

Product Name: SCT-22 (part A)
Revision Date 01/01/2016

SAFETY DATA SHEET

SECTION 1 Product and Company Identification

Product

Product Name: [SCT-22 \(Part A\)](#)

Product Description: Fast cure polyurethane (resin)

Intended Use: Treating static cracks and spalls in concrete

Company

Manufacturer: SureCrete Design Products, Inc.
15246 Citrus Country Drive
Dade City, FL 33523
USA

Contact: 352-567-7973 (telephone general)
800-262-8200 Chemtrec
+1 703-741-5500 Chemtrec International
info@surecretedesign.com (e-mail)
352-521-0973 (facsimile)

SECTION 2 Hazards Identification

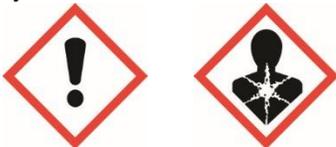
Classification of substance or mixture:

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity, inhalation mist (Category 4) H332
Serious eye damage/eye irritation (Category 2B) H318
Skin corrosion/irritation (Category 2) H312
Skin sensitization (Category 1B) H317
Respiratory sensitization (Category 1) H334
Carcinogenicity (Category 2) H351
Specific target organ toxicity, single exposure (Category 3 respiratory tract irritation) H373
Specific target organ toxicity, repeated exposure (Category 2 respiratory tract irritation) H373
Hazardous to the aquatic environment, acute hazard (Category 3) H401
Hazardous to the aquatic environment, chronic hazard (Category 3) H411
Flammable liquids (Category 4) H227

GHS Label Elements

Hazard symbol:



Signal word: Danger

Label Hazard Statements

H227: Combustible liquid.
H320: Causes eye irritation
H315: Causes skin irritation.
H332: Harmful if inhaled



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- H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H317: May cause an allergic skin reaction.
- H335: May cause respiratory irritation.
- H351: Suspected of causing cancer.
- H373: May cause damage to organs through prolonged or repeated exposure.
- H402: Harmful to aquatic life.
- H412: Harmful to aquatic life with long-lasting effects.
- H304: May be fatal if swallowed and enters airways.

Label Precautionary statements

- P280: Wear protective gloves/protective clothing/eye protection/face protection.
- P271: Use only outdoors or in a well-ventilated area.
- P260: Do not breathe dust/fume/gas/mist/vapors/ spray.
- P202: Do not handle until all safety precautions have been read and understood.
- P284: [In case of inadequate ventilation] wear respiratory protection.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P264: Wash skin thoroughly after handling.
- P273: Avoid release to the environment.
- P210: Keep away from heat/sparks/open flames/hot surfaces. -- No smoking.
- P201: Obtain special instructions before use.
- P312: Call a POISON CENTER or doctor/physician 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.
- P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P308 + P311: IF exposed or concerned: Call a POISON CENTER/ doctor
- P314: Get Medical advice/attention if you feel unwell.
- P302 + P352: IF ON SKIN: Wash with plenty of water
- P333 + P313: If skin irritation or a rash occurs: Get medical advice/attention.
- P362 + P364: Take off contaminated clothing and wash it before reuse.
- P332+313: If skin irritation occurs: Get medical advice/attention.
- P337 + P311: If eye irritation persists get medical advice/attention.
- P370 + P378: In case of fire: Use water spray, dry powder, carbon dioxide, foam to extinguish.
- P403 + P233: Store in a well ventilated place. Keep container tightly closed
- P405: Store locked up.
- P501: Dispose of contents and container in accordance with local regulations.

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

Labeling of special preparations (GHS):

Contains Isocyanates. Inhalation of isocyanate mists or vapors may cause respiratory irritation, breathlessness, chest discomfort and reduced pulmonary function. Overexposure well above established limits may result in bronchitis, bronchial spasms and pulmonary edema. Long-term exposure to isocyanates has been reported to cause lung damage, including reduced lung function which may be permanent. Acute or chronic overexposure to isocyanates may cause sensitization in some individuals, resulting in allergic respiratory reactions including wheezing, shortness of breath and difficulty breathing. Animal tests indicate that skin contact may play a role in causing respiratory sensitization.

Emergency Overview



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Danger: Combustible Liquid. Contains isocyanates. Inhalation of isocyanate mists or vapors may cause respiratory irritation, breathlessness, chest discomfort and reduced pulmonary function. Overexposure well above the PEL may result in bronchitis, bronchial spasms and pulmonary edema. Long-term exposure to isocyanates has been reported to cause lung damage, including reduced lung function which may be permanent. Acute or chronic overexposure to isocyanates may cause sensitization in some individuals, resulting in allergic respiratory reactions including wheezing, shortness of breath and difficulty breathing. Animal tests indicate that skin contact may play a role in causing respiratory sensitization.

Avoid contact with skin and eyes.

Harmful to aquatic organisms, may cause long term adverse effects in the aquatic environment.

