



Infosafe No™	1CHMX	Issue Date : May 2018	RE-ISSUED by CHEMSUPP
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Product Name : **QUARTZ Powder**

Classified as hazardous

1. Identification

GHS Product Identifier	QUARTZ Powder		
Company Name	CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)		
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia		
Telephone/Fax Number	Tel: (08) 8440-2000 Fax: (08) 8440-2001		
Recommended use of the chemical and restrictions on use	Electronic components; piezoelectric control in filters, oscillators, frequency standards, wave filters, radio and TV components; barrel-finishing abrasive, catalyst carrier, maceration agent and analytical reagent.		
Other Names	Name	Product Code	
	QUARTZ Powder >230 Mesh AR	QA001	
	Silicon dioxide		
	Crystalline silica (quartz)		
Other Information	EMERGENCY CONTACT NUMBER: +61 08 8440 2000 Business hours: 8:30am to 5:00pm, Monday to Friday.		

Chem-Supply Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Chem-Supply Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Chem-Supply Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture	Specific target organ toxicity - Repeated Exposure, Inhalation Category 1
Signal Word (s)	DANGER
Hazard Statement (s)	H373 May cause damage to organs (Lungs) through prolonged or repeated exposure if inhaled.
Pictogram (s)	Health hazard



Precautionary statement – Prevention	P260 Do not breathe dust/fume/gas/mist/vapours/spray.
Precautionary statement – Response	P314 Get medical advice/attention if you feel unwell.
Precautionary statement – Disposal	P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/information on ingredients

Chemical Characterization	Solid				
Ingredients	Name	CAS	Proportion	Hazard Symbol	Risk Phrase
	Quartz (crystalline silica)	14808-60-7	100 %		



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4. First-aid measures

Inhalation	Remove from exposure, rest and keep warm. If breathing has stopped, apply artificial respiration. If breathing is difficult, give oxygen. Seek medical attention in severe cases, if symptoms develop, or if breathing is difficult.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. Give water to drink. DO NOT INDUCE VOMITING. Seek medical advice.
Skin	Wash affected area thoroughly with copious amounts of running water. Remove contaminated clothing and wash before reuse. Seek medical attention in severe cases, or if irritation develops.
Eye contact	If contact with the eye(s) occur, wash with copious amounts of water for approximately 15 minutes holding eyelids(s) open. Take care not to rinse contaminated water into the non-affected eye. If irritation develops seek medical attention.
First Aid Facilities	Maintain eyewash fountain and drench facilities in work area.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor.

5. Fire-fighting measures

Hazards from Combustion Products	Toxic and/or irritating dust, including silicon oxides. At higher temperatures, can change crystal structure to form tridymite or cristobalite, which have greater health hazards.
Specific Methods	Use extinguishing media most appropriate for the surrounding fire. No limitations to the type of extinguishing media.
Precautions in connection with Fire	Wear SCBA and structural firefighter's uniform.

6. Accidental release measures

Personal Precautions	Evacuate the area of all non-essential personnel. Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Clean-up Methods - Small Spillages	Sweep up (avoid generating dust) and using clean non-sparking tools transfer to a clean, suitable, clearly labelled container for disposal in accordance with local regulations.

7. Handling and storage

Precautions for Safe Handling	Avoid ingestion or inhalation of dust and aerosols. Avoid contact with eyes, skin, or clothing. Minimize dust, accumulation and dispersion in the work atmosphere. Provide appropriate exhaust ventilation at places where dust is formed. Maintain and test ventilation and dust collection equipment. Use only with adequate ventilation and dust collection. Wear suitable protective clothing to prevent inhalation and eye exposure.
Conditions for safe storage, including any incompatibilities	Store in tightly closed, labelled, corrosion-resistant containers, in a cool, dry, well-ventilated area away from incompatible materials. Store away from bases, halogens and water.
Storage Temperatures	Store at room temperature (15 to 24 °C recommended).

8. Exposure controls/personal protection

Occupational exposure limit values	Name	STEL		TWA		Footnote
		mg/m ³	ppm	mg/m ³	ppm	
	Quartz (crystalline silica)			0.1		
Other Exposure Information	A time weighted average (TWA) has been established for Quartz [Silica Crystalline] [14808-60-7] (Safe Work Australia) of 0.1 mg/m ³ . The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week.					
Appropriate engineering controls	In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. These methods should be used in preference to personal protective equipment.					
Respiratory Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be					



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Eye Protection	selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.
Hand Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336. Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. Recommendation: Vinyl gloves.
Personal Protective Equipment	The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.
Body Protection	Clean clothing or protective clothing should be worn. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
Hygiene Measures	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Solid
Appearance	White or off-white to reddish tan, or grey powder.
Odour	Odourless.
Melting Point	1610 - 2000 °C.
Boiling Point	>2200 °C.
Solubility in Water	Immiscible or insoluble.
Solubility in Organic Solvents	Soluble in concentrated hydrofluoric acid, forming silicon tetrafluoride gas; soluble in hot potassium hydroxide and hot sodium hydroxide solutions; very slightly soluble in strong alkali; practically insoluble in acids; insoluble in ethanol.
Specific Gravity	2.65
Vapour Pressure	10 mm Hg @ 1732 °C.
Volatile Component	0 %vol @ 21 °C
Flammability	Non combustible material.
Molecular Weight	60.09.
Particle Size	>230 mesh.
Other Information	Mohs hardness: 7. Piezoelectric and pyroelectric. Taste: Tasteless. Refractive Index: n _{20/D} 1.544.

