

SAFETY DATA SHEET

Microsilica 600

Section 1 Identification of the Material and the Supplier

Product Name: Microsilica 600

Other Names: Microsilica, MS600, Silica (Silicon Dioxide), Amorphous silica dioxide

Product Use: 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: 13 November 2017

Prepared by: Technical Compliance Consultants (NZ) Ltd

Section 2 Hazards Identification

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

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

Pictograms



Irritant/Toxic



Chronic

Signal Word: Danger

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.3B	H316	Causes mild skin irritation.	Category 3
6.4A	H319	Causes serious eye irritation.	Category 2A
6.7A	H350	May cause cancer	Category 1A
6.9A	H372	Causes damage to organs through prolonged or repeated exposure	Category 1

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.
P260	Do not breathe dust
P264	Wash exposed skin thoroughly after handling.

SAFETY DATA SHEET

Microsilica 600

P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves, clothing and eye/face protection.
P281	Use personal protective equipment as required.

Response Code	Response Statement
P314	Get medical advice/attention if you feel unwell.
P362	Take off contaminated clothing and wash before re-use.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage Code	Storage Statement
P405	Store locked up.

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Section 3 Composition/Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Amorphous silica (SiO ₂)	90	7631-86-9
Contains <20% crystalline quartz and cristobalite	<20	14808-60-7 14464-46-1
Aluminium oxide (Al ₂ O ₃)	<5	1344-28-1
Titanium dioxide (TiO ₂)	<1	13463-67-7
Potassium oxide (K ₂ O) and other metals salts and trace elements	<1	12136-45-7

Section 4 First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for 15 minutes, ensuring all particles are removed from under the eyelids. Remove contact lenses, if present and easy to do. Seek immediate medical attention if irritation persists.
If on Skin	Flush skin with plenty of soap and water. Take off contaminated clothing and wash before re-use, separate from household laundry. If skin irritation or rash occurs: get medical attention.
If Swallowed	Rinse mouth. Do Not induce vomiting. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Seek immediate medical attention.
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. Get medical advice if breathing becomes difficult or experiencing respiratory symptoms.

SAFETY DATA SHEET

Microsilica 600

Most important symptoms and effects, both acute and delayed

Symptoms:

Inhalation:	Respiratory irritant. Over-exposure may result in severe mucous membrane irritation & bronchitis. Pre-existing respiratory conditions may be aggravated. Chronic inhalation exposure to free crystalline silica may cause delayed lung injury including silicosis, a serious and potentially fatal disease, and cause or aggravate other lung conditions or diseases.
Ingestion:	Not expected to have any adverse effects. Due to product form, ingestion is not considered a likely exposure route.
Eye Contact:	Causes severe irritation to eyes.
Skin Contact:	Causes mild skin irritation.

Section 5 Fire Fighting Measures

Hazard Type	Non Flammable
Hazards from decomposition products	Product is inert.
Suitable Extinguishing media	Use extinguishing media suitable to surrounding materials
Precautions for firefighters and special protective clothing	Wear approved self-contained breathing apparatus.
HAZCHEM CODE	None allocated

Section 6 Accidental Release Measures

Wear protective equipment as detailed in Section 8. Clear area of any unprotected personnel.

Collect spilt material, preferably in dry state, and place in sealable containers for disposal. Avoid generating dust. Wash down affected area with water and detergent. Dispose of according to Section 13.

Section 7 Handling and Storage

Precautions for Handling:

- Read label before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe dusts.
- Wash exposed skin thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves, clothing and eye/face protection.
- Use personal protective equipment as required.
- Keep packaging adequately sealed during material transfer, transport, or when not in use.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Store locked up.
- Ensure packaging is labelled, protected from damage, and sealed when not in use.
- Prevent product from being exposed to high humidity and moisture.

