SAFETY DATA SHEET

1. CHEMICAL PRODUCT IDENTIFICATION	
Product Name	**"ICE" (cement retardant) Admixture**
Chemical Family	Various non-toxic natural and powders of calcium, magnesium, and other metal oxides and/or hydrates, with a cellulosic added for stability
Synonyms	Alkaline Earth Materials
Formula	Complex Mixture

2. COMPOSITION / INFORMATION ON INGREDIENTS			
INGREDIENT NAME / CAS NUMBER	Calcium Carbonate	471-34-1	Proprietary
	Calcium Alumina Silicate	Various	Proprietary
	Amorphous Silica (as fume)	7631-86-9	Proprietary
	Quartz (Respirable)	14808-60-7	Trace Amounts
	Cellulosic Derivative	9004-57-3	Less Than 2%
	Clay Powders	Various	Proprietary
	Metal Oxide Powder	Various	Proprietary
EXPOSURE LIMITS	OSHA has established an 8 hour PEL of 0.1 mg/m³ (TWA-TLV) for the respirable fraction of crystalline silica-containing dust.		
CONCENTRATION (%)			
HAZARDOUS INGREDIENTS	Respirable silicon dioxide or quartz dust, only trace amounts.		
EXPOSURE OVERVIEW	May contain small amounts (under 1%) of crystalline silica dust. May cause irritation to the eyes, skin, and respiratory system.		

3. HAZARDOUS IDENTIFICATION	
POTENTIAL HEALTH EFFECTS:	This product contains may contain small amounts of crystalline silica. EYE CONTACT: Direct contact with dust may cause irritation by mechanical abrasion. SKIN CONTACT: Direct contact may cause irritation by mechanical abrasion. SKIN ABSORPTION: Not expected to be a significant exposure route. INGESTION: Expected to be practically non-toxic. Ingestion of large amounts may cause gastrointestinal irritation and blockage. INHALATION: Dusts may irritate the nose, throat, and respiratory tract by mechanical abrasion. Coughing, sneezing, and shortness of breath may occur following exposures in excess of appropriate exposure limits. Use of natural sand and gravel for construction purposes is not believed to cause additional acute toxic effects. However, repeated overexposures to very high levels of respirable crystalline silica-containing dust (respirable sand, cristobalite, tridymite) for periods as short as six months have caused acute silicosis. Acute silicosis is a rapidly progressive, incurable lung disease that is typically fatal. Symptoms include (but are not limited to): shortness of breath, cough, fever, weight loss, and chest pain.
ROUTE(S) OF ENTRY:	Eye Contact, Skin Contact, Skin Absorption, Ingestion, Inhalation

HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE:	There are generally no signs or symptoms of exposure to crystalline silica-containing dust. Often, chronic silicosis has no symptoms. The symptoms of chronic silicosis, if present, are shortness of breath, wheezing, cough and sputum production. The symptoms of acute silicosis are the same; additionally, weight loss and fever are associated with acute silicosis. The symptoms of scleroderma include thickening and stiffness of the skin, particularly in the fingers, shortness of breath, difficulty swallowing and joint problems. Acute effects include: silicosis, cancer, scleroderma, tuberculosis, and nephrotoxicity.
CARCINOGENICITY:	The International Agency For Research On Cancer (IARC), a unit of The World Health Organization, has concluded there is sufficient evidence for the carcinogenicity of inhaled crystalline silica-containing dust in humans and has therefore classified crystalline silica-containing dust in Group 1, carcinogenic to humans. The IARC working group noted, however, that carcinogenicity in humans was not detected in all circumstances studied.
MEDICAL CONDITIONS: AGGRAVATED BY EXPOSURE:	Persons with impaired pulmonary function may be more susceptible to the effects of inhaling any type of dusty material.
4. FIRST AID MEASURES	
FIRST AID FOR EYES	EYES: Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or later develops.
FIRST AID FOR SKIN	SKIN: Wash with soap and water. Contact a physician if irritation persists or later develops.
FIRST AID FOR INGESTION	INGESTION: If person is conscious, give large quantity of water and induce vomiting; however, never attempt to make an unconscious person drink or vomit. Get immediate medical attention. For emergencies, contact: **CHEMTREC (800) 424-9300**
FIRST AID FOR INHALATION	INHALATION: Move to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or later develops
5. FIRE FIGHTING MEASURES	
FLASH POINT	Not flammable
AUTO-IGNITION TEMPERATURE	Not applicable
EXTINGUISHING MEDIA	None required
SPECIAL FIRE FIGHTING PROCEDURES	Full emergency equipment with self contained breathing apparatus and full protective clothing should be worn by firefighters. Contact with powerful

