FX-225 *Non-Shrink Underwater Grout*

SAFETY DATA SHEET

This Safety Data Sheet was prepared following the Code of Practice: Preparation of Safety Data Sheets for Hazardous Chemicals from Work Safe Australia and the New Zealand Code of Practice for the Preparation of Safety Data Sheets (SDS) [No. HSNO CoP 8-1 09-06]. This product has been classified according to the hazard criteria of the Globally Harmonized System (GHS) and contains all of the information required by Safe Work Australia and Work Safe New Zealand.

1. Identification

Product Identification

Product Identifier: **FX-225**

Recommended Use: FX-225 is non-shrink underwater grout for the maintenance of concrete.

Use Restrictions: For industrial use only. To ensure proper installation, use according to package directions. Complete application instructions can be found in Simpson Strong-Tie catalogs or online at strongtie.com.

Company Identification

Company:	Simpson Strong-Tie Australia Pty Limited
Address:	Unit 1/16 Kenoma Place Arndell Park, NSW 2148 Australia
Phone:	+612 9831 7700
Website:	www.strongtie.com.au
Emergency:	**13 11 26**

Company:	Simpson Strong-Tie New Zealand
Address:	52 A Arrenway Drive Albany, Auckland 0632 New Zealand
Phone:	+64 9 477 4440
Website:	www.strongtie.co.nz
Emergency:	**0800 POISON (0800 764 766)**

2. Hazard Identification

General Information

FX-225 Non-Shrink Underwater Grout is a high-strength, non-segregating grout that can be used underwater to maintain concrete or to grout FX-70® fiberglass pile jackets. It is a single component solid product. FX-225 has been assessed according to the Globally Harmonized System (GHS). This Safety Data Sheet covers hazards and responses for the safe use and handling of FX-225.

GHS Classification

Classification according to HazCom2012 (GHS)

Physical Hazards:	Not Classified		
Health Hazards:	Skin Corrosion/Irritation	Category 1	H314: Causes severe skin burns and eye damage
	Serious Eye Damage/Irritation	Category 1	H318: Causes severe eye damage
	Sensitization, Skin	Category 1	H317: May cause an allergic skin reaction
	Carcinogenicity	Category 1A	H350: May cause cancer
	STOT, Single Exposure	Category 3	H335: May cause respiratory irritation
	STOT, Repeated Exposure	Category 2	H373: May cause damage to organs through prolonged or repeated exposure

Environmental Hazards: Not Classified.

Main Symptoms: Damage to the eyes and skin. Symptoms include burns, redness, itching, tearing, swelling, and blurred vision. May cause rash/allergic reaction to the skin. May cause shortness of breath, discomfort in chest, or coughing. Long term exposure may cause chronic effects.

New Zealand Hazardous Substances and New Organisms Classification

8.2 – Skin Corrosion/Irritation; 6.5B – Serious Eye Damage/Eye Irritation; 6.5B – Skin Sensitization; 6.7A – Carcinogenicity; 6.1E – STOT, Single Exposure; 6.9B – STOT, Repeated Exposure

GHS Label Elements

Corrosive | Chronic Health | Exclamation Point

Contains: Portland Cement, Crystalline Silica (Quartz), Petroleum Coke

Signal Word: **DANGER!**

Hazard Statements: H314: Causes severe skin burns and eye damage.