SAFETY DATA SHEET

Microsilica 600

Section 8 Exposure Controls/Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA ppm mg/m ³	STEL ppm mg/m ³
Silica – amorphous	10	
Crystalline silica (quartz) - as respirable dust	0.2	
Cristobalite silica (quartz) - as respirable dust	0.1	
Aluminium oxide	10	
Titanium dioxide	10	

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.* Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). *The 15-minute average exposure standard.* Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply.

Engineering Controls

Use with adequate natural ventilation. Where dust inhalation hazard exists, mechanical extraction ventilation is required to keep concentrations of components below the WES concentrations.

PERSONAL PROTECTIVE EQUIPMENT:

Eyes	Dust-proof goggles or safety glasses with side shields.
Hands	Wear suitable gloves.
Skin	When using large quantities or where heavy contamination is likely, wear overalls. Contaminated work clothing should not be allowed out of the workplace.
Respiratory	When high dust levels exist, wear a class P3 (particulate) respirator or a powered air purifying respirator (PAPR) with class P3 (particulate) filter. Where an inhalation risk exists, wear a Class P2 approved dust mask or a Class P1 (particulate) respirator as appropriate to the exposure circumstances.

Section 9 Physical and Chemical Properties

Appearance	Very fine powder
Colour	Off white
Odour	No specific odour
Odour Threshold	Not available
pH	Not available
Boiling Point	Not available
Melting Point	1,700°C (transformation may occur at > 500°C)
Freezing Point	Not available
Flash Point	Not available
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Inert
Vapour Density	Not available
Bulk Density	Not available
Specific Gravity	2.32
Water Solubility	Insoluble
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available

SAFETY DATA SHEET

Microsilica 600

Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Not available
Respirable dust fraction	~ 60% (dust fraction <7 micron)

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	None known.
Incompatible Materials	Avoid contact with acids, especially hydrofluoric acid
Hazardous Decomposition Products	May evolve toxic gases if heated to decomposition

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable.
Dermal	Not applicable.
Inhalation	Respiratory irritant. Over-exposure may result in severe mucous membrane irritation & bronchitis. Pre-existing respiratory conditions may be aggravated.
Eye	Causes severe irritation to eyes.
Skin	Causes mild skin irritation.

Chronic Effects:

Carcinogenicity	May cause cancer.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Causes damage to organs through prolonged or repeated exposure. Chronic inhalation exposure to free crystalline silica may cause delayed lung injury including silicosis, a serious and potentially fatal disease, and cause or aggravate other lung conditions or diseases

Section 12. Ecotoxicological Information

General information: The product is not classified as being ecotoxic.

Aquatic:

Volatilisation to the atmosphere and bioconcentration in fish and other aquatic organisms are not expected to occur. If released into the atmosphere, the particulates would be deposited by rainfall or drop out from the atmosphere.

Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available

Section 13. Disposal Considerations

Disposal Method:

This product is inert. Dispose by following label use instructions or to an approved landfill in accordance with any local regulations. Dispose of empty packaging by incineration or to landfill according to requirements of local regulations.

SAFETY DATA SHEET

Microsilica 600

Precautions or methods to avoid:

Ensure any container holding waste or reclaimed product is labelled "Hazardous Waste – Carcinogenic" and that the label also has the Chronic Pictogram, waste type identifier (i.e. Waste Construction Material), and your business name, address, and phone number.

Section 14	Transport Information
-------------------	------------------------------

This product is NOT classified as a Dangerous Good for transport in NZ ; NZS 5433:2012

Section 15	Regulatory Information
-------------------	-------------------------------

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

HSNO Classification: 6.3B, 6.4A, 6.7A, 6.9A (Repeated exposure),

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. HSNO Approved Code of Practice: Preparation of Safety Data Sheets, September 2006.

Disclaimer

This document has been prepared by TCC (NZ) Ltd and serves as the suppliers Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd 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) have 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 accept 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



SAFETY DATA SHEET Microsilica 600

The information herein is given in good faith, but no warranty, express or implied is made.

Please contact the New Zealand distributor, Golden Bay Cement, if further information is required.

Issue Date: 13 November 2017

Review Date: 13 November 2022