

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name MICROSILICA
Synonym(s) AMORPHOUS SILICA FUME • DENSIFIED SILICA FUME • SIMCOA MICROSILICA • UNDENSIIFIED SILICA FUME

1.2 Uses and uses advised against

Use(s) CONCRETE ADDITIVE • REFRACTORY APPLICATIONS • STRENGTHENING AGENT

1.3 Details of the supplier of the safety data sheet

Supplier name SIMCOA OPERATIONS PTY LTD
Address 973 Marriott Rd, Wellesley, WA, Australia, 6233
Telephone 08 9780 6661
Fax Not supplied
Email craigwallis@simcoa.com.au
Website http://www.simcoa.com.au

1.4 Emergency telephone number(s)

Emergency 0408901179

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

GHS Classification(s) Carcinogenicity: Category 1A
Specific Target Organ Systemic Toxicity (Repeated Exposure): Category 2

2.2 Label elements

Signal word DANGER

Pictograms



Hazard statement(s)

H350 May cause cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

Prevention statement(s)

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P281 Use personal protective equipment as required.

Response statement(s)

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

Storage statement(s)

P405 Store locked up.

Disposal statement(s)

P501 Dispose of contents/container in accordance with relevant regulations.

2.3 Other Hazards

No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS number	EC number	Content
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Product name **MICROSILICA**

Ingredient	CAS number	EC number	Content
CARBON	Not Available	Not Available	<10%
QUARTZ (CRYSTALLINE SILICA)	14808-60-7	238-878-4	<1.4%
CRISTOBALITE	14464-46-1	238-455-4	<1%
SILICA, AMORPHOUS - FUME	69012-64-2	273-761-1	>90%

Ingredient notes This product has a particle size of approximately 0.5 microns and a specific surface area of 15 - 30 m²/g.

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation	If inhaled, remove from contaminated area. Apply artificial respiration if not breathing.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.
Ingestion	For advice, contact a Poison Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). Due to product form and application, ingestion is considered unlikely.
First aid facilities	Eye wash facilities should be available.

4.2 Most important symptoms and effects, both acute and delayed

No information provided.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Use an extinguishing agent suitable for the surrounding fire.

5.2 Special hazards arising from the substance or mixture

Non flammable. May evolve toxic gases if strongly heated.

5.3 Advice for firefighters

Treat as per requirements for surrounding fires. Evacuate area and contact emergency services. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

None allocated

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Moisten with water to prevent a dust hazard and place in sealable containers for disposal.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

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7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities

Store in a well ventilated area, removed from incompatible substances and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Bulk material should be stored in a manner that minimises dust generation.

7.3 Specific end use(s)

No information provided.

8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Substance	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Cristobalite	SWA (AUS)	--	0.1	--	--
Fumed silica (respirable dust)	SWA (AUS)	--	2	--	--
Quartz (respirable dust)	SWA (AUS)	--	0.1	--	--

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering Controls

Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended. Maintain dust levels below the recommended exposure standard.

PPE

Eye/Face

Wear dust-proof goggles.

Hand

When using large quantities or where heavy contamination is likely, wear leather or cotton gloves.

Body

No PPE specified.

Respiratory

Wear a Class P2 (Particulate) respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	FINE WHITE TO DARK GREY POWDER
Odour	ODOURLESS
Odour Threshold	NOT AVAILABLE
Flammability	NON FLAMMABLE
Flash Point	NOT RELEVANT
Boiling Point	NOT AVAILABLE
Melting Point	1550°C to 1700°C
Evaporation Rate	NOT AVAILABLE
pH	6 to 7 (1% Slurry)
Specific Gravity	2.2 to 2.3
Solubility (water)	INSOLUBLE
Vapour Density	NOT AVAILABLE

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Vapour Pressure	NOT AVAILABLE
Upper Explosion Limit	NOT RELEVANT
Lower Explosion Limit	NOT RELEVANT
Partition Coefficient	NOT AVAILABLE
Autoignition Temperature	NOT AVAILABLE
Decomposition Temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive Properties	NOT AVAILABLE
Oxidising Properties	NOT AVAILABLE
9.2 Other information	
Density	150 to 700 kg/m3

10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization will not occur.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

Incompatible with hydrofluoric acid (may evolve toxic silicon tetrafluoride gas). Heating this product above 500°C may result in the formation of crystalline silica (cristobalite/tridymite), which can cause silicosis and is a known human carcinogen (IARC Group 1).