	H318:	Causes severe eye damage.
	H317:	May cause an allergic skin reaction.
	H350:	May cause cancer.
	H335:	May cause respiratory irritation.
	H373:	May cause damage to organs (lungs) through prolonged or repeated exposure.
Precautionary Statements:		
Prevention:	P201:	Obtain special instructions before use.
	P202:	Do not handle until all safety precautions have been read and understood.
	P233:	Keep container tightly closed.
	P260:	Do not breathe dust, fumes, vapors, or spray.
	P264:	Wash hands thoroughly after handling.
	P270:	Do not eat, drink, or smoke when using this product.
	P271:	Use only outdoors or in a well-ventilated area.
	P272:	Contaminated clothing should not be allowed out of the workplace.
	P280:	Wear protective gloves/protective clothing/eye protection/face protection.
Response:	P301+310:	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
	P330+331:	Rinse mouth. Do NOT induce vomiting.
	P303+P361+P353:	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
	P333+P313:	If skin irritation or rash occurs: Get medical advice/attention.
	P363:	Wash contaminated clothing before reuse.
	P304+P340:	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P312:	Call a POISON CENTER/doctor if you feel unwell.
	P305+P351+P338:	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P310:	Immediately call a POISON CENTER/doctor.
	P308:+P313:	IF exposed or concerned: Get medical advice/attention.
	P314:	Get medical advice/attention if you feel unwell.
Storage:	P402:	Store in a dry place.
	P403+P235:	Store in a well-ventilated place. Keep cool.
	P405:	Store locked up.
Disposal:	P501:	Dispose of contents/container in accordance with local/regional regulations.

Supplemental Label Information: None known.

Hazards Not Otherwise Classified (HNOC)

OSHA Hazard: Combustible Dust

Hazard Statement: Can form explosive air-dust mixtures, avoid creating dust.

Precautionary Statement: Do not allow dust to build up on surfaces.

3. Composition Information

General Information

This product is a mixture. Hazardous ingredients for each component are listed below. May include other nonhazardous ingredients. May include other trace ingredients, see Section 15.

List of abbreviations and symbols:
Classification: Globally Harmonized System Classifications.
The full text for H-phrases is displayed in section 16. All concentrations are in percent by weight unless otherwise noted.

Composition – All concentrations are in percent by weight unless otherwise indicated.

Chemical Name	Weight %	CAS Number	EC Number
Crystalline Silica, Quartz **Classifications:** Carc. 1A: H350, STOT RE 2: H373	40-60	14808-60-7	238-878-4
Portland Cement **Classifications:** Skin Corr. 1: H314, Eye Corr. 1: H318, Skin Sens. 1: H317, Carc. 1: H350, STOT SE: H335	30-60	65997-15-1	266-043-4
Petroleum Coke **Classifications:** Combustible dust	1-5	64741-79-3	265-080-3

4. First-Aid Measures

General Information

Provide general supportive measures and treat symptomatically. Symptoms may be delayed. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. If exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.

Routes of Exposure

Eye Contact: Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. Remove contact lenses if present and easy to do. If you experience redness, burning, blurred vision, or swelling **consult a physician immediately.**

Skin Contact: Remove contaminated clothing and product, immediately wash affected area with soap and water. Do not apply greases or ointments. If rash or irritation occurs **consult a physician.**

Ingestion: Rinse mouth immediately. Do not induce vomiting. **Consult a physician.**

Inhalation: Remove patient to fresh air. Give oxygen or artificial respiration if needed. If patient continues to experience difficulty breathing, **consult a physician.**

Most Important Symptoms

Corrosive effects. Symptoms include burns, itching, redness, tearing, and blurred vision; discomfort in the chest, shortness of breath, or coughing. Permanent eye damage, including blindness, could result.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Water fog. Foam. Dry chemical powder. Carbon dioxide (CO_2).

Additional Information: Can form explosive air-dust mixtures, avoid creating dust.

Hazards during Fire-Fighting: During a fire, gases hazardous to health may be formed.

Fire-Fighting Procedures: Use standard fire-fighting procedures and consider the hazards of other involved materials. In case of fire and/or explosion do not breathe fumes. Self-contained breathing apparatus and full protective clothing must be worn. Move containers from fire area if you can do so without risk. Cool containers with flooding quantities of water until well after fire is out. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

6. Accidental Release Measures

Personal Precautions

Non-emergency personnel: Avoid generating dust. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of dust. Ensure adequate ventilation. If the concentration of dust exceeds the permissible exposure limit wear a respirator. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained.

Emergency personnel: Keep unnecessary personnel away. Wear appropriate personal protective equipment.

Clean-Up Methods

Small spills (not set): Avoid dry sweeping. Do not use compressed air to clean spilled silica sand. Use damp towel to wipe up small spills. Dispose of in closed containers.

