Test dust from quartz

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

Product identifier 1.1

> Substance name: Quartz (SiO₂)

Blowing Sand compliant with MIL-STD-810 Trade name:

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

Relevant identified uses: Test dust

Uses advised against:

Details of the supplier of the safety data sheet 1.3

> Manufacturer/ Supplier: KSL staubtechnik gmbh Address/ PO Box: Westendstrasse 11 Nat.-Ident./ Postcode/ city: DE - 89415 Lauingen

Telephone/ Fax/ E-mail: +49 (0) 9072 / 95 00-0 / Fax no: -50 / info@ksl-staubtechnik.de

Emergency telephone number

+49 (0) 9072/ 95 00-0 (Accessibility: Mon-Thu 8am to 4pm, Fri 8am to 12pm)

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008

No hazardous substance or hazardous mixture according to Regulation (EC) No. 1272/2008 This product contains less than 1% respirable quartz.

2.2 Label elements

2.2.1 Label elements according to Regulation (EC) No. 1272/2008

Not subject to label according to Regulation (EC) No. 1272/2008

2.3 Other hazards

The product is an inorganic substance that does not meet the criteria for PBT and vPvB substances according to Annex XIII of the REACH Regulation 1907/2006/EC.

SECTION 3: Composition/information on ingredients

3.1

Description of the substance: Quartz (SiO₂) **Hazardous ingredients:** None

This product contains less than 1% respirable quartz

Product identifier	CAS No.	EC No.	Concentration range [M%]	Classification according to Regulation (EC) No. 1272/2008
Silicon dioxide SiO ₂	14808-60-7	238-878-4	>= 98%	Not applicable

3.2 **Mixtures**

This product is a substance.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes:

If symptoms persist, it is advised to consult a doctor. Please specify substance/product and measures taken to the doctor.

Ensure supply of fresh air. Any dust in the throat and nasal passages should be cleared promptly. Consult a doctor in case of symptoms such as discomfort, cough or persistent irritation. In general, inhalation is to be avoided.

After skin contact:

Wash with water and soap.

After eye contact:

If necessary, remove contact lenses and, holding the eyelid open, rinse the eye under running water to remove all particles. If possible, use an isotonic eye rinsing solution (0.9 % NaCl). Do not rub eyes when dry, since additional cornea damage could occur due to mechanical stress.

After ingestion:

Rinse mouth with plenty of water.

4.2 Most important symptoms and effects, both acute and delayed

It may cause irritation of the eyes (caused by foreign bodies).

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4.3 Indication of any immediate medical attention and special treatment needed

There are no known special measures.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable:

Suitable extinguishing media in the work area/ environment.

Unsuitable:

None

5.2 Special hazards arising from the substance or mixture

None. Not combustible.

5.3 Advice for firefighters

None

5.4 Additional advice

No action is required because the substance is not combustible.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Avoid dust formation. Wear protective clothing as described under Section 8. Follow the instructions for safe use, as described under Section 7.

6.1.2. For emergency responders

Emergency plans are not necessary. With high dust levels, respiratory protection is however required.

6.2 Environmental precautions

No special environmental precautions required.

6.3 Methods and material for containment and cleaning up

6.3.1 Notes for containment

Avoid dust generation.

6.3.2 Notes for clean-up

Avoid inhalation. Avoid dry sweeping. Use tested spraying and vacuum cleaning systems. Use protective equipment.

6.3.3 Advice on inappropriate containment and cleaning methods

Blowing-off for cleaning purposes is not permitted.

6.4 Reference to other sections

See also Sections 8 and 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

7.1.1 Recommendations on safe handling

Avoid dust formation and deposits. Handle packaged products carefully in order to prevent the packaging from bursting open. Areas subject to dust generation must be equipped with suitable ventilation systems. In case of inadequate dust removal in the workplace, wear suitable respiratory protection (in compliance with the EN 143 standard). Gloves compliant to the EN 374 standard are recommended.

Measures to prevent fire and explosion

No special measures required.

Measures to prevent aerosol and dust generation

Sweep only with an appropriate cleaning agent. For cleaning, use suitable methods as dry as possible - such as vacuum intake - that do not cause dust generation.

Measures to protect the environment

No special measures required.

7.1.2 Advice on general occupational hygiene

During work do not drink, eat or smoke. Wash hands after use/ contact. In dusty atmosphere, use breathing masks and safety goggles.

7.2 Conditions for safe storage, including any incompatibilities

Advice on storage conditions

Store in dry and sealed containers, possibly the original ones. Keep away from foodstuffs, drinks and tobacco.

Requirements for storage rooms and vessels

No special measures required.

Storage class

VCI: 10-13 (non flammable solids)

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7.3 Specific end use(s)

Industry and sector specific guidance

Convenient and economical application with suitable testing equipment depending on the intended purpose. For specific end uses (see Section 1.2), no additional information is available.

