

Safety data sheet (in accordance with Regulation (EC) 1907/2006, Regulation (EC) 1272/2008 and Regulation (EC) 830/2015)

Revision date: 03/06/2021

Version: EN 1

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1. NAME OF THE SUBSTANCE OR MIXTURE AND THE COMPANY

1.1. PRODUCT IDENTIFIER

SUBSTANCE NAME

Quartz

Synonyms:

Quartz sand, crystalline quartz sand, silicon dioxide, quartzite

CHEMICAL NAME AND FORMULA

SiO₂

TRADE NAMES:

Crystal quartz sand, fire-dried or moist direct from the stockpile
Product series: all G-grades and S-grades

EINECS NUMBER:

238-878-4

CAS NUMBER:

14808-60-7

REACH REGISTRATION NUMBER:

Exempted in accordance with Annex V.7

1.2. RELEVANT IDENTIFIABLE USES OF THE SUBSTANCE OR MIXTURE AND USES WE ADVISE AGAINST

Main applications (non exhaustive list): Raw materials for glass and ceramics, foundry and building materials

1.3. DETAILS OF THE SUPPLIER PROVIDING THIS SAFETY DATA SHEET

[entity within EU]

COMPANY NAME:

Schlingmeier Quarzsand
GmbH & Co. KG
38179
Schwülper
GERMANY
Phone: + 49 (0)5303-9501-0
Fax: + 49 (0)5303-9501-95

EMAIL ADDRESS OF THE PERSON RESPONSIBLE FOR THE SAFETY DATA SHEET:

dr.barmeyer@schlingmeierquarzsand.de

1.4. EMERGENCY TELEPHONE NUMBER

112

National centre for Prevention and Treatment of Intoxications N°:

To be completed (See national emergency telephone numbers at <http://echa.europa.eu/web/guest/support/helpdesks/national-helpdesks/list-of-national-helpdesks>)

COMPANY EMERGENCY PHONE NUMBER

+49 (0) 5303-9501-51

AVAILABILITY OUTSIDE OFFICE HOURS?

No

OTHER INFORMATION (e.g. TELEPHONE SERVICE LANGUAGE)

German/English

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2. HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

CLASSIFICATION ACCORDING TO REGULATION EC 1272/2008:

Not classified

2.2. LABEL ELEMENTS

LABEL ELEMENTS (EC) 1272/2008:

Not classified

2.3. OTHER HAZARDS

This product is an inorganic substance and does not meet the criteria for PBT or vPvB as set out in Annex XIII of REACH.

No additional hazards identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. MAIN CONSTITUENT:

Quartz

AMOUNT:

SiO₂ > 98%

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3.2 IMPURITIES

This product contains less than 1% of quartz (fine fraction), which is classified as STOT RE1.

4. FIRST AID MEASURES

4.1. DESCRIPTION OF THE FIRST AID MEASURES

FOLLOWING EYE CONTACT:

Rinse the eyes with open lids under running water for several minutes. Consult a doctor if irritation persists.

FOLLOWING INHALATION:

Movement of the exposed individual from the area to fresh air is recommended.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

No acute and delayed symptoms and effects are observed.

4.3. INDICATIONS OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

No special measures required.

5. FIRE-FIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

SUITABLE EXTINGUISHING MEDIA

No specific extinguishing media is needed.

UNSUITABLE EXTINGUISHING MEDIA

No restriction on the extinguishing media to be used

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Non combustible. No hazardous thermal decomposition.

5.3. ADVICE FOR FIREFIGHTERS

No specific fire-fighting protection is required.

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6. ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Avoid airborne dust generation, wear respiratory personal protective equipment in compliance with national legislation, see EN 143: 2000.

6.2. ENVIRONMENTAL PRECAUTIONS

No special requirements.

6.3. METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING

Avoid dry sweeping and use water spraying or vacuum cleaning systems (with high-efficiency particulate air filter) to prevent airborne dust generation. Wear personal protective equipment in compliance with national legislation

6.4. REFERENCE TO OTHER SECTIONS

See Sections 8 and 13.

7. HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

PROTECTIVE MEASURES

Avoid airborne dust generation. Provide appropriate exhaust ventilation at places where airborne dust is generated. Other suitable controls may include enclosure, isolation, water suppression, respiratory protective equipment. Handle packaged products carefully to prevent accidental bursting. If you require advice on safe handling techniques, please contact your supplier or check the Good Practice Guide referred to in section 16.

ADVICE ON GENERAL OCCUPATIONAL HYGIENE

Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. Shower and change clothes at end of work shift.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

TECHNICAL MEASURES / PRECAUTIONS

Minimize airborne dust generation and prevent wind dispersal during loading and unloading. Keep containers closed and store packaged products so as to prevent accidental bursting.

