



# MARCHINGTON STONE LIMITED

## HEALTH & SAFETY PRODUCT DATA SHEET

Issue Date: July 2006

### SILICA SAND

#### 1. Identification of Substances & Company

##### SILICA SAND

Use of the substance/preparation

Main applications of silica sand - non-exhaustive list:

Glass, silicate chemistry, abrasives, foundry sand, filler for textured coatings, glues and mortars, filtration, sports and leisure, specialist construction .....

Company:

Marchington Stone Limited

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#### 2. Composition/Information on Ingredients

Chemical	SiO <sub>2</sub> (ca.99%)
Mineralogical	alpha quartz
E.I.N.E.C.S.-N°	238-878-4
C.A.S.-N°	14808-60-7
EU-classification	no classification
IUPAC Name	silicon dioxide

#### 3. Hazards Identification

The grain size distribution of silica sand means that it is not hazardous. However, any respirable crystalline silica dust generated by processing and handling of silica sand may cause health effects.

Prolonged and/or massive inhalation of respirable crystalline dust may cause lung fibrosis, commonly referred to as silicosis. Principal symptoms of silicosis are cough and breathlessness. Occupational exposure to respirable crystalline silica dust should be monitored and controlled.

#### 4. First Aid Measures

##### Summary of First Aid Procedures

No actions are to be avoided, nor are there any special instructions for rescuers.

##### Inhalation

Immediately remove to fresh air. If breathing is stopped or irregular, apply artificial respiration and seek medical attention.

##### Skin Contact

No special first aid measures necessary.

##### Eye Contact

Immediately and thoroughly irrigate with water. If pain persists seek medical attention.

##### Ingestion

Non-toxic.

#### 5. Fire Fighting Measures

##### Suitable Extinguishing Media

Not applicable

##### Unsuitable Extinguishing Media

Not applicable

##### Special Exposure Hazards in Fire

None

##### Special Protective Equipment for Fire Fighters

None

#### 6. Accidental Release Measures

##### Personal Precautions

Avoid airborne dust generation. In cases of exposure to airborne dust concentrations exceeding regulatory limits, wear a personal respirator in compliance with national legislation.

##### Environmental Precautions

No special requirements

##### Methods for Cleaning

Spray with water to prevent airborne dust and avoid dry sweeping which creates dust.

## 7. Handling and Storage

### Handling

The product should be handled to minimise the creation of airborne dust. Provide appropriate exhaust ventilation where airborne dust is generated. In case of insufficient ventilation, wear suitable respiratory protective equipment. Please contact your supplier if you require advice on safe handling techniques.

### Storage

Technical measures/Precautions

Ensure abatement of dust during the loading of silos.

Keep containers closed and store/handle bagged products so as to prevent accidental bursting.

### Specific Uses

When mixing with other substances the aforementioned safe handling advice shall apply.

## 8. Exposure Controls/Personal Protection

### Exposure Limit Values

Respect workplace regulatory provisions for all types of airborne dust (inhalable dust, respirable dust and respirable crystalline silica dust)

The workplace MEL (Maximum Exposure Limit) for respirable crystalline silica dust is 0.3mg/m<sup>3</sup> in the United Kingdom, measured as an 8 hour TWA (Time Weighted Average). However, the Health and Safety Executive believes it should now be reasonably practicable for all industry sectors to control respirable crystalline silica to 0.1mg/m<sup>3</sup> (8 hour TWA). Refer to section 16 for more information.

### Occupational Exposure Controls

Provide appropriate local exhaust ventilation in places where dust is generated. Control of occupational exposure may also be achieved by enclosing plant and equipment, by isolating personnel from dusty areas and by ensuring good standards of ventilation in the workplace.

### Respiratory Protection

Suitable dust masks should be worn in case of exposure to airborne dust concentrations exceeding regulatory limits.

### Hand Protection

Gloves

### Eye Protection

Goggles may be required

### Skin Protection

Overalls

## 9. Physical and Chemical Properties

Appearance	Granular, solid, in various colours ranging from white to brown
Odour	None
ph	Various
Density	2.65g/cm <sup>3</sup>
SiO <sub>2</sub> %	ca.99% (cfr. technical data sheet)
Grain shape	sub-angular
Particle size range	cfr. Technical data sheet
Water Solubility	Negligible
Hydroflouric Acid Solubility	Yes
Melting point	1610°C
Molecular weight	60.1

## 10. Stability and Reactivity

Chemically stable, no particular incompatibility.

## 11. Toxicological Information

Prolonged and/or massive exposure to respirable crystalline silica-containing dust may cause silicosis, a nodular pulmonary fibrosis caused by deposition in the lungs of fine respirable particles of crystalline silica.

In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However, it pointed out that not all industrial circumstances, nor all crystalline silica types, were to be incriminated. (*IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres. 1997, Vol.68, IARC, Lyon, France*)

In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore preventing the onset of silicosis will also reduce the cancer risk ....." (*SCOEL SUM Doc 94-final, June 2003*)

There is a body of evidence supporting the fact that increased cancer risk would be limited to people already suffering from silicosis. According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits.

**12. Ecological Information**

No specific adverse effects known.

**13. Disposable Consideration**

Safe Handling of Residues/Waste Product

Can be landfilled in compliance with local and national legal requirements. The material should be buried to prevent dust being picked up by the wind. Where possible, recycling is preferable to disposal. The substance has not been included in the EU Waste Catalogue.

Packaging

No specific requirements

**14. Transport Information**

Special Carriage Requirements

None - open vehicles to be sheeted to avoid dust nuisance

**15. Regulatory Information**

This product is NOT classified as dangerous for transport.

**16. Other Information**

Training Advice

Wear and use of PPE

### Sand Blasting

According to the Control of Substances Hazardous to Health Regulations 2002, sand and other substances containing free crystalline silica cannot be used as an abrasive for blasting articles in any blasting apparatus.

### HSE Chemical Hazard Alert Notice 35

The HSE issued a Chemical Hazard Alert Notice for Respirable Crystalline Silica on 7 May 2003. The notice states:

“HSE believes that in most cases it should be reasonably practicable to control exposure to 0.1mg/m<sup>3</sup> (8 hour TWA) or less by engineering or process control. Employers should aim to ensure that workers are not exposed to RCS dust concentrations above this level. If exposure cannot be controlled to 0.1mg/m<sup>3</sup> (8 hour TWA) or below by elimination or process or engineering controls, then exposure must be controlled by provision and use of suitable respiratory protective equipment”

The full text of this notice is available at [www.hse.gov.uk/pubns/chan35.htm](http://www.hse.gov.uk/pubns/chan35.htm)

### Further Information

Marchington Stone Limited  
Telephone 01663 765000

If you have purchased this product for supply to a third party for use at work, it is your duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet.

If you are an employer, it is your duty to tell your employees and others who may be affected, of any hazards described in this sheet and any of the precautions which should be taken.

Further copies of this Safety Data Sheet may be obtained from Marchington Stone Limited.

