

SAFETY DATA SHEET

Microsilica SF

Section 1	Identification of the Material and the Supplier
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Product Name:	Microsilica SF
Other Names:	Densified silica fume, Silica (Silicon Dioxide), Amorphous silica
Product Use:	General building raw material additive / concrete additive, Natural pozzolan for high performance concrete.
Restriction of Use:	Refer to Section 15
New Zealand Supplier	Golden Bay Cement
Address:	Portland Road Whangarei, 0178
Telephone:	09 432 2656 (7.30am – 4 pm, Mon – Fri)
Emergency Telephone 24 hour:	0800 764 766 (NZ Poisons Centre) 0800 243 622 (0800 CHEMCALL)
Date of SDS Preparation:	25 September 2017
Prepared by:	Technical Compliance Consultants (NZ) Ltd

Section 2	Hazards Identification
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This substance is hazardous according to the *HSNO (Minimum Degrees of Hazard) Regulations 2001*

EPA Approval No: Construction Products (Toxic [6.7]) - HSR002545

Pictograms



Chronic

Signal Word: Danger

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.7A	H350	May cause cancer	Category 1A

Prevention Code	Prevention Statement
P103	Read label before use.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P281	Use personal protective equipment as required.

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

Storage Code	Storage Statement

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P405	Store locked up.
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Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Other Hazards:

Dust may cause respiratory irritation, skin and eye irritation through mechanical means.

Section 3 Composition/Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Silica (Amorphous)	>85.0	69012-64-2
Crystalline Silica	<0.67	14808-60-7

Section 4 First Aid Measures (for construction uses)

Recommended on site emergency facilities: Comprehensive First Aid kit plus access to eye wash facilities.

Routes of Exposure:

If in Eyes	Quickly and gently blot or brush away any dry powder. Hold eyelids open and immediately irrigate eye with copious amounts of water for a minimum of 15 minutes. Remove contact lenses if safe to do so. If irritation persists: get medical advice.
If on Skin	Continuously flush contaminated area with lukewarm, gently flowing water for at least 15-20 minutes. Remove contaminated clothing and wash before reuse or discard. Some individuals may have a sensitization to the product. Seek medical advice if a large area of redness or skin irritation develops.
If Swallowed	Wash out mouth with water and drink 1-2 glasses (240-300ml) of water. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Never give anything by mouth if victim is rapidly losing consciousness, unconscious or convulsing. Seek medical advice.
If Inhaled	Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice.

Section 5 Fire Fighting Measures

Hazard Type	Non-combustible solid
Hazards from decomposition products	No specific hazards from heat decomposition except for minor amounts of carbon dioxide/monoxide.
Suitable Extinguishing media	Extinguish fires based on surrounding material.
Precautions for firefighters and special protective clothing	Firefighters should wear full protective clothing and self-contained breathing apparatus
HAZCHEM CODE	None allocated

Section 6 Accidental Release Measures

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Methods and materials for containment and clean up:

Prevent spillage from entering storm water and sewer drains.

Use dry clean up procedures and avoid generating dust. Increase ventilation and wear full protective clothing and sufficient respiratory protection. Use a vacuum device or shovel suitable for clean-up. Place waste material in plastic or metal drums with tightly sealed lids for disposal.

Section 7 Handling and Storage

HANDLING:

- Wear protective clothing.
- Wash hands before smoking, eating, drinking or using the toilet
- Use in well ventilated areas

STORAGE:

- Store in a dry, well-ventilated place.
- Store away from foodstuffs and containers.
- Keep in sealed containers until needed.
- Store away from incompatibilities listed in Section 10.

Section 8 Exposure Controls/Personal Protection

WORKPLACE EXPOSURE STANDARDS NZ WorkSafe New Zealand (provided for guidance only)

Substance	TWA ppm mg/m ³
Silica fume	2 (Respirable dust)
Quartz	0.1(Respirable dust)

Workplace Exposure Standard – Time Weighted Average (WES-TWA). *The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure.*

ENGINEERING CONTROLS:

Use in well-ventilated area or outside. Maintain air concentrations below exposure standards.

