

**MATERIAL SAFETY DATA SHEET
(OSHA 29 CFR 1910.1200)**

Product Types: Dry Packaged Shotcrete/ Cement Products

Section 1: Manufacturer's Name

**JETomes & Associates, Inc.
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Emergency Telephone Number: N/A

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SECTION I: PRODUCT IDENTIFICATION

PRODUCT TYPES: DRY PACKAGED SHOTCRETE PRODUCTS

<u>Product Name</u>	<u>Code#</u>
GUN-RITE Cement	GR505

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	PEL(OSHA) mg/M3	TLV(ACGIH) mg/M3
Portland Cement	65997-15-1	5	5
Silicon Dioxide	14808-807	NA	NA
Alkaline Resistant Fiber:	various	NA	NA
May Contain one or more of the following ingredients:			
Blast Furnace Slag	various		
Lime	01305-62-0	5	5
Fly Ash	68131-74-8	5	5
Silica Sand, crystalline	14808-60-7	<u>10</u>	0.05 (respirable)
		%SiO ₂ + 2	
Amorphous Silica	07631-86-9	<u>80mg/M3</u>	10
		% SiO ₂	
Calcium Aluminate Cement	65997-16-2	5	5
Copolymer Powder	24937-78-8	NA	NA

Other Limits: National Institute for Occupational Safety and Health (NIOSH). Recommended standard maximum permissible concentration=0.05 mg/M3 (respirable free silica) as determined by a full-shift sample up to 10-hour working day, 0-hour work week. See NIOSH Criteria for a Recommended Standard Occupational Exposure to Crystalline

SECTION III -PHYSICAL/CHEMICAL CHARACTERISTICS

Appearance: Gray to light brown colored powder. Some products contain aggregate.
Specific Gravity: 2.6 to 3.15 **Melting Point:** >2700F **Boiling Point:** >2700F
Vapor Pressure: None **Vapor Density:** None **Evaporation Rate:** None
Solubility in Water: Slight **Odor:** None
Product Types: JE Tomes & Associates, Inc. Dry Packaged Shotcrete Products [MSDS](#)

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flammability: Noncombustible and not explosive.

SECTION V- REACTIVITY DATA

Stability: Stable.

Incompatibility (Materials to Avoid): Contact of silica with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, oxygen difluoride, may cause fires.

Hazardous Decomposition or By-products: Silica will dissolve in Hydrofluoric Acid and produce a corrosive gassilicon tetrafluoride.

Hazardous Polymerization: Will Not Occur.

Condition to Avoid: Keep dry until used to preserve product utility.

SECTION VI - HEALTH HAZARD DATA

Route(s) of Entry: Inhalation, Skin, Ingestion

Acute Exposure: Product becomes alkaline when exposed to moisture. Exposure can dry the skin, cause alkali burns and effect the mucous membranes. Dust can irritate the eyes and upper respiratory system. Toxic effects noted in animals include, for acute exposures, alveolar damage with pulmonary edema.

Chronic Exposure: Dust can cause inflammation of the lining tissue of the interior of the nose and inflammation of the cornea. Hypersensitive individuals may develop an allergic dermatitis. Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs and possibly cancer. There is evidence that exposure to respirable silica or the disease silicosis is associated with an increased incidence of Scleroderma, tuberculosis and kidney disorders.

Carcinogenicity Listings:NTP: Known carcinogen

OSHA:

Not listed as a carcinogen

IARC Monographs:

Group 1 Carcinogen

California Proposition 65: Known carcinogen

NTP: The National Toxicology Program, in it's a Ninth Report on Carcinogens@ (released May 15, 2000) concluded that a Respirable crystalline silica (RCS) , primarily quartz dusts occurring in industrial and occupational settings, is known to *be a human carcinogen*, based on sufficient evidence of carcinogenicity from studies in humans indicating a casual relationship between exposure to RCS and increased lung cancer rates in workers exposed to crystalline silica dust (reviewed in IAC,, 1997; Brown et al., 1997; Hind et al., 1997)

IARC: The International Agency for Research on Cancer (AIARC@) concluded that there was A *sufficient evidence@* in humans for the carcinogenicity of crystalline silica in the forms of quartz or cristobalite from occupational sources@, and that there is A *sufficient evidence* in experimental animals for the carcinogenicity of quartz or cristobalite.@ The overall IARC evaluation was that A crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is *carcinogenic to humans* (Group1).@ The IARC evaluation noted that A carcinogenicity was not detected in all industrial circumstances or studies. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs.@ For further information on the IARC evaluation, see [IARC](#)

Monographs on the Evaluation of carcinogenic Risks to Humans, Volume 68, A Silica, Some [Silicates...@\(1997\)](#)

Product Types: JE Tomes & Associates, Inc. Dry Packaged Shotcrete Products

Signs and Symptoms of Exposure: Symptoms of excessive exposure to the dust include shortness of breath and reduced pulmonary function. Excessive exposure to skin and eyes especially when mixed with water can cause caustic burns as severe as third degree.

Medical Conditions Generally Aggravated by Exposure: Individuals with sensitive skin and with pulmonary and/or respiratory disease, including, but not limited to, asthma and bronchitis, or subject to eye irritation, should be precluded from exposure. Exposure to crystalline silica or the disease silicosis is associated with increased incidence of scleroderma, Tuberculosis and possibly increased incidence of kidney lesions.

Emergency First Aid Procedures: Irrigate (flood) eyes immediately and repeatedly with clean water. Wash exposed skin areas with soap and water. If irritation or inflammation occurs seek prompt attention. For gross inhalation, remove person immediately to fresh air, give artificial respiration as needed. Get prompt medical attention.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Spills: If spilled, use dustless methods (vacuum) and place into close able container for disposal or use if not contaminated or wet. Use adequate ventilation.

Waste Disposal Method: The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under RCRA or CERCLA.

SECTION VIII - CONTROL MEASURES/PERSONAL PROTECTION

Inhalation: DO NOT BREATH DUST. In dusty environments, the use of OSHA, MSHA or NIOSH approved respirator is recommended. Local exhaust can be used, if necessary, to control airborne dust levels.

Eyes: Wear tight fitting goggles.

Skin: The use of barrier creams or impervious gloves, boots and clothing to protect the skin from contact is recommended. Following work, workers should shower with soap and water.

Precautions must be observed because burns occur with little warning B little heat is sensed.

WARN EMPLOYEES AND/OR CUSTOMERS OF THE HAZARDS AND REQUIRED OSHA PRECAUTIONS ASSOCIATED WITH THE USE OF THIS PRODUCT.

NOTE: The information and recommendations contained herein are based upon date believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products. Customers-users must comply with all applicable health and safety laws, regulations and orders covering silica.