

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY/ UNDERTAKING

1.1. Identification of the substance or preparation

Harena – coated silica sand

1.2. Use of the substance/ preparation

Main applications of Harena coated silica sand - non-exhaustive list:
Hydrophobic barrier to water and dissolved salts; thermal insulating material; barrier to insects and garden pests; adsorbent for hydrocarbons.

2. COMPOSITION/ INFORMATION ON INGREDIENTS

Substance	Chemical Formula	IUPAC Name	CAS N°	EINECS N°	% by wt
Silica (α -quartz)	SiO ₂	silicon dioxide	14808-60-7	238-878-4	93 - 97
Calcium carbonate	CaCO ₃	limestone	1317-65-3	215-279-6	1 - 3
Calcium oxide	CaO	calcium oxide	1305-78-8	215-138-9	1 - 2
Bitumen mixture			8052-42-4	232-490-9	< 0.6
Bentonite Clay			1302-78-9	215-108-5	< 0.5
Starch	(CH ₆ H ₁₀ O ₅) _n		9005-25-8	232-679-6	< 0.5
Aluminium oxide	Al ₂ O ₃	aluminium oxide	1344-28-1	215-691-6	< 0.03

3. HAZARD IDENTIFICATION

Harena coated silica sand is not classified as hazardous.

The grain size distribution of the silica sand in this product 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 dust should be monitored and controlled.

4. FIRST AID MEASURES

Low hazard for usual industrial handling.

Eye contact

May cause conjunctival irritation. Immediately flood the eye with plenty of water for at least 10 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Ingestion

A large dose may cause irritation of mouth, throat and digestive tract. Wash out mouth with water. Do not induce vomiting. Have victim drink plenty of water. If vomiting occurs naturally, rinse mouth and repeat administration of water. Obtain medical attention.

Inhalation

Exposure may cause irritation of nose, throat and respiratory tract. Remove to fresh air and consult a physician if the victim feels unwell.

Skin contact

May cause slight irritation upon prolonged or repeated contact. No special first aid measures necessary.

5. FIRE-FIGHTING MEASURES

Does not burn. May give rise to hazardous fumes in a fire.

6. ACCIDENTAL RELEASE MEASURES

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.

Environmental precautions

No special requirements.

Methods for cleaning up

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

7. HANDLING AND STORAGE

7.1. Handling

Avoid airborne dust generation.
Provide appropriate exhaust ventilation at places 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.

7.2. Storage

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.
Storage area should be cool, dry and well ventilated.

7.3. Specific use(s)

When mixing with other substances the afore-mentioned safe handling advice shall apply.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Exposure limit values

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

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 0.1 mg/m^3 applies in the United Kingdom, measured as an 8 hour TWA (Time Weighted Average).

8.2. Exposure controls

8.2.1. 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.

8.2.1.1. 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.

8.2.1.2. Eye protection

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

8.2.2. Environmental exposure controls

No special requirements.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. General information

Appearance

Solid, granular, in various colours ranging from grey to brown

Odour

odourless to slight odour

9.2. Important health, safety and environmental information

Flammability : nonflammable

9.3. Other information

Density : 2.65 g/cm^3
 SiO₂ % : 93 - 97 % (cfr. technical data sheet)
 Grain shape : sub-angular
 Particle size range : see technical data sheet
 Solubility in water : negligible

10. STABILITY AND REACTIVITY

Chemically stable under normal conditions.
Incompatibilities with other materials: the product may be decomposed by strong oxidising agents.

Hazardous decomposition products: carbon monoxide.

11. TOXICOLOGICAL INFORMATION

This product has a low order of acute toxicity.

Respirable crystalline silica

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. ECOTOXICOLOGICAL INFORMATION

No specific adverse effects known.

13. DISPOSAL CONSIDERATIONS

Waste from residues / unused products

Can be landfilled in compliance with local regulations. Where possible, recycling is preferable to disposal.

Packaging

No specific requirements

14. TRANSPORT INFORMATION

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

15. REGULATORY INFORMATION

The substance has not been classified at EU level, under regulations relating to dangerous substances and preparations.

16. OTHER INFORMATION

Third party materials

Insofar as materials not manufactured or supplied by Sibelco UK Ltd are used in conjunction with, or instead of Sibelco UK Ltd materials, it is the responsibility of the customer himself to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of Sibelco UK Ltd Harena Coated Silica Sand in conjunction with materials from another supplier.

Liability

Such information is to the best of Sibelco UK Ltd knowledge and belief accurate and reliable as of the date indicated. However, no representation, warranty or guarantee is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use.

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.

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 excessive long term exposures to almost any dust, are likely to lead to respiratory (breathing) problems.

Detailed reviews of the scientific evidence on the health effects of crystalline silica have been published by HSE in the following Hazard Assessment Documents EH75/4 and EH75/5. These documents are available from HSE Books.

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 text of the Agreement and its annexes, including the Good Practices Guide, are available from:

<http://www.nepsi.eu>

Training

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.