7.3. SPECIFIC END USES

If you require advice on specific uses, please contact your supplier or check the Good Practice Guide referred to in section 16.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

Follow workplace regulatory exposure limits for all types of airborne dust (e.g. total dust, respirable dust, respirable crystalline silica dust). The OEL (Occupational Exposure Limit) for respirable crystalline silica dust is 0,1 mg/m³ in the United Kingdom, measured as an 8 hour TWA (Time Weighted Average). For the equivalent limits in other countries, please consult a competent occupational hygienist or the local regulatory authority.

A European Binding OEL (Occupational Exposure Limit) for respirable crystalline silica dust is set at 0.1 mg/m³ in the Directive (EU) 2017/2398, measured as an 8-hour TWA (Time Weighted Average).

8.2. EXPOSURE CONTROLS

8.2.1. APPROPRIATE ENGINEERING CONTROLS

Minimize airborne dust generation. Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below specified exposure limits. If user operations generate dust, fumes or mist, use ventilation to keep exposure to airborne particles below the exposure limit. Apply organizational measures, e.g. by isolating personnel from dusty areas. Remove and wash soiled clothing.

8.2.2. INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION:

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

SKIN PROTECTION:

No specific requirement. For hands, see below. Appropriate protection (e.g. protective clothing, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin.

HAND PROTECTION:

Appropriate protection (e.g. gloves, barrier cream) is recommended for workers who suffer from dermatitis or sensitive skin. Wash hands at the end of each work session.

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RESPIRATORY PROTECTION:

In case of prolonged exposure to airborne dust concentrations, wear a respiratory protective equipment that complies with the requirements of European or national legislation. The use of half or full face masks with filters against particles of category 2 or 3 (FP2 - FP3) is recommended. See EN 143: 2000 - Respiratory protective devices. Particle filters

8.2.3. ENVIRONMENTAL EXPOSURE CONTROLS

Avoid wind dispersal.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

Solid

COLOUR:

white

ODOUR:

Odourless

ODOUR THRESHOLD

Not applicable

PH VALUE

pH value (400 g/l water at 20°C)

5-8

MELTING POINT/FREEZING POINT

> 1610°C

INITIAL BOILING POINT AND BOILING RANGE

Between 2230 and 2590 °C

FLASH POINT

Not applicable (solid with a melting point >1610°C)

EVAPORATION RATE

Not applicable (solid with a melting point >1610°C)

FLAMMABILITY (SOLID, GASEOUS)

Non-flammable (not combustible)

EXPLOSIVE LIMITS

Non explosive (absence of chemical groups associated with explosive properties)

VAPOUR PRESSURE

Not applicable (solid with a melting point >1610°C)

VAPOUR DENSITY

Not applicable

RELATIVE DENSITY:

2-3 g/cm³

Grain shape

subangular

SOLUBILITY IN WATER

Negligible

SOLUBILITY IN HYDROFLUORIC ACID

Yes

PARTITION COEFFICIENT: N-OCTANOL/WATER

Not applicable (inorganic substance)

AUTO-IGNITION TEMPERATURE

No self-heating under 400 °C (a solid with a melting point > 1610 °C)

DECOMPOSITION TEMPERATURE

Approx. 2000 °C

VISCOSITY

Not applicable (solid with a melting point >1610°C)

EXPLOSIVE PROPERTIES

Non explosive (absence of chemical groups associated with explosive properties)

OXIDISING PROPERTIES

Not applicable (substance is incapable of reacting exothermically with a combustible material)

9.2. OTHER INFORMATION

Not applicable

10. STABILITY AND REACTIVITY

10.1. REACTIVITY

Inert, not reactive

10.2. CHEMICAL STABILITY

Chemically stable

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10.3. POSSIBILITY OF HAZARDOUS REACTIONS

No hazardous reactions.

10.4. CONDITIONS TO AVOID

Not relevant

10.5. INCOMPATIBLE MATERIALS

No particular incompatibilities.

10.6. HAZARDOUS DECOMPOSITION PRODUCTS

Not relevant

11. TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

a) Acute toxicity

The acute oral/dermal LD50 value of quartz and cristobalite is greater than 2000 mg/kg.

