



SILICA SAND MATERIAL SAFETY DATA SHEET

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Section 1-General

Product: Silica Sand
Trade Name: Kemerton Silica Sand Pty Ltd
Producer: Kemerton Silica Sand Pty Ltd
PO Box A 283
Australind 6223
Western Australia
Telephone: (61-8) 9720 0000
Facsimile: (61-8) 9720 1406

Ingredient	Concentration	CAS No
Feldspar:	<5%	Not available
Silica:	>95%	14808-60-7
Synonyms:	Crystalline Quartz, Quartz, Silicon Dioxide	
Appearance:	White granules	
Odour:	Odourless	
Uses:	Feedstock, Glass production, Ceramic Manufacture	
Poison Schedule:	None allocated	
Hazchem:	None allocated	
UN#:	None allocated	
DG Class:	None allocated	
Pkg Group:	None allocated	
EPG:	None allocated	
Sub-tert risk:	None allocated	

Section 2- Health Hazards

Low irritant. Avoid dust generation. Adverse health effects, usually associated with long term exposure to high crystalline silica dust levels are not anticipated, given the granular nature of this product. Chronic exposure to dust may cause lung fibrosis (silicosis). Crystalline quartz is classified as carcinogenic to humans (IARC Group 1)

Eye: Low irritant. Exposure may result in irritation and lacrimation

Inhalation: Low irritant. Over exposure at high levels may result in irritation of the nose and throat with coughing. Prolonged and repeated inhalation of respirable silica may result in pulmonary fibrosis (silicosis). Crystalline quartz is classified as carcinogenic to humans (IARC Group 1). Due to product form, inhalation exposure is not anticipated.



Skin: Low irritant. Prolonged and repeated exposure to dust may result in irritation and dermatitis.

Ingestion: Low toxicity. This product is biologically inert. However, ingestion may result in gastrointestinal irritation due to mechanical action.

Section 3- precautions

Flammability: Non flammable. No fire or explosion hazard exists.

Reactivity: Incompatible with strong acids (eg. Hydrofluoric acid).

Ventilation: Do not inhale dust/powder. Use with adequate natural ventilation. Where a dust inhalation hazard exists, mechanical extraction ventilation or dampening with water is recommended.

Section 4- Personal Protective Equipment

PPE: No personal protective equipment is normally required. When using large quantities or where heavy contamination is likely, wear dust proof goggles and PVC, rubber or cotton gloves. Where an inhalation risk exists, wear a Class P1 (Particulate) respirator. At high dust levels, wear a Powered Air Purifying Respirator (PAPR) with Class P3 (Particulate) filter, an Air-line respirator or a Full-face Class P3 (Particulate) respirator.

Section 5- First Aid

Eye: (Dust exposure) Flush gently with running water. Seek medical attention if irritation develops.

Inhalation: Leave area of exposure. Seek medical attention if symptoms develop.

Skin: (Dust). Gently flush affected areas with soap and water. Seek medical attention if Irritation develops.

Ingestion: Due to product form application, ingestion is considered highly unlikely.

Section 7- Emergency

Spillage: If spilt (bulk), wear dust-proof goggles, PVC/rubber gloves and a Class P1 (Particulate) respirator (where an inhalation risk exists). Collect and place in sealable containers for disposal. Avoid generating dust.

Environment: The main component/s of this product occur naturally in the earth's crust. It is not anticipated to cause any adverse effects to plants or animals.

Fire and Explosion: Non flammable. No fire or explosion hazard exists.

Extinguishing: Non flammable.

Section 8- Physical and Chemical Properties

Flammability: Non flammable

Boiling Point: 2230.05c

Exposure Standard (TWA) 0.2mg/m³ silica, crystalline-quartz

pH: not available

Specific Gravity: 2.20

Vapour Pressure: Not available



Lower
Explosion Limit: Not relevant

Melting point: 1610c

Evaporation Rate: Not available

%Volatiles: Not available

Solubility: Insoluble

Upper Explosion
Limit: Not relevant

ADDITIONAL INFORMATION FOR: FELDSPAR

Concentration in this product: <5%

EMERGENCY-ENVIRONMENT

Feldspars are naturally occurring silicate minerals, they are not anticipated to have an adverse effect on the environment.

