Safety Data Sheet
acc. to OSHA HCS (29 CFR 1910.1200)

Printing date 5/8/2016 Reviewed on 05/08/2016

1. Identification

Product Identifier

Trade Name Flowcrete SLU

Article Identifier FC SLU

Recommended use and restriction on use

· **Recommended use:** Concrete Underlayment

· **Restrictions on use:** No further relevant information available.

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Details of the supplier of the Safety Data Sheet
· **Manufacturer/Supplier:**

Lyons Manufacturing, Inc
8900 Forney Rd Dallas, TX 75227
(214) 381-8100

· **Emergency telephone number:** Lyons Mfg 214 505 1993

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
	Sensitization, skin	Category 1
	Carcinogenicity	Category 1A
	Reproductive toxicity	Category 1B
	Specific target organ toxicity, repeated exposure	Category 2 (Lung)

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. .May cause cancer. May damage fertility or the unborn child. May cause damage to organs (Lung) through prolonged or repeated exposure.

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing must not be allowed out of the workplace.

Response If exposed or concerned: Get medical advice/attention. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. IF exposed or concerned: Get medical advice/attention.

Storage Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC) None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Silica Sand	14808-60-7	50-60
Calcium aluminate cement	65997-16-2	8 - 2
Calcium sulfate, anhydrous	14798-04-0	4 - 8
Portland Cement	65997-15-1	1-3
Lithium Carbonate	554-13-2	0.1-0.2

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Eye contact Do not rub eyes. Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Rash. Coughing. Irritant effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Symptoms may be delayed.

General information	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.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire-fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep upwind. Avoid formation of dust. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation.
Methods and materials for containment and cleaning up	Stop the flow of material, if this is without risk. Sweep or shovel up material and place in a clearly labeled container for waste. Collect dust using a vacuum cleaner. Following product recovery, flush area with water.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Do not handle until all safety precautions have been read and understood. Minimize dust generation and accumulation. Wear appropriate personal protective equipment. Do not breathe dust. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Keep container tightly closed. Store in a cool, dry place out of direct sunlight.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
Calcium sulfate, anhydrous (CAS 14798-04-0)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
Portland Cement (CAS 65997-15-1)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)	Type	Value	Form
Components			
Portland Cement (CAS 65997-15-1)	TWA	50 mppcf	
Silica Sand (CAS 14808-60-7)	TWA	0.3 mg/m3	Total dust.
		0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.

US. ACGIH Threshold Limit Values	Type	Value	Form
Components			
Calcium sulfate, anhydrous (CAS 14798-04-0)	TWA	10 mg/m3	Inhalable fraction.
Portland Cement (CAS 65997-15-1)	TWA	1 mg/m3	Respirable fraction.
Silica Sand (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards	Type	Value	Form
Components			

Calcium sulfate, anhydrous (CAS 14798-04-0)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Portland Cement (CAS 65997-15-1)	TWA	5 mg/m3	Respirable.
		10 mg/m3	Total
Silica Sand (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

Appropriate engineering controls 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

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Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear chemical-resistant, impervious gloves.

Other Wear appropriate chemical resistant clothing.

Respiratory protection Wear a dust mask if dust is generated above exposure limits.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations 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. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance	
Physical state	Solid.
Form	Powder.
Color	Gray.
Odor	Odorless.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	Not flammable or combustible.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available
Explosive limit - lower (%)	Not available
Explosive limit - upper (%)	Not available
Vapor pressure	Not available
Vapor density	Not available
Relative density	Not available
Solubility(ies)	
Solubility (water)	Insoluable
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Swallowing may cause gastrointestinal irritation.
Inhalation	Dust irritates the respiratory system and may cause coughing and difficulties in breathing
Skin Contact	Causes skin irritation. May cause an allergic skin reaction. Prolonged contact with wet cement/mixture may cause burns.
Eye Contact	Causes serious eye damage. Prolonged contact with wet cement/mixture may cause burns

Symptoms related to the physical, chemical and toxicological characteristics

Rash. Coughing. Irritant effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Prolonged exposure may cause chronic effects.