10.6 Hazardous decomposition products

Not expected to evolve hazardous decomposition products.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met.
Skin	Contact may result in irritation, redness, pain and rash.
Eye	Contact may result in irritation, lacrimation, pain and redness.
Mutagenicity	Not classified as a mutagen.
Carcinogenicity	Crystalline silica is classified as carcinogenic to humans (IARC Group 1). However, there is a body of evidence supporting the fact that increased cancer risk would be limited to people already suffering from silicosis. There is inadequate evidence in humans for the carcinogenicity of amorphous silica. Amorphous silica is not classifiable as to its carcinogenicity to humans (Group 3).
Reproductive	Not classified as a reproductive toxin.
STOT - single exposure	Not classified as causing organ damage from single exposure.
STOT - repeated exposure	Over exposure to amorphous silica does not cause silicosis, however there is a risk of pulmonary fibrosis associated with the crystalline silica contaminant.
Aspiration	Not classified as causing aspiration.
Sensitisation	Not classified as causing skin or respiratory sensitisation.

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12. ECOLOGICAL INFORMATION

12.1 Toxicity

No information provided.

12.2 Persistence and degradability

No information provided.

12.3 Bioaccumulative potential

No information provided.

12.4 Mobility in soil

No information provided.

12.5 Results of PBT and vPvB assessment

No information provided.

12.6 Other adverse effects

The main component/s of this product are not anticipated to cause any adverse effects to plants or animals.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal Reuse where possible. No special precautions are normally required when handling this product.
Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA

	Land Transport (ADG)	Sea Transport (IMDG/IMO)	Air Transport (IATA/ICAO)
14.1 UN number	None Allocated	None Allocated	None Allocated
14.2 UN proper shipping name	None Allocated	None Allocated	None Allocated
14.3 Transport hazard classes			
DG Class	None Allocated	None Allocated	None Allocated
Subsidiary risk(s)	None Allocated	None Allocated	None Allocated
14.4 Packing group	None Allocated	None Allocated	None Allocated
14.5 Environmental hazards		None Allocated	
14.6 Special precautions for user			
Hazchem Code	None Allocated		

15. REGULATORY INFORMATION

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

Poison schedule A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Classifications Carc. - Carcinogen
Xn - Harmful

Risk phrases R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R49: May cause cancer by inhalation.

Safety phrases S22: Do not breathe dust.
S36: Wear suitable protective clothing.

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S51: Use only in well ventilated areas.

WHS regulatory information

Ingredient name	CAS number	Regulation	Details
QUARTZ (CRYSTALLINE SILICA)	14808-60-7	Restricted Hazardous Chemicals	Free silica (crystalline silicon dioxide). For abrasive blasting >1%.
		Schedule 14 - Health Monitoring	Crystalline silica

Inventory listing(s) **AUSTRALIA: AICS (Australian Inventory of Chemical Substances)**

All components are listed on AICS, or are exempt.

15.2 Chemical safety assessment

No information provided.

16. OTHER INFORMATION

Additional information **RESPIRATORS:** In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

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 a ChemAlert report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

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.

Abbreviations	ACGIH	American Conference of Governmental Industrial Hygienists
	CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
	CNS	Central Nervous System
	EC No.	EC No - European Community Number
	EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
	GHS	Globally Harmonized System
	GTEPG	Group Text Emergency Procedure Guide
	IARC	International Agency for Research on Cancer
	LC50	Lethal Concentration, 50% / Median Lethal Concentration
	LD50	Lethal Dose, 50% / Median Lethal Dose
	mg/m ³	Milligrams per Cubic Metre
	OEL	Occupational Exposure Limit
	pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
	ppm	Parts Per Million
	STEL	Short-Term Exposure Limit
	STOT-RE	Specific target organ toxicity (repeated exposure)
	STOT-SE	Specific target organ toxicity (single exposure)
	SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
	SWA	Safe Work Australia
	TLV	Threshold Limit Value

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TWA Time Weighted Average

Report Status

This ChemAlert report has been independently compiled by RMT's scientific department utilising the original Safety Data Sheet ('SDS') for the product provided to RMT by the manufacturer. The information is based on the latest chemical and toxicological research and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. It is an independent collation by RMT of information obtained from the original SDS for this product. Its content has not been authorised or verified by the manufacturer / distributor of the chemical to which it relates.

This ChemAlert report does not constitute the manufacturer's original SDS and is not intended to be a replacement for same. It is provided to subscribers of ChemAlert as a reference tool only, is not all-inclusive and does not represent any guarantee as to the properties of the product. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer.

While RMT has taken all due care to include accurate and up-to-date information in this ChemAlert report, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this ChemAlert report.

Prepared By

Risk Management Technologies
5 Ventnor Ave, West Perth
Western Australia 6005
Phone: +61 8 9322 1711
Fax: +61 8 9322 1794
Email: info@rmt.com.au
Web: www.rmt.com.au

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