

SAFETY DATA SHEET- SILICA SAND

According to regulation (EC) No 1907/2006

Section 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Silica Sand

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture

Primarily used to add to clay bodies to help make the body more refractory.

1.3 Details of the supplier of the safety data sheet

Valentine Clays LTD

Valentine Way

Stoke on Trent

ST4 2FJ

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e: sales@valentineclays.co.uk

w: www.valentineclays.co.uk

1.4 Emergency Telephone Number

+44 (0)1782 271200

Section 2: Hazards Identification

2.1 Classification of the substance or mixture

Quartz sand does not meet the criteria for classification as dangerous as defined in Directive 67/548/EEC and in the Regulation EC 1272/2008 (Classification, Labelling and Packaging of dangerous substances).

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

Section 3: Composition/information on ingredients

<u>Chemical</u>	<u>Mineralogical</u>	<u>EINECS</u>	<u>CAS No</u>	<u>EU Classification</u>	<u>IUPAC Name</u>	<u>REACH No</u>
SiO ₂ (ca. 99 %)	Alpha Quartz	238-878-4	14808-60-7	No Classification	Silicon Dioxide	Exempted

Section 4: First Aid Measures

4.1 Description of first aid measures

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

Eye contact- Wash with copious quantities of water.

Ingestion- Not hazardous. No special first aid measures necessary.

Inhalation- No special first aid measures. Remove to fresh air and consult a physician.

Skin contact- Not hazardous. No special first aid measures necessary.

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Section 5: Firefighting Measures

Does not burn. No hazardous releases in case of fire.

5.1 Suitable Extinguishing Media

Not applicable.

5.2 Extinguishing Media which should not be used

Not applicable.

5.3 Special Exposure Hazards

Not applicable.

5.4 Special Protective Equipment for Fire Fighters

Not applicable.

Section 6: Accidental Release Measures

6.1 Personal Precautions

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

6.2 Environmental Precautions

No special requirements.

6.3 Methods and material for containment and cleaning up

Avoid dry sweeping and use water spraying or vacuum cleaning systems to prevent airborne dust generation.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Avoid airborne dust generation. Handle bags carefully so as to prevent accidental bursting. Provide appropriate exhaust ventilation at places where airborne dust is generated. In case of insufficient ventilation, wear suitable respiratory protective equipment. If you require advice on safe handling techniques, please contact your supplier or check the Good Practice Guide referred to in Section 16.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures / Precautions- Ensure abatement of dust produced during the loading of silos. Keep containers closed and store/handle bagged products so as to prevent accidental bursting.

7.3 Specific end use(s)

For industry specific guidance, check the Good Practice Guide referred to in Section 16.

Section 8: Exposure Controls/ Personal Protection

8.1 Exposure Limit Values

Respect workplace regulatory provisions for all types of airborne dust (total dust, respirable dust and respirable crystalline silica dust). The UK Control of Substances Hazardous to Health Regulations 2002 (as amended) require adherence to good practice principles in the control of exposure to hazardous substances. Additionally, a WEL (Workplace Exposure Limit) for respirable crystalline silica dust of 0.1mg/m³ applies in the United Kingdom, measured as an 8hour TWA (Time Weighted Average). For the equivalent limits in other countries, please consult a competent occupational hygienist or the local regulatory authority.

8.2 Exposure Controls

Occupational Exposure Controls

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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

In case of exposure to airborne dust concentrations exceeding regulatory limits, wear a personal respirator that complies with the requirements of national legislation.

Eye Protection

Wear safety glasses with side-shields in circumstances where there is a risk of penetrative eye injuries.

Environmental Exposure Controls

No special requirements.

Section 9: Physical and Chemical Properties

9.1 General Information

Appearance- Solid, granular, in various colours ranging from white to brown

Odour- Odourless

9.2 Important health, safety and environmental information

Density- 2.65 g/cm³

SiO₂ %- ca. 99 % (cfr. technical data sheet)

Grain shape- sub-angular

Particle size range- cfr. technical data sheet

Solubility in water- negligible

Solubility in hydrofluoric acid- yes

9.3 Other Information

Melting Point- 1610°C

Molecular Weight- 60.1

Section 10: Stability and Reactivity

Chemically stable, no particular incompatibility.

