

# SILTEC BLASTING SAND

## MATERIAL SAFETY DATA SHEET

### SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identity:** Siltec Blasting Sand

**Manufacturer:**

Cementec Industries Inc.  
288, 200 Rivercrest Drive SE  
Calgary, Alberta  
T2C 2X5  
Emergency TeL: 1-866-212-5042

**Supplier:**

Cementec Industries Inc.  
288, 200 Rivercrest Drive SE  
Calgary, Alberta  
T2C 2X5

**MSDS Preparer:**

Cementec Industries Inc.  
288, 200 Rivercrest Drive SE  
Calgary, Alberta  
T2C 2X5

**Date of MSDS Preparation:** April 28, 2008

**Product Use:** Filter Sand, Foundry Sand, Abrasive Blasting Media, Play Sand, Traction Sand, Golf Course Sand.

### SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	Approximate Percent by Weight	C.A.S. Number	Occupational Exposure Limits (OELs)		LD <sub>50</sub> /LC <sub>50</sub>	Species and Route
Silicon Dioxide (Crystalline)	70 - 95	14808-60-7	OSHA PEL ACGIH TLV	See below* 0.1 mg/m <sup>3</sup> (Resp.)	LD <sub>50</sub> /LC <sub>50</sub>	No Data
			NIOSH REL	0.05 mg/m <sup>3</sup> (Resp.)		
Aluminum Oxide	3 - 7	1344-28-1	OSHA PEL ACGIH TLV	15 mg/m <sup>3</sup> 10 mg/m <sup>3</sup>	LD <sub>50</sub> /LC <sub>50</sub>	No Data
			NIOSH REL	None established		
Minor Mineral Constituents (see below)	5 - 6	N/A	N/A	N/A	LD <sub>50</sub> /LC <sub>50</sub>	No Data

This product also contains minor constituents including calcium, iron, magnesium, potassium and sodium minerals, each at approximately 0.5 – 1.5% by weight (calculated as their respective oxides).

\*The PEL-TWA set by U.S. OSHA is as follows: Respirable Dust Fraction (in mg/m<sup>3</sup>) = 10 / (%SiO<sub>2</sub> + 2)

NOTE: OELs for individual jurisdictions may differ from OSHA PELs. Check with local authorities for the applicable OELs in your jurisdiction. OSHA - Occupational Safety and Health Administration; ACGIH - American Conference of Governmental Industrial Hygienists; NIOSH - National Institute for Occupational Safety and Health. OEL – Occupational Exposure Limit, PEL – Permissible Exposure Limit, TLV – Threshold Limit Value, REL – Recommended Exposure Limit, (Resp) - Respirable dust fraction as defined in Appendix D of the ACGIH TLV booklet.

**Trade Names and Synonyms:** Siltec Silica Blasting Sand, Blasting Sand, Quartz Crystalline Silica, Silicon Dioxide

### SECTION 3. HAZARDS IDENTIFICATION

**Emergency Overview:** A solid, light colored granular material that is not flammable or combustible. This product is not acutely toxic and does not pose an immediate hazard to the health of emergency response personnel or to the environment in an emergency situation.

**Potential Health Effects:** Material may cause mild irritation of the upper respiratory tract on acute overexposure. Chronic overexposure to particulates of respirable size may cause lung inflammation, difficult breathing, chest pain, coughing, and pneumoconiosis or possible fibrotic changes in the lungs. Prolonged overexposure may result in pneumoconiosis, silicosis, and pulmonary fibrosis.

**Potential Environmental Effects:** The product has a high degree of intrinsic chemical stability and is relatively non-toxic in the environment. This material is normally stored in closed containers.

## SECTION 4. FIRST AID MEASURES

**Eye Contact:** The material is a granular material and may be a mechanical irritant to the eyes. Flush eyes with water until irritant is removed.

**Skin Contact:** Wash skin with plenty of soap and water after removing contaminated clothing and shoes.

**Inhalation:** Use adequate respiratory protection and remove victim from exposure area to fresh air. If shortness of breath or irritation persists or cough or other symptoms develop, seek medical attention.