Further information can be found i. a. in the Agreement on Workers' Health Protection through the Good Handling and Use of Crystalline Silica and Products Containing it (see Section 16).

SECTION 8: Exposure controls/ personal protection

8.1 Control parameters

Components with workplace-related limit values to be monitored:

Chemical identity	CAS No.	EC No.	National limit value	Exposure type	DNEL/ PNEC value	Comment/ Legal provision
General dust limit value	-	-	1,25 (A) mg/m ³ (respirable)	inhalative		Workplace-related limit value TRGS 900
General dust limit value	-	-	10 (E) mg/m³ (inhalable)	inhalative		Workplace-related limit value TRGS 900

8.2 Exposure controls

To comply with workplace-related limit values, combined technical and individual protection measures are often necessary. For the identified uses (Section 1.2), technical control devices and personal protection measures are recommended. Technical measures and the selection of appropriate processes have priority over the use of personal protective equipment.

8.2.1 Appropriate engineering controls

Avoid or minimise dust formation. Closed processes and local extraction devices are to be used in order to keep airborne dust concentrations below the permissible exposure limit value. With high dust content in the air, use a ventilation system. If dust formation cannot be avoided, the air must remain below exposure limit values through ventilation of the dust content. Organisational measures are to be applied, for example keeping people away from dusty areas.

Recommended measuring procedures for workplace-related measurements: see the professional association series of papers.

8.2.2 Individual protection measures, such as personal protective equipment

General

When the product is used as intended, no personal protective equipment is necessary. Treat the product in compliance with the safety instructions.

Eye/face protection

In case of dust generation, wear closed protective goggles according to the EN 166 Standard.

Skin/hand protection

People suffering from dermatitis or with very sensitive skin should take appropriate precautions (e.g. wear gloves or use protective cream). Wash hands after working. The use of gloves compliant to the EN 374 standard is recommended.

Respiratory protection

Install effective exhaust ventilation and/ or sufficient ventilation. In case the permissible exposure limit values in the workplace are exceeded, a breathing mask must be worn in accordance with the regulations applied in the EU or current national regulations (e.g. particle filter P2 according to the EN 143 standard).

Occupational hygiene

During work do not drink, eat or smoke. Wash your hands before any breaks and after finishing work, and if necessary have a shower. Avoid contact with eyes and skin. After work, workers should wash or have a shower and use skin care products. Clean contaminated clothing, shoes, watches, etc., before re-using.

8.2.3 Environmental exposure controls

See also Sections 6 and 7.

Air

Prevent wind-blown dispersal. Compliance with dust emission limit values according to the Technical Instructions on Air Quality Control.

not applicable

not applicable

Water

Wastewater and groundwater regulations must be observed.

Ground

(j) (k)

Compliance with the Federal Soil Protection Ordinance. No special control measures required.

SECTION 9: Physical and chemical properties

Lower explosive limits:

Vapour pressure:

9.1 Information on basic physical and chemical properties

(a)	Appearance: - Aggregate state	Powder - solid
	- Colour	whitish
(b)	Odour	odourless
(c)	Odour threshold:	not applicable
(d)	pH-value:	5 - 8 (400 g/l at 20° C)
(e)	Melting point/ freezing point:	> 1610°C
(f)	Initial boiling and boiling range:	not applicable
(g)	Flash point:	not applicable
(h)	Evaporation rate:	not applicable
(i)	Flammability (solid, gas):	not applicable

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Vapour density: not applicable Relative density: $2.5 - 2.7 \text{ g/m}^3$ (m) Solubility: negligible (n) Partition coefficient: (o) not applicable (p) (q) Auto-ignition temperature: not applicable **Decomposition temperature:** not applicable

Viscosity: not applicable as it is not a liquid

(s) **Explosive properties:** None

Oxidising properties: not applicable, the substance has no oxidising properties

9.2 Other information

Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

In case of appropriate storage and handling, no hazardous reactions are known.

10.2 Chemical stability

The substance is stable.

10.3 Possibility of hazardous reactions

10.4 Conditions to avoid

Moisture and water during storage may cause lump formation and loss of product quality.

10.5 Incompatible materials

10.6 Hazardous decomposition products

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Based on the available data, the classification criteria are not met.

Skin corrosion/irritation

Based on the available data, the classification criteria are not met.

Serious eye damage/irritation

Based on the available data, the classification criteria are not met.

Respiratory or skin sensitisation

Based on the available data, the classification criteria are not met. Mutagenicity

Based on the available data, the classification criteria are not met. Carcinogenicity

Based on the available data, the classification criteria are not met.

Reproductive toxicity

No information available.

Based on the available data, the classification criteria are not met. Aspiration hazard

Specific target organ toxicity — single exposure

Based on the available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure

Based on the available data, the classification criteria are not met.