Large spills (not set): Avoid dry sweeping. Do not use compressed air to clean spilled silica sand. Use water spraying/flushing or ventilated or HEPA filtered vacuum cleaning system. Dispose of in closed containers.

Set Material: Chip or grind off. If you are grinding or cutting cured product, ensure good work practice and use of personal protective equipment as needed to control exposure to respirable dust.

Environmental Precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so.

7. Handling and Storage

Handling

Avoid generating dust. Mechanical ventilation or local exhaust ventilation is recommended. Use all available work practices to control dust exposure, such as water sprays. Wear appropriate personal protective equipment. When using, do not eat, drink or smoke. Avoid contact with eyes, skin, and clothing. Do not breathe dust. Wear a respirator if dust concentrations exceed permissible exposure limits. Do not permit dust to collect and build up on work surfaces, use good housekeeping. Avoid contact with unhardened cement products. Observe good industrial hygiene practices.

Storage

Use dust collection to trap dust produced during loading and unloading. Store in a closed container away from incompatible materials (See Section 10 of the SDS). Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Protect against physical damage.

8. Exposure Controls / Personal Protection

Personal Protective Equipment

Protective Measure: Wear appropriate personal protective equipment.
Eye Protection: Wear chemical splash goggles or safety glasses with side shield.
Hand Protection: Wear chemical-resistant gloves such as: Nitrile, neoprene, butyl.
Skin and Body Protection: Wear long sleeve shirt/long pants and other clothing as required to minimize contact. In case of dust production, dust-proof clothing. Avoid contact with unhardened cement products, if contact occurs wash immediately with soap and water.
Respirator Protection: Use NIOSH-approved air-purifying or supplied-air respirator where airborne concentrations of dust are expected to exceed exposure limits.
General Hygiene: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Engineering Controls

Mechanical ventilation or local exhaust ventilation is recommended. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and emergency shower.

Exposure Limits

Component	Australia National Workplace OELs	New Zealand Workplace Exposure Limits (WES)	United States ACGIH (TLV)
Quartz (CAS 14808-60-7)	0.1 mg/m^3 (TWA)	0.1 mg/m^3 (TWA)	0.025 mg/m^3 (respirable)
Portland Cement (CAS 65997-15-1)	10 mg/m^3 (TWA)	10 mg/m^3 (TWA)	1 mg/m^3 (TWA, respirable)
Petroleum Coke (CAS 64741-79-3)	N/E	N/E	2 mg/m^3 (respirable dust)

9. Physical and Chemical Properties

Physical State:	Solid	**Freezing/Melting Point:**	N/A
Form:	Powder	**Boiling Point:**	N/A
Color:	Gray	**Flash Point:**	N/A
Odor:	Characteristic	**Evaporation Rate:**	N/A
Odor Threshold:	N/A	**Specific Gravity:**	2.7
pH:	N/A	**VOC:**	0 g/L
Flammability:	N/A	**U/L Flammability:**	N/A
Vapor Pressure:	N/A	**Vapor Density:**	N/A
Solubility:	Slight	**Kow:**	N/A
Decomposition:	N/A	**Viscosity:**	N/A

10. Stability and Reactivity

Reactivity: Stable and non-reactive under normal conditions of use and storage.
Chemical Stability: Stable and non-reactive under normal conditions of use and storage.
Condition to Avoid: Conditions which generate dust. Avoid unintentional contact with water.
Substances to Avoid: Strong oxidizers. Strong acids and bases. Ammonium salts. Aluminum metal.
Hazardous Reactions: The product is stable if stored and handled as prescribed/indicated. Strong bases are formed on the addition of water.
Decomposition Products: Carbon dioxide, carbon monoxide, oxides of nitrogen, other organic compounds.

11. Toxicological Information

Likely Routes of Exposure

Ingestion: Expected to be a low ingestion hazard.
Inhalation: Irritation to nose and respiratory tract.

Skin contact: Causes skin burns. May cause sensitization by skin contact.
Eye contact: Causes severe eye damage. Particles can cause corneal abrasion.
Symptoms: Corrosive effects. Sensitization. Symptoms include burns, itching, redness, and tearing.