**Ingestion:** If swallowed, no specific intervention is required as silica flour is not likely to be hazardous by ingestion. However, consult a physician if necessary.

## SECTION 5. FIRE FIGHTING MEASURES

**Fire and Explosion Hazards:** The product is non-combustible and not an explosion hazard.

**Extinguishing Media:** Not applicable

**Fire Fighting:** As with any fire, fire fighters should be fully trained and wear full protective clothing including an approved, self-contained breathing apparatus which supplies a positive air pressure within a full face piece mask.

**Flashpoint and Method:** None

**Upper and Lower Flammable Limit:** Not applicable

**Autoignition Temperature:** Not applicable

## SECTION 6. ACCIDENTAL RELEASE MEASURES

**Procedures for Cleanup:** Control source of spillage if possible to do so safely. Clean up spilled material immediately, observing precautions in Section 8, Personal Protection and using methods that will minimize dust generation (e.g., vacuum solids, dampen material and shovel or wet sweep). Return uncontaminated spilled material to the process if possible. Place contaminated material in suitable labeled containers for recovery or disposal. Treat or dispose of waste material in accordance with all local, regional, and national requirements.

**Personal Precautions:** Persons responding to an accidental release should wear protective clothing, gloves and a dust respirator (see also Section 8). Close-fitting safety goggles may be necessary in some circumstances to prevent eye contact with dust.

**Environmental Precautions:** Care should be taken to prevent the spillage of this product to aquatic and terrestrial environments. Measures to control dust generation from product spills should be applied.

## SECTION 7. HANDLING AND STORAGE

Material is to be stored in suitable containers. Handle the container in accordance with good storage and handling practices to prevent dust generation.

## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Protective Clothing:** Gloves and coveralls or other work clothing are recommended to prevent prolonged or repeated direct skin contact. Appropriate eye protection should be worn where dust is generated. Safety type boots are recommended.

**Ventilation:** Engineered ventilation systems should be used at all dust emission points to ensure the concentration of the dust in the work environment is well below recommended occupational exposure limits.

**Respirators:** Where excessive dust is generated and cannot be controlled to within acceptable levels by engineering means, use appropriate NIOSH approved respiratory protection equipment for fine particulates (a 42CFR84 Class N, R or P-100 particulate filter cartridge). If sandblasting, use a NIOSH approved respirator for abrasive blasting operations.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b> Granular Sand	<b>Odour:</b> None	<b>Physical State:</b> Solid	<b>pH:</b> 7.3
<b>Vapour Pressure:</b> Not Applicable	<b>Vapour Density:</b> Not Applicable	<b>Boiling Point/Range:</b> 2230 °C (4050°F)	<b>Melting Point/Range:</b> 1710 °C (3100°F)
<b>Specific Gravity:</b> 2.6 (approximate) 80 lb/ft <sup>3</sup> bulk density (approx).	<b>Evaporation Rate:</b> Not Applicable	<b>Coefficient of Water/Oil Distribution:</b> Not Applicable	<b>Odour Threshold:</b> Not Applicable
<b>Solubility in Water:</b> Insoluble	<b>Particle Size:</b> 50% < 300 microns		

## SECTION 10. STABILITY AND REACTIVITY

**Stability and Reactivity:** This material is stable and non-reactive under normal room temperatures and pressures.

**Incompatibilities:** Contact with agents such as molten magnesium, fluorine, chlorine trifluoride, manganese trioxide, oxygen difluoride, or hydrofluoric acid may cause fires or corrosive gases.

**Hazardous Decomposition Products:** Silica will dissolve in hydrofluoric acid producing a corrosive gas, silicon tetrafluoride.

## SECTION 11. TOXICOLOGICAL INFORMATION

**General:** This material is very fine and significant airborne dust may be generated through improper handling procedures. Chronic inhalation of respirable crystalline silica dust can cause silicosis.