Further advices

Irritation of the eye caused by exposure to foreign bodies may occur

Experience from practice

Based on our experience and information provided to us, the product does not cause adverse health effects if used appropriately and handled according to specifications.

SECTION 12: Ecological information

For the product, no ecotoxicological data is available. Quartz is a mineral found in nature and is used worldwide. Adverse consequences for the environment can be ruled out.

12.1 Toxicity

No data available.

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12.2 Persistence and degradability

Quartz is not biodegradable.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Collect the product dry. Avoid formation of dust.

It can be disposed of together with household waste in compliance with local regulations. If necessary, coordinate disposal with the local competent authority.

Recommendation

Agree on the correct waste code with the disposal company.

Waste code according to the European List of Waste (LoW)

010410 - dusty and powdery waste

Treatment of purified/unclean packaging

150106 - mixed packaging suitable for material recycling

SECTION 14: Transport information

With respect to transport regulations, the product is not hazardous (ADR, RID, ADN, IMDG, ICAO/IATA).

14.1 UN number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not applicable

14.6 Special precautions for user

No special measures

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code

Not applicable

SECTION 15: Regulatory information

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

The product does not fall within the registration requirement of EC Regulation 1907/2006 (REACH).

EU regulations

National regulations

When handling this product, the following valid legal provisions are i. a. to be complied with

AwSV Water hazard class: nwg - not hazardous for water

TRGS 500 "precautions" TRGS 559 "Mineral dust"

TRGS 900 "Work-place related limit values"

Technical Instructions on Air Quality Control

Regulation on occupational health care (ArbMedVV)

Basic principles of the Institution for Statutory Accident Insurance and Prevention on occupational medical examinations

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15.2 Chemical safety assessment

A safety assessment has not been carried out.

SECTION 16: Other information

16.1 Changes to the previous version

Editorial modifications

16.2 Abbreviations and acronyms

ADN European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ADR European Agreement concerning the International Carriage of Dangerous Goods by Road ArbMedVV Verordnung zur arbeitsmedizinischen Vorsorge (Regulation on occupational health care)

BImSchV Bundes-Immissionsschutzverordnung (German Federal Emission Control Act)
BG Berufsgenossenschaft (Institution for Statutory Accident Insurance and Prevention)

CAS Chemical Abstracts Service

CLP Classification, labelling and packaging (Regulation (EC) No. 1272/2008)

GefStoffV Gefahrstoffverordnung (Hazardous Substances Ordinance)

IARC International Agency for Research on Cancer
IATA International Air Transport Association
ICAO International Civil Aviation Organisation

IMDG International agreement on the Maritime transport of Hazardous Goods

PBT Persistent, bio-accumulative and toxic

REACH Registration, Evaluation and Authorisation of Chemicals (Regulation (EC) 1907/2006)
RID Regulations concerning the International Carriage of Dangerous Goods by Rail

SCOEL Scientific Committee for Occupational Exposure Limits

SDS Safety Data Sheet

STOT Specific Target Organ Toxicity
SWeRF Size Weighted Relevant Fine Fraction

TRGS Technische Regeln für Gefahrstoffe (Technical rules for hazardous substances)

VCI Verband der chemischen Industrie e.V. (Registered association of the chemical industry)

vPvB Very persistent, very bioaccumulative

AwSV Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (Regulation on plants for handling sub-

stances hazardous to water)

16.3 Literature references and sources of data

With regard to the sources of key data and technical information we refer to the information provided by the raw material supplier/ manufacturer or the ECHA Classification and Labelling Inventory.

16.4 Training appropriate for workers

In addition to training programmes for employees on the topics of health, safety and environment, companies must ensure that their employees read and understand this safety data and are able to implement its requirements. Employees must be informed of the presence of crystalline quartz and trained on the intended use of the product.

16.5 Social dialogue on respirable crystalline silica

On 25 April 2006, the cross-sector "Agreement on Workers' Health Protection through the Good Handling and Use of Crystalline Silica and Products Containing it" was signed. This autonomous agreement, funded by the European Commission, is based on guidelines concerning good practices. The conditions specified in 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, its annexes and the guidelines concerning good practices can be found at http://www.nepsi.eu. These provide useful information and guidance for the handling of products containing respirable crystalline silica. References are available at EUROSIL (European Association of Industrial Silica Producers).

The respirable dust content of the product was determined using the SWeRF method.

Occupational exposure limits can also be found at www.nepsi.eu.

16.6 Disclaimer

The information contained in this safety data sheet describes the safety requirements of our product and is based on our current level of knowledge. It implies no guarantee of the product properties and does not justify a contractual legal relationship. This safety data sheet serves the user as reference information. Although this safety data sheet has been drawn up with great care, no guarantee for data accuracy, and no liability for the consequences of printing, typeset or transcription errors can be accepted. The existing laws, regulations and rule systems, including those not mentioned in this data sheet, must be complied with by the recipient of our products under their own responsibility.