

SAFETY DATA SHEET – Silica Sand

1. Identification of the Substance/ Mixture & Company/Undertaking

1.1 Product identifiers

Product Name: Silica Sand

A naturally occurring material excavated and processed at sand pits, gravel pits and hard rock quarries.

Fine washed silica sand that has been processed by washing and cleaning of the grains, sizing to remove coarse and very fine fractions, and physical and chemical processes to remove iron, chromium and other harmful minerals.

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

Identified uses: a variety of industrial uses including building construction, civil engineering works, glass/ceramics production, sports & leisure.

Details of the supplier of the safety data sheet:

Marchington Stone Limited
105 Buxton Road
High Lane
Stockport
SK6 8DX
☎ 01663 765000
✉ sales@marchington.net

Hours of operation:

07:30 – 18:00 Weekdays

08:00- 10:00 Saturday

1.3 Emergency phone number

UK National Poisons Information Service 0344 892 0111 (Healthcare professionals only – 24 hours a day)

2. Hazards Identification

2.1 Classification of the substance or mixture

Not classified as hazardous according to Regulation (EC) No. 1272/2008.

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Note: The product gives potential for generation of respirable dust during handling and use which may contain respirable crystalline silica.

Prolonged inhalation of respirable dust may cause lung fibrosis.
Principal symptoms of lung fibrosis are cough and breathlessness.

Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled. Repeated inhalation of excessive amounts of respirable crystalline silica may cause silicosis.



2.2 Label elements

The product does not need to be labelled in accordance with EC directives or respective national laws.

2.3 Other hazards

None

3. Composition/Information on Ingredients

3.1 Mixtures

Silica sand may contain low levels of respirable crystalline silica.

Hazardous Ingredients				
Substance Name	EC No	%	CAS No:	CLP Classification
Crystalline Silica (respirable fraction)	238-878-4	Variable	14808-60-7 (quartz)	STOT-RE 1, H372i

Text of H-code(s) above:

H372i Causes damage to organs through prolonged or repeated exposure by inhalation

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4. First Aid Measures

4.1 Description of first aid measures

<u>METHOD OF CONTACT</u>	<u>IMMEDIATE ACTION</u>	<u>FURTHER ACTION</u>
Inhalation: Excessive inhalation of dust or fine particles	Remove to fresh air and allow to rest	If recovery is not rapid, obtain prompt medical attention
Skin contact: In case of gross contamination with dusts or fine particles	Remove contaminated clothing. Wash with soap/cleanser and rinse with plenty of water Prolonged contact may cause irritation	If irritation persists, obtain prompt medical attention
Eye contact: Dusts or fine particles causing mechanical eye irritation	Thoroughly irrigate with clean water or eye wash solution Do not rub eyes as the material is abrasive and may scratch the surface of the eye Take care not to wash debris from one eye to another	If irritation persists, obtain prompt medical attention
Swallowing: Ingestion of significant quantities of aggregate that could cause harm is very unlikely	If material enters the mouth, do not induce vomiting Remove to fresh air, rinse mouth and give plenty of water to drink	If feeling unwell seek medical advice

4.2 Most important symptoms and effects, both acute and delayed

The product when handled in the form supplied is not dangerous for human health.

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

5. Fire Fighting Measures

5.1 Extinguishing Media

Silica sand is non-flammable and not combustible.

Use extinguisher suitable for any other materials present in the surrounding fire.

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5.2 Special Exposure Hazards in Fire

None.

5.3 Advise-for Fire Fighters

Material will not burn and will not be affected by other extinguishing media used to fight fires that may be present in surrounding areas.

6. Accidental Release Measures

6.1 Personal Precautions

Avoid breathing in dust.

Keep dust out of eyes.

See Section 7 for guidance on handling the product.

See section 8 for guidance on exposure controls and personal protective equipment.

6.2 Environmental Precautions

Natural aggregates are inert, but as far as possible, dust & fine particles should be prevented from entering into water courses.

Discharge of dust onto vegetation and surrounding property should be avoided and controlled at source.