Information on Toxicological Effects

Acute Effects

Toxicity: Occupational exposure to the substance or mixture may cause adverse effects.
Skin corrosion/irritation: Causes severe skin burns.
Eye damage/eye irritation: Causes serious eye damage.
Respiratory sensitization: Not a respiratory sensitizer.
Skin sensitization: May cause sensitization by skin contact.
Aspiration hazard: No data available.
Specific target organ toxicity
Single Exposure: Respiratory tract irritation.

Chronic Effects

Germ cell mutagenicity: No data available.
Carcinogenicity: May cause cancer.
Reproductive toxicity: No data available.
Specific target organ toxicity
Repeated exposure: Causes damage to organs (lungs) through prolonged or repeated exposure (inhalation). Repeated or prolonged exposure to respirable silica dust will cause lung damage in the form of silicosis. Symptoms include progressively more difficult breathing, cough, fever, and weight loss. Acute silicosis can be fatal.

Carcinogen / Reproductive Toxin / Mutagen Information

Component	% In Blend (approx.)	IARC Monographs	NTP	ACGIH	Other
Quartz (CAS 14808-60-7)	40-60	1	KNOWN	A2	CA65
Portland Cement (CAS 65997-15-1)	30-60	---	---	A4	---

IARC: 1- Carcinogenic 2- Possibly carcinogenic 3 – Not classifiable as to carcinogenicity 4 – Probably not carcinogenic
NTP: Known to be human carcinogen or Reasonably anticipated to be a human carcinogen
ACGIH – A1 – Confirmed carcinogen A2 – Suspected carcinogen A3 – Animal carcinogen A4 – Not classified A5 – Not suspected
CA65 – California Prop 65

Further Information

Toxicological, ecotoxicological, physical, and chemical properties may not have been fully investigated. Hazard data above is estimated based on best available information. Some workers with certain pre-existing medical conditions such as: asthma, allergies, or impaired pulmonary and/or liver functions, or who may be particularly susceptible to this material, may be affected by exposure to this material.

12. Ecological Information

General Information

Information given is based on data on the components and the ecotoxicology of similar products. This material is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment

Supporting Data

Persistence and degradability: Not readily biodegradable.
Bioaccumulative potential: Not expected to bioaccumulate.
Mobility in soil: No data available.

Other Adverse Effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

13. Disposal Considerations

Waste Disposal of Substance: Do not allow material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Container Disposal: Empty containers or liners may retain some product residues, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Set Material: Chip or grind off. If you are grinding or cutting set product, ensure good work practice and use of personal protective equipment as needed to control exposure to respirable dust.

14. Transportation Information

DOT: FX-225 is not regulated for transport.

IMDG/IATA: FX-225 is not regulated for transport.

Additional Information

Special precautions for user: Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable.

This information does not cover all specific regulatory or operational requirements of this product. The classifications for transportation may vary by container volume or different regional or national regulations.

15. Regulatory Information

United States

Federal Regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA (Toxic Substances Control Act): All components are on the TSCA inventory.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D):
Diutan Gum (CAS 595585-15-2) LISTED

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.
CERCLA Hazardous Substance List (40 CFR 302.4): Not listed.

Australia

This SDS was prepared following the Code of Practice: Preparation of Safety Data Sheets for Hazardous Chemicals from Work Safe Australia. This product has been classified according to the hazard criteria of GHS and contains all of the information required by WHS.

Australian Inventory of Chemical Substances (AICS)	
Chemical	**Registration Status**
Crystalline Silica, Quartz (CAS 14808-60-7)	Hazardous Substance IMAP – Tier II – Human Health
Portland Cement (CAS 65997-15-1)	Hazardous Substance IMAP – Tier I – Human Health
Petroleum Coke (CAS 64741-79-3)	Hazardous Substance IMAP – Tier I – Human Health

New Zealand

New Zealand Code of Practice for the Preparation of Safety Data Sheets (SDS) [No. HSNO CoP 8-1 09-06].
Classified as hazardous according to the Hazardous Substances (minimum Degrees of Hazard) Regulations 2001.

