MATERIAL SAFETY DATA
Microsilica 600

Section 1: Identification of the Substance and Supplier

Product name	**Microsilica 600** **Microsilica** **Amorphous Silica** **Amorphous Silica Dioxide**
CAS number	Unassigned
Recommended use	Natural Pozzolan for high performance concrete
Company details	Microsilica New Zealand Address: Te Puea Road, Rotorua PO BOX 1143, Whangarei, 0178 Phone: 07 345 4710 Hours 7.30am – 4 pm, Mon – Fri
Emergency telephone	0800 764 766 (0800 POISON) 24 hours human health 0800 243 622 (0800 CHEMICAL) 24 hours
Date of preparation	May 2011

Section 2: Hazards Identification

Hazard classifications	Classified as hazardous according to criteria in the Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.
HSNO approval number	Classified under the group standard: Construction Products (toxic [6.7A]) Group Standard 2006.
HSNO approval number	HSR002545
Hazard classification	6.7A Carcinogenic 6.9A Target organ toxicant 
DANGER	May cause cancer. Causes damage to respiratory organs through prolonged or repeated exposure.

Section 2: Hazards Identification (Continued)...

WARNING	Read label and safety data sheet before use. Obtain special instruction before use. Do not handle until all safety precautions have been read and understood. Do not breathe in dust. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Use personal protective equipment as required.

Section 3: Composition/Information on Ingredients

Chemical name	CAS number	Concentration (%)
Amorphous Silica	7631-86-9	90
Crystalline Quartz	14808-60-7	10
Cristobalite	14464-46-1	Trace

Section 4: First Aid measures

Necessary first aid measures	**IF EXPOSED OR CONCERNED:** Get medical advice/attention. **IF INHALED:** Remove exposed person from dusty area if respiratory difficulties are experienced and allow to breathe fresh air. **EYE CONTACT:** High concentration in the air can irritate the eyes. In case of eye irritation, immediately rinse eyes thoroughly with plenty of water. If wearing contact lenses, remove only after initial rinse, and continue rinsing eyes for at least 15 minutes. If irritation occurs or persists, get medical advice/attention. **SKIN CONTACT:** Sensitive skins may be affected by long-term contact. Wash with water and/or mild detergent. Get medical advice/attention if you feel unwell.
Required instructions	For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor.
Notes for medical personnel	Chronic hazard respirable dust – may cause damage to the respiratory system.
Workplace facilities	Eye wash and safety shower facilities are recommended.

Section 5: Fire Fighting Measures

Type of hazard	Not classified as flammable.
Fire hazard properties	This product is inert.
Regulatory requirements	Not applicable.
Extinguishing media and methods	Not applicable.
HAZCHEM code for fire	Not applicable.
Recommended protective clothing	Not applicable.

Section 6: Accidental Release Measures

Emergency procedures	Wear silica approved dust masks (Class P2 or similar) and goggles. Prevent further spillage. Place product in sealable container for disposal. Wash down affected area with water plus detergent. This product is inert and no special environmental disposal conditions apply.

Section 7: Handling and Storage

Precautions for safe handling	Read label and safety data sheet before use. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe in dust. Wash hands thoroughly after handling. Use personal protective equipment as required.
Regulatory requirements	Approved handlers, tracking and signage not required. Emergency response plans for carcinogenic response are required where quantities greater than 1,000kg are present. Emergency response plans for target organ toxicant are required when holding more than 10,000kg.
Handling practices	Avoid contact with eyes. Keep container adequately sealed during material transfer, transport, or when not in use.

Section 7: Handling and Storage (Continued)...

Conditions for safe storage	Store in original container in a cool, dry, ventilated place away from direct heat or direct sunlight. Keep container sealed when no in use.
Store site requirements	Store in a cool, dry, well-ventilated area.
Packaging	See Part 4 of the Group Standard for Construction Product (Toxic [6.7A]) Group Standard 2006.