Section 11: Toxicological Properties

Skin Irritation

Data shows no skin irritation effects.

Eye Irritation

Data shows no eye irritation effects.

Chronic Effects

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.)

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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 94final, June 2003). So, there is a body of evidence supporting the fact that increased cancer risk would be limited to people already suffering from silicosis. Worker protection against silicosis should be assured by respecting the existing regulatory occupational exposure limits and implementing additional risk management measures where required (see IMA-Europe table of OELs in the EU at <http://www.ima-eu.org/en/publication.htm>).

Section 12: Ecological Information

No specific adverse effects known.

Section 13: Waste Disposal

13.1 Waste treatment methods

Waste from residues / unused products

Can be landfilled in compliance with local regulations. The material should be buried to prevent dust being picked up by the wind. Where possible, recycling is preferable to disposal.

Packaging

No specific requirements. Recycling and disposal of packaging should be carried out by an authorised waste management company.

Section 14: Transport Information

No special precautions are required under regulations relating to the transportation of dangerous goods.

Section 15: Regulatory Information

National Legislation

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.

European Legislation

Quartz sand does not meet the criteria for classification as dangerous as defined in Directive 67/548/EEC. Dry Blasting According to national regulations in EU member states, sand containing more than a certain amount of free crystalline silica cannot be used for dry blasting. This amount varies between 1% and 5%, according to country.

Section 16: Other Information

Dry sand blasting

According to national regulations in EU member states, sand containing more than a certain amount of free crystalline silica cannot be used for dry blasting. This amount varies between 1% and 5%, according to country.

Literature references

Literature references are available on request from EUROSIL, the European Association of Industrial Silica Producers, Bd. S. Dupuis 233 Bte 124, 1070 Brussels, Belgium. Tel: +32 (0)2 524 55 00, Fax: + 32 (0)2 524 45 75, e-mail: secretariat@ima-eu.org.

Social Dialogue on Respirable Crystalline Silica

A multi-sectoral social dialogue agreement on Workers Health Protection through the Good Handling and Use of Crystalline Silica and Products Containing it was signed on 25 April 2006. This autonomous agreement, which receives the European Commission's financial support, is based on a Good Practices Guide. The requirements of the Agreement came into force on 25 October 2006. The Agreement was published in the Official Journal of the European Union (2006/C 279/02). The text of the Agreement and its annexes, including the Good Practices Guide, are available from <http://www.nepsi.eu> and provide useful information and guidance for the handling of products containing respirable crystalline silica.

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UK Health and Safety Executive - silica (quartz)

Extract taken from <http://www.hse.gov.uk/quarries/silica.htm> Quartz is found in almost all kinds of rock, sands, clays, shale and gravel. Workers exposed to fine dust containing quartz are at risk of developing a chronic and possibly severely disabling lung disease known as "silicosis". It usually takes a number of years of regular daily exposure before there is a risk of developing silicosis. Silicosis is a disease that has only been seen in workers from industries where there is a significant exposure to silica dust, such as in quarries, foundries, the potteries etc. No cases of silicosis have been documented among members of the general public in Great Britain, indicating that environmental exposures to silica dust are not sufficiently high to cause this occupational disease. In addition to silicosis, there is now evidence that heavy and prolonged workplace exposure to dust containing crystalline silica can lead to an increased risk of lung cancer. The evidence suggests that an increased risk of lung cancer is likely to occur only in those workers who have developed silicosis. It should also be noted that

This data sheet is provided under CLP and REACH Regulation and is not intended to constitute an assessment of workplace risk associated with product(s) used as required under any other Health and Safety Regulation.

Workers must be informed of the presence of crystalline silica and trained in the proper use and handling of this product as required under applicable regulations.

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