New Zealand Inventory of Chemicals (NZIoC)	
Chemical	**Registration Status**
Crystalline Silica, Quartz (CAS 14808-60-7)	HSNO Approved (HSR003125)
Portland Cement (CAS 65997-15-1)	May be used as a single component under an appropriate group standard
Petroleum Coke (CAS 64741-79-3)	May be used as a single component under an appropriate group standard

South Africa National Regulations

Simpson Strong-Tie South Africa is a subsidiary if Simpson Strong-Tie Australia and relies on the parent company to support many of the services it provides, one of these services is Safety Data Sheets (SDS). This SDS contains all of the relevant information required for the South African market, with the exception of the following information.
Local contact information for South African Poisons Centre – Phone: 0219 316129 or 021 6895227
Local Contact for Simpson Strong-Tie who has access to the SDS sheets - Houston Hank – Phone: 0873 540629

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POSTAL ADDRESS:	PO Box 281 Bergvliet 7864
PHONE:	0873540629
DIRECTORS:	Brian Magstadt & Herbert Kuhn
REGISTRATION #:	2012/052288/07
VAT #:	4190262362

International

The product is classified and labeled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work.

This product is not subject to or not applicable for any of the following International Regulations; **Stockholm Convention, Rotterdam Convention, Kyoto Protocol, Montreal Protocol, Basel Convention.**

International Inventories

Australia	All components of this product are listed on the Australian Inventory of Chemical Substances (AICS).
Canada	All components of this product are included on the Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).
China	One or more components of this product are not listed on the Inventory of Existing Chemical Substances in China (IECSC).
Europe	All components of this product are included on the European Inventory of Existing Commercial Chemical Substances (EINECS) or are exempt from listing.
Japan	One or more components in this product are not listed on the Inventory of Existing and New Chemical Substances (ENCS).
Korea	All components of this product are listed on the Existing Chemicals List (ECL).
New Zealand	All components of this product are included on the New Zealand Inventory.
Philippines	One or more components in this product are not listed in the Philippine Inventory of Chemicals and Chemical Substances (PICCS).
United States & Puerto Rico	All components of this product are listed on the Toxic Substances Control Act (TSCA) Inventory or are not required to be listed.

16. Other Information

Date Prepared or Revised: August 2016
Supersedes: June 2014

Contact Simpson Strong-Tie Environmental Health and Safety at EHS@strongtie.com.

Abbreviations

ACGIH:	American Conference of Governmental Industrial Hygienists
CAS No.:	Chemical Abstract Service Registry Number
CERCLA:	Comprehensive Environmental Response, Compensation and Liability Act (U.S. EPA)
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals
HSNO:	Hazardous Substances and New Organisms

IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association
IMDG:	International Maritime Dangerous Goods code
NIOSH:	National Institute of Occupational Safety and Health (U.S.)
NTP:	National Toxicology Program (US)
OELS:	Occupational Exposure Limits
STEL:	Short Term Exposure Limit (15 minute Time Weighted Average)
STOT:	Specific Target Organ Toxicity (GHS Classification)
TLV:	Threshold Limit Value
TSCA:	Toxic Substances Control Act (U.S.)
TWA:	Time Weighted Average (exposure for 8-hour workday)
VOC:	Volatile Organic Compounds
WES:	Workplace Exposure Standards

Full Text of H-Phrases Under Section 3

H314:	Causes severe skin burns and eye damage.
H317:	May cause an allergic skin reaction.
H318:	Causes serious eye damage.
H335:	May cause respiratory irritation.
H350:	May cause cancer.
H373:	May cause damage to organs through prolonged or repeated exposure.

Disclaimer

Safety Data Sheet (SDS) is prepared by Simpson Strong-Tie Co. in compliance with the requirements of OSHA 29 CFR Part 1910.1200. The information it contains is offered in good faith as accurate as of the date of this SDS. This SDS is provided solely for the purpose of conveying health, safety, and environmental information. No warranty, expressed or implied, is given. Health and Safety precautions may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations.

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