation (40 CFR 261). Check local, regional, state or provincial regulations for applicable requirements for disposal. Any processing, use, alteration or chemical additions to the product, as purchased, may alter the disposal requirements. Under Federal regulations, it is the waste generator's responsibility to properly characterize a waste material, to determine if it is a "hazardous" waste.

Empty Containers:
Product packaging may contain product residue. Do not reuse.

SECTION 14 - TRANSPORT INFORMATION

UN Number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group, if applicable:	Not applicable
Environmental hazards (e.g., Marine pollutant (Yes/No))	Not a marine pollutant
Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code)	Not applicable
Special precautions which a user needs to be aware of, or needs to comply with, in connection with transport or conveyance wither within or outside their premises	Not applicable

Canadian TDG Hazard Class & PIN: Not regulated
Not classified as dangerous goods under ADR (road), RID (train) or IMDG (ship).

SECTION 15 - REGULATORY INFORMATION

Key statutory and regulatory classifications or listings for the product, as manufactured, which may impact product storage, use, handling or disposal.

United States Federal Regulations:

EPA: **Superfund Amendments and Reauthorization Act (SARA) Title III Information** - SARA Hazard categories, listed below, are for SARA Sections 311/312 (40 CFR 370)
Hazard Categories: Immediate Hazard - No Delayed Hazard - Yes Fire Hazard - No
Pressure Hazard - No Reactivity Hazard - No
Toxic Substances Control Act (TSCA) - All substances in this product are listed, as required, on the TSCA inventory.

International Regulations:

Canada: **Canadian Workplace Hazardous Materials Information System (WHMIS 2015)** - This product is not classified under WHMIS 2015.

Canadian Environmental Protection Act (CEPA) - All substances in this product are listed, as required, on the Domestic Substance List (DSL).

SECTION 16 - OTHER INFORMATION

After-Service: Removal
The amorphous silica contained in this product may devitrify and form cristobalite (a form of crystalline silica) when used at temperatures above 1000°C for sustained periods. Chronic exposure to respirable crystalline silica may lead to lung disease. IARC has concluded that: "Crystalline silica inhaled in the from of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1)". [IARC Monograph 68, June1997, p. 210-211]. The Occupational Safety and Health Administration (OSHA) has adopted a permissible exposure

limit (PEL) for respirable cristobalite at 0.05 mg/m^3. When needed, the use of proper exposure controls and respiratory protection is recommended to reduce potential health risks and to ensure compliance with OSHA requirements. The evaluation of workplace hazards and the identification of appropriate respiratory protection is best performed, on a case by case basis, by a qualified Industrial Hygienist.

Effective Date:	January 1, 2018
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Revision Date:	October 1, 2019
SDS Prepared By:	CeraMaterials

Disclaimer

The information presented herein is presented in good faith and believed to be accurate as the effective date of this Safety Data Sheet. Employers may use this SDS to supplement other information gathered by them in their efforts to assure the health and safety of their employees and the proper use of the product. This summary of the relevant data reflects professional judgement; employers should note that information perceived to be less relevant has not been included in this SDS. Therefore, given the summary nature of this document, CeraMaterials does not extend any warranty (expressed or implied), assume any responsibility, or make any representation regarding the completeness of this information or its suitability for the purposes envisioned by the user.