**Acute:**

**Skin/Eye:** Not irritating to the eyes or skin except through mechanical abrasion of the tissues.

**Inhalation:** Airborne dust may be irritating to the nose, throat and upper respiratory tract causing mild respiratory distress.

**Ingestion:** Not hazardous by ingestion.

**Chronic:** Prolonged overexposure to crystalline silica particles of respirable particle size can cause respiratory diseases such as silicosis, pulmonary fibrosis or pneumoconiosis with symptoms of coughing, shortness of breath, wheezing and impaired pulmonary function. Silicosis may progress even after exposure has ceased. The International Agency for Research on Cancer (IARC) has classified Inhalable Crystalline Silica as Group 1. The agency states that there is sufficient evidence of carcinogenicity in humans. Reference: IARC Monograph 68. The American Conference of Governmental Industrial Hygienists (ACGIH) has classified Respirable Crystalline Silica as Group A2, Suspected Human Carcinogen.

## SECTION 12. ECOLOGICAL INFORMATION

The principal constituents of this product are chemically stable and, as such, it will be relatively inert in the environment

## SECTION 13. DISPOSAL CONSIDERATIONS

If material cannot be returned to process or salvage, dispose of in accordance with applicable regulations. It may be possible to dispose of uncontaminated silica flour in a sanitary landfill. This should be verified with the local authorities prior to disposal.

## SECTION 14. TRANSPORT INFORMATION

PROPER SHIPPING NAME ..... Not regulated  
TRANSPORT CANADA CLASSIFICATION..... Not applicable  
US DOT HAZARD CLASSIFICATION ..... Not applicable  
TRANSPORT CANADA PRODUCT IDENTIFICATION NUMBER ..... Not applicable  
US DOT PRODUCT IDENTIFICATION NUMBER..... Not applicable  
MARINE POLLUTANT ..... No  
IMO CLASSIFICATION..... Not applicable

## SECTION 15. REGULATORY INFORMATION

### U.S.

INGREDIENTS LISTED ON TSCA INVENTORY ..... Yes  
HAZARDOUS UNDER HAZARD COMMUNICATION STANDARD..... Yes  
CERCLA SECTION 103 HAZARDOUS SUBSTANCES ..... No ingredients qualify  
EPCRA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCE ..... No ingredients qualify  
EPCRA SECTION 311/312 HAZARD CATEGORIES..... Delayed (Chronic) Health Hazard - Cancer and Silicosis  
Hazard  
EPCRA SECTION 313 Toxic Release Inventory..... Aluminum Oxide  
..... CAS 1344-28-1  
..... Percent by Weight 3-7%

### CANADIAN:

INGREDIENTS LISTED ON THE DOMESTIC SUBSTANCES LIST ..... Yes  
WHMIS CLASSIFICATION: ..... D2A -Very Toxic Material  
(Cancer and Silicosis Hazard)

## SECTION 16. OTHER INFORMATION

The information in this Material Safety Data Sheet is based on the following references:

American Conference of Governmental Industrial Hygienists, 1991, Documentation of the Threshold Limit Values and Biological Exposure Indices, Sixth Edition plus supplements.  
American Conference of Governmental Industrial Hygienists, 2003, Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices.  
Canadian Centre for Occupational Health and Safety (CCOHS) CHEMpendium Chemical Information Data Base, Disk A2 (2000-2).  
Clayton and Clayton, 1994, Patty's Industrial Hygiene and Toxicology, Fourth Edition.  
Industry Canada, SOR/88-66, Controlled Products Regulations, as amended.  
Merck & Co., Inc., 1983, The Merck Index, An Encyclopedia of Chemicals, Drugs, and Biologicals, Tenth Edition.  
Sax, N. Irving, 1989, Dangerous Properties of Industrial Materials, Seventh Edition.  
Urban, P. G., 1995, Bretherick's Handbook of Reactive Chemical Hazards, Fifth Edition.  
U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health, 1990, NIOSH Pocket Guide to Chemical Hazards. CD-ROM Edition DHHS(NIOSH) Publication No 99-115, April 1999

### Notice to Reader

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