Acute toxicity on inhalation

There is no specific acute toxicity data at doses that enable a categorical decision on the acute inhalation toxicity classification for any form of crystalline silica at 100%. Acute inhalation toxicity is not expected based on read across to an OECD compliant study, with a substance that contains 45% cristobalite and gives no indication of lethality. Hence, further testing is not warranted in the interests of animal welfare.

b) Skin corrosion/irritation

Quartz (coarse sand and milled) is not irritating to skin (OECD TG 404).

c) Serious eye damage/irritation

Quartz (coarse sand and milled) is not irritating to eye (OECD TG 405).

d) Respiratory or skin sensitization

No evidence of skin sensitization in handbook data.

e) Germ cell mutagenicity

Quartz has a genotoxic and mutagenic effect mainly through its inflammatory effects. Respirable quartz was unable to cause increased HPRT mutations in rat lung epithelial cells in vitro.

f) Carcinogenicity

Lung cancer excess risk is demonstrated only under high occupational exposures to Respirable Crystalline Silica. The lung cancer excess risk is restricted to subjects who contracted silicosis.

g) Reproductive toxicity

Silica is essential for normal body function and is ingested orally via the consumption of foods containing silica naturally. An early one-generation study on Wistar rats gave no evidence of any adverse effects arising from long-term feeding of silica-rich water.

h) STOT-single exposure

Available studies; inconclusive

i) STOT-repeated exposure

This product is not classified as STOT RE according to criteria defined in the Regulation EC 1272/2008. 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. 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 section 16 below for more information).

j) Aspiration hazard

No aspiration hazard envisaged

12. ECOLOGICAL INFORMATION

12.1. TOXICITY

Not relevant

12.2. PERSISTENCE AND DEGRADABILITY

Not relevant

12.3. BIOACCUMULATIVE POTENTIAL

Not relevant

12.4. MOBILITY IN SOIL

Negligible

12.5. RESULTS OF PBT AND vPvB ASSESSMENT

Not relevant

12.6. OTHER ADVERSE EFFECTS

No specific adverse effects known.

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13. DISPOSAL CONSIDERATIONS

13.1. WASTE TREATMENT METHODS

WASTE FROM RESIDUES/UNUSED PRODUCTS

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

PACKAGING

Dust formation from residues in packaging should be avoided and suitable worker protection assured.. Store used packaging in enclosed receptacles. Recycling and disposal of packaging should be carried out in compliance with local regulations. The re-use of packaging is not recommended. Recycling and disposal of packaging should be carried out by an authorised waste management company.

14. TRANSPORT INFORMATION

14.1. UN NUMBER

Not relevant

14.2. UN PROPER SHIPPING NAME

Not relevant

14.3. TRANSPORT HAZARD CLASSES

ADR: not classified

IMDG: not classified

ICAO/IATA: not classified

RID: not classified

14.4. PACKAGING GROUP

Not relevant

14.5. ENVIRONMENTAL HAZARDS

Not relevant

14.6. SPECIAL PRECAUTIONS FOR THE USER

No special precautions.

14.7. TRANSPORT IN BULK ACCORDING TO ANNEX II OF THE MARPOL AGREEMENT AND THE IBC CODE

Not relevant

15. REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

NATIONAL LEGISLATION/REQUIREMENTS:

15.2. CHEMICAL SAFETY ASSESSMENT

Exempted from REACH Registration in accordance with Annex V.7. of Regulation (EC) 1907/2006.

16. OTHER INFORMATION

Third party materials

Insofar as materials not manufactured or supplied by Schlingmeier Quarzsand GmbH & Co. KG are used in conjunction with, or instead of Schlingmeier Quarzsand GmbH & Co. KG 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 Schlingmeier Quarzsand GmbH & Co. KG's products in conjunction with materials from another supplier.

LIABILITY:

Such information is to the best of Schlingmeier Quarzsand GmbH & Co. KG's knowledge and believed 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.

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.

16.1. REVISION

Most of the 16 Sections have been updated and formatted according to the revised ECHA Guidance on the compilation of safety data sheets (version 3 of February 2015). Therefore, this SDS has been completely redrafted and replaced the former SDS from 20 January 2020.

16.2. ABBREVIATIONS

LD50: Medial lethal dose.

PBT: Persistent bioaccumulative toxic

STOT: Specific Target Organ Toxicity

vPvB: Very persistent very bioaccumulative

OEL: Occupational exposure level

SDS: Safety data sheet

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16.3. RELEVANT H-STATEMENTS

Not applicable

16.4. OTHER RELEVANT INFORMATION

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 2009, in the Monographs 100 series, IARC confirmed its classification of Silica Dust, Crystalline, in the form of Quartz and Cristobalite (IARC Monographs, Volume 100C, 2012).

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).

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. Literature references are available on request from EUROSIL, the European Association of Industrial Silica Producers.

Health & Safety Executive (specific for UK): Detailed reviews of the scientific evidence on the health effects of crystalline silica have been published by HSE (Health and Safety Executive, UK) in the Hazard Assessment Documents EH75/4 (2002) and EH75/5 (2003). The HSE points out on its website that "Workers exposed to fine dust containing quartz are at risk of developing a chronic and possibly severely disabling lung disease known as "silicosis". 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.

This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation (EC 1907/2006; article 31 and Annex II), as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this SDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this SDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particular applications, and does not establish a legally valid contractual relationship. This version of the SDS supersedes all previous versions.

END OF THE SAFETY DATA SHEET