6.3 Methods and materials for containment and cleaning

- Spray with water to prevent the generation of dust.
- Do not dry sweep residues.
- Use a vacuum where practical.
- Contain to avoid the generation of dust (i.e., cover, enclose or suppress).
- Scoop up and place in container to await transfer.
- Recycle and reuse material where possible.

7. Handling and Storage

7.1 Precautions for safe handling

- Product should be handled to minimise the creation of airborne dust.
- Conveying systems should be fitted with covers to reduce wind whipping.
- Very fine, dry materials should be conveyed in an enclosed system.
- Water sprays and/or local exhaust ventilation and filtration should be used as required.

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Manual handling of the product should be avoided where possible. If manual handling is necessary, full account should be taken of Manual Handling Regulations.

7.2 Conditions for safe storage

- This product should be stored to minimise the creation of airborne dust.
- Very fine dry products (<3mm) in bulk should be stored in enclosed silos unless it is conditioned with water.
- Stockpiles should be sited to avoid wind-whipping where possible.
- Storage bays should be fitted with 3 sides and the aggregates stored below the level of the sides to avoid wind-whipping.

7.3 Specific end use(s)

No data available.

8. Exposure Controls/Personal Protection

8.1 Control parameters

Components with occupational exposure limits

Component	CAS No.	Exposure limit	Reference period	Basis
Respirable Silica	14808-60-7	0.1 mg/m ³	8 hrs T.W.A	UK. EH40 W.E.L.
Nuisance Dust	Respirable Fraction	4 mg/m ³	8 hrs T.W.A	UK. EH40 W.E.L.
	Total Fraction	10 mg/m ³	8 hrs T.W.A	UK. EH40 W.E.L.
W.E.L = Workplace Exposure Limit			T.W.A = Time Weighted Average	

8.2 Exposure controls



Appropriate engineering controls

- Use in well-ventilated areas.
- Use mechanical ventilation in poorly ventilated areas.
- Dusts should be controlled by containment, suppression and extraction / filtration where possible.
- Regular monitoring of where people may be exposed to respirable dust should be undertaken and further measures implemented to reduce exposure.

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Personal Protective Equipment (PPE)

AREA OF CONTACT	PPE STANDARD FOR PROTECTION	OTHER RELEVANT INFORMATION
Eyes 	EN166	Goggles / safety glasses to be worn if there is a risk of product entry into eyes
Skin	Impervious heavy-duty gloves to EU Directive 89/686/EEC and standard EN 374	<p>Gloves must be inspected prior to use</p> <p>Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with good practices</p> <p>Wash hands thoroughly before handling or eating any food and drink</p> <p>Use of skin barrier cream is recommended</p>
Body	Overalls/impervious clothing	<p>Type of protective equipment must be selected according to the prevalent conditions at the specific workplace</p> <p>Wash hands thoroughly before handling or eating any food and drink</p> <p>Use of skin barrier cream is recommended</p>
Respiratory 	Respirators - particulate filter type P3 or equivalent	Where a risk assessment in accordance with the hierarchy of controls established within the Chemical Agents Directive shows a requirement
General Hygiene Measures Wash hands thoroughly before handling or eating any food and drink		

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9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

a	Appearance	Fine free flowing sand
b	Odour	None
c	Odour threshold	Not applicable
d	pH	Not applicable
e	Melting point/freezing point	Not applicable
f	Initial boiling point and boiling range	Not applicable
g	Flash point	Not applicable
h	Evaporation point	Not applicable
i	Flammability (solid/gas)	Non flammable
j	Upper/lower flammability or explosive limits	Non-explosive
k	Vapour pressure	No data available
l	Vapour density @ 20°C	Not applicable
m	Relative Density	Above 2.65
n	Water Solubility	No data available
o	Partition coefficient : (n – octanol/water)	No data available
p	Auto-ignition temperature	Not applicable
q	Decomposition temperature	No data available
r	Viscosity	Not applicable
s	Explosive properties	None
t	Oxidizing properties	None

9.2 Other safety information

No data available

10. Stability and Reactivity

10.1 Reactivity

Stable.

10.2 Chemical stability

Stable at normal temperatures and under recommended storage and handling conditions.

10.3 Possibility of hazardous reactions

None expected under normal conditions.