Information on toxicological effects

Acute toxicity May cause respiratory irritation.

Components	Species	Test Results
Lithium Carbonate (CAS 554-13-2)		
Acute		
Inhalation		
LC50	Rat	➢ 2.17 mg/l, 4 hours
Oral		
LC50	Rat	525 mg/kg

Skin corrosion /irritation	Causes skin irritation
Serious eye damage/eye Irritation	Causes serious eye damage.
Respiratory or skin sensitization	
Respiratory sensitization	No data available.
Skin sensitization	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	May cause cancer. In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity 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." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003)

IARC Monographs. Overall Evaluation of Carcinogenicity

Silica Sand (CAS 14808-60-7) 1 Carcinogenic to humans.

NTP Report on Carcinogens

Silica Sand (CAS 14808-60-7) Known To Be Human Carcinogen.

Reproductive toxicity	May damage fertility or the unborn child.
Specific target organ toxicity single exposure	Not classified.
Specific target organ toxicity repeated exposure	May cause damage to organs (Lung) through prolonged or repeated exposure.
Aspiration hazard	Due to the physical form of the product it is not an aspiration hazard.
Chronic effects	Prolonged or repeated exposure may cause lung injury, including silicosis

12. Ecological information

Ecotoxicity Not expected to be harmful to aquatic organisms.

Components		Species	Test Results
Calcium sulfate, anhydrous (CAS 14798-04-0)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	> 1970 mg/l, 96 hours

Components		Species	Test Results
Lithium Carbonate (CAS 554-13-2)			
Aquatic			
Fish	LC50	Mummichog (Fundulus heteroclitus)	8.1 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available for this product.

Mobility in soil The product is not mobile in soil.

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 component.

13. Disposal considerations

Disposal instructions Dispose of contents/container in accordance with local/regional/national/international regulations. Do not contaminate ponds, waterways or ditches with chemical or used container.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT Not regulated as dangerous goods.

IATA Not regulated as dangerous goods.

IMDG Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

This substance/mixture is not intended to be transported in bulk.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
Delayed Hazard – Yes
Fire Hazard – No
Pressure Hazard – No
Reactivity Hazard – No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous Chemical Yes

SARA 313 (TRI reporting) Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations WARNING: This product contains chemical(s) known to the State of California to cause birth defects or other reproductive harm.

US. Massachusetts RTK - Substance List

Calcium sulfate, anhydrous (CAS 14798-04-0)
Lithium Carbonate (CAS 554-13-2)
Portland Cement (CAS 65997-15-1)
Silica Sand (CAS 14808-60-7)

US. New Jersey Worker and Community Right-to-Know Act

Calcium sulfate, anhydrous (CAS 14798-04-0)
Lithium Carbonate (CAS 554-13-2)
Portland Cement (CAS 65997-15-1)
Silica Sand (CAS 14808-60-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Calcium sulfate, anhydrous (CAS 14798-04-0)
Portland Cement (CAS 65997-15-1)
Silica Sand (CAS 14808-60-7)

US. Rhode Island RTK

Lithium Carbonate (CAS 554-13-2)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Lithium Carbonate (CAS 554-13-2)
Silica Sand (CAS 14808-60-7)

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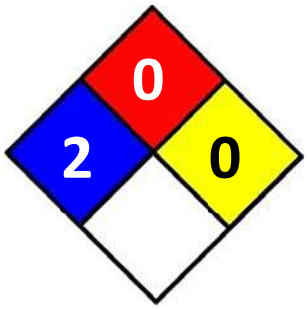
16. Other information, including date of preparation or last revision

Issue date 05-May-2016

Revision date -

Version # 01



NFPA Ratings

References HSDB® - Hazardous Substances Data Bank
Registry of Toxic Effects of Chemical Substances (RTECS)

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