

EG-Material Safety Data Sheet
(1907/2006/EG)

Quartzsand

Grain Size 101, 102, 103, 104, 105

Revision Date: 30/01/2014

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Quartzsand K101 – 105 / ISS-0

1. **Identification**

Product: Quartz
Trade Name: (Silica Sand) Grain Size 101, 102, 103, 104, 105
Manufacturer: Industriesandwerk Robert Hardt GmbH & Co. KG
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2. **Possible Hazards**

Quartzsand itself is not classified as dangerous. However, depending on the handling of the product alveolar crystalline silica may develop. Prolonged inhalation of particles smaller than 10μ can cause lung fibrosis also known as silicosis. Symptoms can range from coughs to breathlessness. New studies show that people who already suffer from fibrosis also have a higher risk of developing lung cancer. Crystalline silica exposure should therefore be measured regularly and reduced accordingly.

ATTENTION! Alveolar Crystalline Silica is invisible to the naked eye.

3. **Composition**

Main Component: Alpha-Quartz (SiO₂)
Other Component: See Chemical Analysis

CAS-Nr. 14808-60-7
EINECS-Nr 238-878-4
EU-Classification None

4. **First Aid Measures**

No special instructions need to be provided for first aid workers; further exposure should be discontinued immediately.

Eye Exposure

Rinse with water

Swallowing

Not Poisonous

Skin Exposure

No special first aid measures required.

Protection for first aid workers / doctors

Not Required.

5. **Firefighting Measures**

Non inflammable. No dangerous substances are released in the case of fire.

6. **Accidental Release Measures**

Personal Precautions:

Avoid airborne dust generation. Wear personal protective equipment in compliance with national law.

Environmental Precautions:

No specific requirements.

Cleaning Methods:

Avoid dry sweeping. Clean with water to avoid dust and/or use according vacuum cleaner systems.

7. **Handling and Storage**

Handling:

Avoid dust generation. Provide exhaust ventilation at workplaces where dust is generated. Wear personal protective equipment in compliance with national law when exposed to dust above the safety limit.

Storage:

Minimise airborne dust when loading and unloading. Store and handle packaged products with care to avoid bursting and/or leaks.

Storage Class: 13 (VCI- Concept)

8. Exposure Control and Personal Protection

National safety limits for dust exposure and alveolar crystalline silica exposure at workplaces are not to be exceeded. This requires regular measurements. When the safety limit is exceeded use appropriate exhaust and ventilation systems to reduce exposure.

Safety Limits for alveolar crystalline silica at workplaces (particles <10 μ):

The OEL (Occupational Exposure Limit) for respirable crystalline silica dust is 0,100 mg/m³ in the United Kingdom, measured as an 8 hour TWA (Time Weighted Average).

<u>Country</u>	<u>Safety-Limit</u>
Germany	0,150mg/m ³
Switzerland	0,150mg/m ³
Austria	0,150mg/m ³
France	0,100mg/m ³
Italy	0,050mg/m ³
Belgium	0,100mg/m ³
Netherlands	0,075mg/m ³
Luxemburg	0,150mg/m ³

Personal Protection for Emergencies:

respiratory protection: respiratory mask with particlefilter class P2

eye protection: safety glasses with side protection

9. Physical and Chemical Properties

Appearance:	grainy, solid
Colour:	white-grey
Grainform:	angular-rounded
Odour:	odourless
Melting Point:	1730°C, verified SK 33
Boiling Point:	2230°C
Sinter:	1550-1600°C
Density:	2,2g/cm ³ -2,4 g/cm ³
Bulk Weight:	1,3g/cm ³ -1,6 g/cm ³ , depending on grain size

Solubility in Water:	No
Solubility in Hydroflouric Acid:	Yes
SiO ₂ Amount:	approx. 96-98%, depending on grain size
Other Oxides:	see chemical analysis
pH-Value:	approx. 7

10. **Stability and Reactivity**

Quartzsands are inert materials. They are stable on both chemical and thermal level and show no significant incompatibility with other substances.

11. **Toxicological Information**

Following information is only relevant in the case of exposure to alveolar crystalline silica. Prolonged or massive exposure can lead to lung fibrosis (silicosis). Symptoms are coughs and breathlessness. People who suffer from fibrosis may have a higher risk of developing lung cancer. Dust exposure must be measured and controlled.

The IARC (International Agency for Research on Cancer) suggests that crystalline SiO₂, which is inhaled at workplaces can cause lung cancer. However they have concluded that depending on the handling and the type of crystalline silica not every type is affected.

Several studies suggest that a higher risk of developing cancer is limited to people who already suffer from fibrosis. According to present information fibrosis can be avoided when the national safety limits are not exceeded.

12. **Ecological Information**

Quartz is environment friendly.

Quartz is also the main component of the Earth's crust.

13. Disposal Information

Unused, non contaminated sand is environment friendly and can be disposed according to local regulations. Packaging such as bags, shrink foil or big-bags should be disposed of in collaboration with local waste sites.

14. Transport Information

No special requirements. Avoid open transport to prevent dust.

15. Regulations

No EU-Classification in 67/548/EWG attachment 1.

National Regulation:	None
Incident Regulation:	None
Air Quality Control (TA-Luft):	5.2.1
Water Contamination Class:	0 Non-Hazardous

Chemical Safety Assessment:

Excluded from REACH registrations-requirements of Annex V.7.

16. Other Information

Liability:

The Information given in this paper solely describe the safety requirements of this Product according to todays state of knowledge. No guarantee regarding validity, accuracy and applicability can be made. It is the users responsibility to ensure all special safety information for their individual use.

Operating Limitations:

In some countries dry blasting is not permitted with Quartz containing more than 5% of crystalline silica. (e.g. Germany, France, Switzerland).

Workplace Safety Limits for Crystalline Silica:

Current national safety limits can be obtained from IMA-Europe (Industrial Minerals Association Europe) Bd. S. Dupuis 233, B-1070 Brüssel under www.ima-eu.org/en/silhsefacts.html