	oxidizing agents may cause fire and/or explosions (See section 10 of this MSDS)
6. ACCIDENTAL RELEASE MEASURES	
SPILL OR LEAK PROCEDURES:	Steps to be Taken in Case Material is Released or Spilled The personal protection and controls identified in Section 8 of the MSDS should be used as appropriate. Spilled material, where dust can be generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust. Wetting of spilled material and/or use of respiratory protective equipment may be necessary. Do not dry sweep spilled material. Prevent spilled materials from inadvertently entering streams, drains, or sewers. For emergencies, contact: **CHEMTREC (800) 424-9300**
7. HANDLING AND STORAGE	
STORAGE TEMPERATURE	Ambient
SHELF LIFE	Unlimited
SPECIAL SENSITIVITY	None known.
HANDLING/STORAGE PRECAUTIONS	Avoid breathing dust. An OSHA-approved HEPA filter and mask (or comparable dust mask) should be worn when working with these materials. Avoid contact with eyes and skin. Wash thoroughly after handling. Store in a cool, dry place away from excessive heat, in original or similar waterproof containers. Ensure adequate ventilation to avoid dusting.
8. PERSONAL PROTECTION	
EYE PROTECTION REQUIREMENTS	Chemical safety goggles.
SKIN PROTECTION REQUIREMENTS	Rubber gloves, and long sleeve shirts and pants to minimize skin contact.
VENTILATION REQUIREMENTS	Use local ventilation if dusting is a problem when working with this product.
RESPIRATOR REQUIREMENTS	Under normal working conditions an OHSA-approved HEPA filter and mask, or comparable particulate-removing respirator is required. However, if dusty conditions are present in the work environment, then an particulate-removing respirator equipped with full-face organic dust cartridge and recommended by the National Institute for Occupational Safety and Health and the Mine Safety and Health Administration (NIOSH-MSHA) should be used.
9. PHYSICAL AND CHEMICAL PROPERTIES	
PHYSICAL FORM	Solid
COLOR	Various
ODOR	Odorless
pH	Not Applicable
BOILING POINT	Not Applicable
MELTING/FREEZING POINT	Not Applicable
VISCOSITY	Not Applicable
SOLUBULITY IN WATER	Insoluble
SPECIFIC GRAVITY	2.65
BULK DENSITY	110 lbs/cu ft.
VAPOR PRESSURE	Not Applicable

10. STABILITY AND REACTIVITY	
STABILITY	This is a stable material.
HAZARDOUS POLYMERIZATION	Will not occur.
INCOMPATIBILITIES	Powerful oxidizing agents such as fluorine, boron trifluoride, calcium chlorine, chlorine trifluoride, manganese trifluoride and oxygen difluoride may cause an exothermic reaction leading to fire and/or explosion.
INSTABILITY CONDITIONS	None known.
DECOMPOSITION TEMPERATURE	Not Applicable.
DECOMPOSITION PRODUCTS	Silica-containing respirable dust particles may be generated by handling.

11. ECOLOGICAL INFORMATION	
ECOLOGY DATA FOR: AQUATIC TOXICITY	None available.

12. DISPOSAL CONSIDERATIONS	
WASTE DISPOSAL METHOD:	Waste must be disposed of in compliance with federal, state and local environmental control regulations. If incinerated, toxic and corrosive combustion gases must be properly handled.
EMPTY CONTAINER PRECAUTIONS:	All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations.

13. TRANSPORTATION INFORMATION	
PRODUCT LABEL	Product label established
HAZARD CLASS OR DIVISION:	Amorphous silica, quartz dust, and clay and earth material fines are not a hazardous material for purposes of transportation under the U. S. Department of Transportation Table of Hazardous Materials, 49 CFR, Sec. 172.101
HAZARD CLASS DIVISION NUMBER:	Non-regulated

14. REGULATORY INFORMATION	
OSHA STATUS	This product is not listed as an OSHA Carcinogen
TSCA STATUS	PEL of TWA 20 mppcf (80 mg/m^3/%SiO_2) may apply for TSCA and OSHA under Appendix C (mineral dust) under certain circumstances.
CERCLA REPORTABLE QUANTITY	Amorphous silica, quartz dust, and clay and earth material fines, are not classified as a hazardous substance under the regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR, Sec.302.
SARA TITLE III:	SECTION 302 - Extremely Hazardous Substances: None SECTION 311/312 - Hazard Categories: Non-hazardous under section 311/312
COMPONENT NAME CAS NUMBER	SECTION 313 Toxic Chemicals: The following chemicals are present in this coatings material in small amount. These chemicals are listed by

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CONCENTRATION	California EPA as materials known to the State of California to cause cancer, birth defects, or other reproductive harm: Silica Dust 14808-60-7 Less Than (0.5%) Cellulosic Derivative 9004-57-3 Less Than 2% Calcium Carbonate 1317-65-3 Proprietary Amorphous Silica (as fume) 7631-86-9 Proprietary
RCRA STATUS	If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the producer or deliverer of the product to determine whether the material should be classified as a hazardous waste. (40 CFR 261.20-24)
California Proposition 65	Crystalline Silica-containing dust is classified as a substance known to the state of California to be a carcinogen and has an 8 hour PEL of 0.1 mg/m³ (TWA-TLV) for the respirable crystalline-silica dust fraction.

15. OTHER INFORMATION	
HMIS RATINGS:	0=minimal 1=slight 2=moderate 3=serious 4=severe
HEALTH	2
FLAMMABILITY	0
REACTIVITY	0
REASON FOR ISSUE	First Release
PREPARED BY	Jonathan Dongell (R & D) Sr. Chemist
APPROVED BY	Jonathan Dongell (R & D) Sr. Chemist
SUPERSEDES DATE	N/A
MSDS NUMBER	2208