ADDITIONAL INFORMATION FOR: SILICA, CRYSTALLINE-QUARTZ

Concentration in this product: >95%
Molecular Formula: Si-O₂
Molecular Weight: 60.09

HEALTH HAZARD-EYE

Direct contact may result in mechanical irritation. Avoid rubbing the eyes as the surface may be scratched.

HEALTH HAZARDS – HEALTH HAZARD SUMMARY

Crystalline silica quartz is classified as a human carcinogen (IARC Group 1). It is also listed as a hazardous substance for which health surveillance is required according to the WorkSafe Australia Standard for

the Control of Workplace Hazardous Substances. The National Occupational Health and Safety Commission (NOHSC) recommends that where legislation exists that deals with the control of crystalline silica and specifies lower exposure standard values for quartz, cristobalite and tridymite than those listed by NOHSC, then compliance with those exposure standards must be maintained. The ACGIH recommend a TLV of 0.1 mg/m³.

HEALTH HAZARDS – INHALATION

Classified as carcinogenic to humans (IARC group 1). Smokers are likely to be more susceptible. Chronic exposure to respirable silica dust may result in lung fibrosis (silicosis). Symptoms include cough, wheezing and with progression, an increasing shortness of breath.

YWA: 0.2mg/m³ (Silica Quartz)
TCLo (inhalation) : 16 000 000 particles /ft³/8 hours 17.9 years (human-fibrosis)
LCLo (Inhalation) : 300 ug/m³ /10 years (human)

EMERGENCY – ENVIRONMENT

Silica occurs naturally as quartz, flint, diatomite, agate, chalcedony, chert and tridymite. It is not anticipated to have an adverse effect on the environment.

HEALTH HAZARDS- TOXICITY DATA

LDLo (Intravenous) : 20 mg/kg (dog)
LDLo (Intratracheal) : 200 mg/kg (rat)

ADDITIONAL SAFE HANDLING INFORMATION

EXPOSURE STANDARDS – TIME WEIGHTED AVERAGES: Exposure standards are established on the premises of an 8 hour work period of normal intensity, under normal climatic conditions and where a 16 hour break between shifts exists to enable the body to eliminate absorbed contaminants. In the following circumstances, exposure standards must be reduced: strenuous



work conditions; hot, humid climates; high altitude conditions; extended shifts (which increase the exposure period and shorten the period of recuperation).

IARC – GROUP 1 – PROVEN HUMAN CARCINOGEN: This product contains an ingredient for which there is sufficient evidence to have been classified by the International Agency for Research into Cancer as a human carcinogen. The use of products known to be human carcinogens should be strictly monitored and controlled.

SILICA – MEDICAL CONSIDERATIONS: Medical testing for those with frequent or potentially high exposure to silica (half the TWA or more) is recommended before beginning work and at regular intervals thereafter. This should include: lung function tests – chest x-rays every 1-3 years. If abnormal chest x-ray develops, skin test for tuberculosis should be done. Any evaluation should include a careful history of past and present symptoms with an exam. Medical tests that look for damage already done are not a substitute for controlling exposure.

PERSONAL PROTECTIVE EQUIPMENT GUIDELINES:

The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.

HEALTH EFFECTS FROM EXPOSURE: It should be noted that the effects from exposure to this product will depend on several factors including: frequency and duration of use; quantity used, effectiveness of control measures; protective equipment used and method of application. Given that it is impractical to prepare an MSDS which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Kemerton Silica Sand Disclaimer

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by purchase, resale, use or exposure to our silica sand. Customers-users of silica sand must comply with all applicable health and safety laws, regulations and orders, including the OSHA Hazardous Communication Standard.