10.4 Conditions to avoid

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None.

10.5 Incompatible materials

Strong mineral acids.

10.6 Hazardous decomposition products

None under recommended storage and handling conditions.

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity	None
Skin contact	Excessive contact may cause mechanical irritation Prolonged contacts may cause irritation, dryness or dermatitis
Eye contact	May cause mild transient irritation and/or scratch eyes Excessive contact may cause mechanical irritation/damage
Ingestion	Unlikely to cause long term problems
Germ cell mutagenicity	None
Carcinogenicity	IARC classes respirable crystalline silica as a Group 1 carcinogen. The carcinogenic status of respirable silica is further addressed below
Reproductive toxicity	None
Specific target organ toxicity – single exposure	Single exposure – None
Specific target organ toxicity – respiratory- repeated exposure	Prolonged exposure by inhalation may cause cough breathlessness and may lead to lung fibrosis (silicosis)
Aspiration Hazard	None

Potential health effects – Inhalation, ingestion, skin and eyes

- None when intact
- Prolonged handling of aggregates may cause mechanical abrasion of skin
- Inhalation of dusts containing respirable silica may cause serious chronic health effects
- See below for further details

ADDITIONAL INFORMATION

Prolonged inhalation of respirable 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.

(Source: 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 evidence 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...” (Source: 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 research, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits.

12. Ecological Information

When used and disposed of as intended, no adverse environmental effects are foreseen. Aggregates are naturally occurring, inert mineral and do not pose a significant ecological hazard.

12.1 Toxicity

Sand is a naturally occurring, inert material and does not pose a significant ecological hazard.

12.2 Persistence and degradability

Sand is resistant to degradation and will persist in the environment.

12.3 Bioaccumulative potential

Not applicable.

12.4 Mobility in Soil

Sand will sink in water and form a layer on the surface of the ground. Dust may become airborne, leading to deposition on vegetation and subsequent damage.

12.5 Results of PBT and vPvB assessment

Will not meet PBT or vPvB criteria.

13. Disposal Considerations

13.1 Waste treatment methods

Product:

Not classified as Hazardous Waste, can be disposed of as normal industrial waste in line with local and national legislation.

Natural aggregates can be readily reused or recycled.

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Contaminated packaging:

Dispose of as unused product.

14. Transport Information

- Not classified as dangerous to transport.
- Open vehicles should be sheeted to avoid creation of nuisance dust and contain material.
- Dry bulk powder should be transported by tanker to avoid creation of nuisance dust.

15. Regulatory Information

Prepared in accordance with the requirements of Retained REACH EU Regulation (UK).

15.1 Safety, health and environmental regulations / legislation specific for the substance or mixture

- Health & Safety at Work etc. Act 1974
- HSE Guidance Note EH40/2005 Workplace Exposure Limits (as amended)
- Control of Substances Hazardous to Health Regulations (COSHH) 2002 (As amended)
- Environmental Protection Act 1990
- Classification, Labelling and Packaging of Substances and Mixtures Regulations 2008 (as amended)
- Chemicals (Hazard Information and Packaging for Supply) Regulations 2009
- Hazardous Waste Regulations 2005 (as amended)

15.2 Chemical Safety Assessment

No data available.

16. Other Information

16.1 Recommended restrictions on use

Use in accordance with manufacturer's technical instructions.

Sand blasting

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

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Legal Notice

The information in this Safety Data Sheet should be provided to those who will use, handle, store, transport or otherwise be exposed to the product. It has been prepared for the guidance of plant engineering, operations, management and for the people working with and handling the product and was believed to be correct at the time of issue. However, no guarantee or warranty is made, expressed or implied as to the accuracy or completeness of this information and Marchington Stone Ltd assume no responsibility resulting from its use.

This Safety Data Sheet is based on proper handling and anticipated uses and is for the material without chemical additions or alterations. Users should make their own investigations to determine the suitability of the information for their particular purpose. This safety data sheet does not constitute the user's own assessment of workplace risk, and it is the user's sole responsibility to take all necessary precautions when using this product and a suitable risk assessment / COSHH assessment should be complied prior to using this product.

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.

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

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