10. Stability and reactivity

Chemical Stability	Stable under normal conditions of storage and handling.
Conditions to Avoid	Dust generation and incompatible materials.
Incompatible Materials	Strong alkalis, hydrofluoric acid, alkaline aqueous solutions, catechol, strong oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, oxygen difluoride, vinyl acetate and magnesium.
Hazardous Decomposition Products	Toxic and/or irritating dust, including silicon oxides. At higher temperatures, can change crystal structure to form tridymite or cristobalite, which have greater health hazards.
Possibility of hazardous reactions	Quartz is attacked by hydrofluoric acid and produces a corrosive gas - silicon tetrafluoride. Slowly attacked by heating with concentrated phosphoric acid. Combines with strong alkalies under suitable conditions to form silicates. Silica is attacked by catechol. Melts to glass at ordinary temperatures. Reacts with strong oxidants causing fire and explosion hazard. Can cause violent reaction in contact with oxygen difluoride, with vinyl acetate and magnesium.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Ingestion	Ingestion of this product may cause irritation of the digestive tract, causing nausea and vomiting.
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Inhalation	Harmful if inhaled. May cause cancer by inhalation. May cause drying and respiratory tract irritation, with coughing. Affects respiration. Inhalation of silica dust may cause pulmonary disease (silicosis). Acute pneumoconiosis from overwhelming exposure to silica dust has occurred. May also affect liver.
Skin	Dust may cause mechanical skin irritation, resulting in redness and itching.
Eye	Dust is abrasive and may cause mechanical eye irritation, temporary discomfort to eyes, redness and pain. May cause physical damage, including corneal scarring.
Carcinogenicity	Silica [14808-60-7], crystalline (inhaled in the form of quartz or cristobalite from occupational sources) is evaluated in the IARC Monographs (Vol. 68; 1997) as Group 1: Carcinogenic to humans.
STOT-repeated exposure	H373 May cause damage to organs (Lungs) through prolonged or repeated exposure if inhaled.
Chronic Effects	Repeated or prolonged inhalation, or exposure to dust may aggravate asthma and may lead to cancer and lung injury/fibrosis (silicosis, the formation of adhesions in the lungs progressing to the formation of a continuous mass of fibrous tissue, characterized by a dry cough, shortness of breath, emphysema, decreased chest expansion, reduced lung function, increased susceptibility to tuberculosis, in advanced stages, loss of appetite, pleuritic pain, and total incapacity to work and in severe cases, death due to cardiac failure or destruction of lung tissue). The onset of silicosis is usually slow and can develop to a more serious degree even after exposure has ceased, or when no symptoms or signs of ill-health have occurred and may also lead to other diseases including heart disease and scleroderma. May also affect blood. Prolonged or repeated contact with the skin in the absence of proper hygiene, may cause dryness and dermatitis.
Mutagenicity	Mutagenic effects have occurred in humans. Micronucleus test, Human Lung, Dose/Duration: 40 µg/cm ² , Reference: MUREAV Mutation Research. (Elsevier Science Pub. B.V., POB 211, 1000 AE Amsterdam, Netherlands) V.1- 1964- Volume(issue)/page/year: 335,27,1995. Mutagenic effects have been observed on tests with laboratory animals. Micronucleus test, Rodent - hamster Lung, Dose/Duration: 160 µg/cm ² , Reference: MUREAV Mutation Research. (Elsevier Science Pub. B.V., POB 211, 1000 AE Amsterdam, Netherlands) V.1- 1964- Volume(issue)/page/year: 335,27,1995.

12. Ecological information

Ecological Information	No ecological problems are to be expected when the product is handled and used with due care and attention.
Ecotoxicity	Quantitative data on the ecological effect of this product are not available.

13. Disposal considerations

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and disposed of according to relevant local, state and federal government regulations.
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14. Transport information

Transport Information	Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.
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15. Regulatory information

Regulatory Information	Listed in the Australian Inventory of Chemical Substances (AICS).
Poisons Schedule	Not Scheduled
National and or International Regulatory Information	NICNAS: Crystalline silica: Human health tier II assessment

16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia. Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007. Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide',
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Safety Data Sheet

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**Contact
Person/Point**

Standards Australia/Standards New Zealand, 2010.
Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'.
Safe Work Australia, 'Hazardous Substances Information System, 2005'.
Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'.
Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.
Paul McCarthy Ph. (08) 8440 2000 **DISCLAIMER STATEMENT:**
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**Empirical Formula &
Structural Formula**

SiO₂
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