PERSONAL PROTECTIVE EQUIPMENT:

Eyes	Wear tight fitting safety goggles
Hands and Skin	Wear rubber gloves. When in poor ventilation, use impervious full length clothing to reduce skin contact.
Respiratory	Use in well-ventilated area or outside. Wear Class P1 or P2 (particulate) or equivalent dust mask.
General	Wash hands before eating, drinking, smoking, using the toilet and at the end of the shift.

Section 9 Physical and Chemical Properties

Appearance	Grey solid
Odour	Odourless
Odour Threshold	Not applicable
pH	Not applicable
Boiling Point	> 2000°C
Melting Point	2000°C
Freezing Point	Not available
Flash Point	Not applicable
Flammability	Not flammable
Upper and Lower Explosive Limits	Not applicable

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Vapour Pressure	Not applicable
Specific gravity	2.2 – 2.3
Bulk Density	300 - 700 kg/m ³
Solubility in water	Insoluble in water, soluble in concentrated acids/alkalis
Partition Coefficient:	Not applicable
Auto-ignition Temperature	Not applicable
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Particle size 0.5 micron (av.)
% Volatiles	Not applicable
Evaporation Rate	Not applicable

Section 10 Stability and Reactivity

Chemical Stability:	Stable under normal storage and use conditions.
Conditions to Avoid:	Avoid contact with moisture, heat and extreme cold.
Incompatibility:	Hydrofluoric acid, other strong acids, alkalis.
Hazardous Decomposition: Products	Heating Microsilica above 500°C can form crystalline SiO ₂ (Cristobalite/Tridynite) which may cause pulmonary fibrosis/silicosis.
Hazardous Reactions	Reacts with hydrofluoric acid (HF) to produce toxic, gaseous silicon tetrafluoride (SiF ₄)

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable.
Dermal	Not applicable.
Inhalation/Respiratory	Not applicable.
Eye	Not applicable.
Skin	Not applicable.

Not a primary skin irritant, various severities of irritations are possible on prolonged, repeated or occluded contact. Ingredients may also irritate or cause burning sensation to eyes, nose and throat and may cause abdominal discomfort.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.
Aspiration	Not applicable.

Exposure to dust can cause perforation of the nasal septum. Prolonged exposed ingredients in these products can cause lung and respiratory damage.

Excess inhalation of aerosol dust may result in respiratory disease, including Silicosis, pneumoconiosis and pulmonary fibrosis.

Section 12 Eco Toxicological Information

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This product is not known to be a hazard to the environment unless dumped in excessive quantities. Remove from waterways if possible.

Persistence/Degradability: No data available
Mobility in Soil: No data available
Bio accumulative potential: No data available
Other Adverse effects: No data available

Section 13 Disposal Considerations

Consult Regional Council or supplier for disposal options of unwanted product.
 Dispose of container by returning to supplier or through recycling.

Section 14 Transport Information

This substance is not classified as a dangerous good in New Zealand according to NZS5433: 2012

Section 15 Regulatory Information

EPA Approval No: Construction Products (Toxic [6.7]) - HSR002545

HSNO Classification: 6.7A

HSWA Controls:
 Trigger quantities for this substance:

	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	Not Required
Emergency Response Plan	1000kg (6.7A)
Secondary Containment	1000kg (6.7A)
Restriction of Use	Only use for the intended purpose.

Section 16 Other Information

Glossary

EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms - inhaling or ingesting it.
LD ₅₀	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

1. EPA Hazardous Substances (Safety Data Sheets) Notice – September 2017.

Disclaimer

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This document has been compiled by TCC (NZ) LTD on behalf of the manufacturer of the product and serves as the manufacturer's Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) LTD by the manufacturer or obtained from third party sources 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. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) LTD has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, TCC (NZ) LTD 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 SDS.

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