Section 8: Exposure Control/Personal Protection

Workplace exposure standards	Silica-Amorphous 10mg/m^3 Silica Crystalline – Quartz 0.1mg/m^3 Respirable dust Silica Crystalline – Cristobalite 0.1mg/m^3 Respirable dust
Application in the workplace	Ensure adequate ventilation. Keep container sealed when not in use.
Exposure standards outside the workplace	No TEL or EEL is set for this substance at this time.
Personal protection	A silica approved face mask should be worn when handling this product. If Microsilica 600 dust is present in the workplace or during dust generating operations, the use of respiratory protection (Class P2 or similar) is recommended.
Engineering controls	Where possible ventilation should be used (with a suitable dust trap or filter) to maintain the environment below the workplace exposure standard.

Section 9: Physical and Chemical Properties

Appearance	Off-white, very fine powder.
Melting Point	1,700°C (Transformation may occur >500°C).
Bulk Density	500-600kg/m^3 approx.
Specific Gravity	2.32
Vapour Pressure	Inert.
Solubility (water)	Insoluble.

Section 10: Stability and Reactivity

Stability of the substance	Stable.
Conditions to avoid	None.
Material to avoid	Keep away from acids especially hydrofluoric acid.
Hazardous decomposition products	None.

Section 11: Toxicological Information

Effects for active ingredient only

ORAL	Not determined.
DERMAL	Not determined.
INHALATION	Not determined.
CHRONIC	The lung appears to the major site where lesions appear. IARC have outlined that crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1). [IARC Monograph vol. 68]. In making the overall evaluation, the working group noted that carcinogenicity in humans was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs. Crystalline silica inhaled in the form of quartz or cristobalite from occupational sources is carcinogenic to humans (Group 1). [IARC Vol. 68 (1997) (p.41)].

	Pulmonotoxicity (lung)
Species:	Rat
Sex:	No data
Strain:	No data
Route of admin:	Inhalation
Exposure period:	For up to 420 days
Frequency of treatment:	18 hrs/day, 5days/week
Post. obs. Period:	Not reported
Doses:	30,000 particles (40% <0.5 microns) per mL
Control Group:	No data specified
Method:	
Year:	1979
GLP:	No data
Test substance:	As prescribed by 1.1 – 1.4
Remark:	Similar findings have also been reported in rats, guinea pigs, rabbits and monkeys.
Result:	By 220 days: silicotic nodules, showing only reticulin fibrosis had developed. By 330 days: dense, rounded collagenous nodules were present.
Source:	SIRO S.P.A. ROBILANTE

TEL	No TEL is set for this substance at this time

Section 12: Environmental Information

Effects for active ingredient only

AQUATIC	Volatilization to the atmosphere, biodegradation, and bioconcentration in fish and aquatic organisms are not expected to occur. If released to the atmosphere as particulates, it is expected return to the earth via dry deposition and rain-out.
SOIL	Not classified as a soil ecotoxic under the Hazardous Substances and New Organisms Act.
TERRESTRIAL VERTEBRATES	Not classified as toxic to terrestrial vertebrates under the Hazardous Substances and New Organisms Act.
TERRESTRIAL INVERTEBRATES	Not classified as toxic to terrestrial invertebrates under the Hazardous Substances and New Organisms Act.
EEL	No EEL is set for this substance at this time.

Section 13: Disposal Considerations

Disposal information	This product is inert and no special environmental disposal conditions apply.

Section 14: Transport Information

Relevant information	None.
Other requirements	Not classified as a Dangerous Good for transport. Check the Land Transport Rule Dangerous Goods 2005, Rule 45001/1 and NZS 5433 for land transport requirements, IMDG for sea transport, and IATA for air transport requirements.

Section 15: Regulatory Information

Regulatory status	ERMA Approval Code: HSR002545 - Group Standard for Construction Products (Toxic [6.7A]) Group Standard 2006. For full listings of controls see www.ermanz.govt.nz.

Section 16: Other Information

Relevant information	mg/m^3 - milligrams per cubic metre. CAS# - chemical abstract service number - used to uniquely identify chemical compounds. IARC - International Agency for Research on Cancer.
Additional information	None.

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