FLAMMABLE LIQUID

SECTION 3 Composition / Information on Ingredients

This material is regulated as a mixture

Ingredient	CAS #	EC#	% (by weight)
Hazardous			
Diphenylmethane-4,4'-diisocyanate (MDI)	101-68-8	NE	<75%
solvent naphtha	64742-94-5	NE	<20%
P-MDI	9016-87-9	NE	<15%
Benzene, 1,1'-methylenebis[4-isocyanato-, homopolymer	25686-28-6	NE	<15%
Methylenediphenyl diisocyanate	26447-40-5	NE	<3%
naphthalene	91-20-3	NE	<3%
Isocyanic acid, polymethylenepolyphenylene ester, polymer with.alpha.-hydro-.omega.-hydroxypoly(oxy-1,2- ethanediyl)	57636-09-6	NE	<1%
1,3-Diazetidone-2,4-dione, 1,3-bis[4-[(4-isocyanatophenyl)methyl]phenyl]-	17589-24-1	NE	<0.3%
Benzene	71-43-2	NE	<0.1%

The exact percentage of composition has been withheld as a trade secret.

SECTION 4 First Aid Measures

Inhalation: Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

Skin Contact: Wash contact areas with soap and water. If irritation develops, seek medical attention.

Eye Contact: In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required.

Ingestion: Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

Most important symptoms/effects, acute and delayed: Eye irritation, skin irritation, allergic symptoms.

Information on solvent naphtha: Overexposure may cause: unconsciousness, vomiting, lethargy, confusion, nausea, headache, dizziness.

Information on naphthalene: Overexposure may cause: perspiration, methaemoglobinaemia, loss of appetite, emoglobinuria, hemolytic anemia, corneal injury, nausea, headache.

Symptoms can occur later.



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Information on Diphenylmethane-4,4'-diisocyanate (MDI): Respiratory sensitization may result in allergic (asthma-like) signs in the lower respiratory tract including wheezing, shortness of breath and difficulty breathing, the onset of which may be delayed. Repeated inhalation of high concentrations may cause lung damage, including reduced lung function, which may be permanent. Substances eliciting lower respiratory tract irritation may worsen the asthma-like reactions that may be produced by product exposures.

Indication of immediate medical attention and special treatment needed:

Note to physician / Antidote treatment: Specific antidotes or neutralizers to isocyanates do not exist. Treatment should be supportive and based on the judgement of the physician in response to the reaction of the patient.

General information: Remove contaminated clothing.

SECTION 5 Fire Fighting Measures

Appropriate Extinguishing Media: Foam, CO₂, dry chemical, water spray or fog.

Special Hazards arising from substance or mixture: nitrous gases, fumes/smoke, isocyanate, vapor.

Advice for Fire Fighters: Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further Information: Keep containers cool by spraying with water if exposed to fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6 Accidental Release Measures

Personal Precautions, Protective Equipment, Emergency Procedures: Clear area. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

Methods and Materials for Containment and Clean-up:

Large Spills: Note that as product is packaged, large spills are extremely unlikely if not impossible. If temporary control of isocyanate vapor is required, a blanket of protein foam or other suitable foam (available from most fire departments) may be placed over the spill. Transfer liquid via pump or vacuum device into closed but not sealed containers for disposal. Dike spillage.

Small Spills: Absorb isocyanate with suitable absorbent material (see § 40 CFR, sections 260, 264 and 265 for further information). Shovel into open container. Do not make container pressure tight. Move container to a well-ventilated area (outside). Spill area can be decontaminated with the following recommended decontamination solution: Mixture of 90% water, 8% concentrated ammonia, 2% detergent. Add at a 10 to 1 ratio. Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide. Dike spillage.

For Residues: Wash down spill area with decontamination solution. Allow solution to stand for at least 10 minutes.

Environmental precautions: Do not discharge into drains/surface waters/groundwater

SECTION 7 Handling and Storage

Precautions for Safe Handling: Provide suitable exhaust ventilation at the processing machines during manufacture, not as packaged for use. Ensure thorough ventilation of stores and work areas. Avoid aerosol formation. When handling heated product, vapors of the product should be ventilated, and respiratory protection used. Wear respiratory protec-



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tion when spraying. Danger of bursting when sealed gastight. Protect against moisture. If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing.

Conditions for Safe Storage, Including Incompatibilities: Keep away from water. Segregate from foods and animal feeds. Segregate from acids and bases. Segregate from bases. Suitable containers: Carbon steel (Iron), High density polyethylene (HDPE), Low density polyethylene (LDPE), Stainless steel 1.4301 (V2).

Formation of CO₂ and build-up of pressure possible. Keep container tightly closed and in a well-ventilated place. Outage of containers should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture.

Storage temperature: 60 - 80°F (16 - 27 °C)

Protect against moisture.

SECTION 8 Exposure Control / Personal Protection

Engineering Measures: Air contaminant levels should be controlled below the PEL or TLV for this product (see Exposure Guidelines).

Exposure limit values:

Component	Value / Source			
naphthalene	PEL	50 mg/m ³	10 ppm	OSHA PEL
naphthalene	STEL	75 mg/m ³	15 ppm	OSHA PEL
naphthalene	TWA	50 mg/m ³	10 ppm	OSHA PEL
naphthalene	TWA	No data available	10 ppm	ACGIH TLV
naphthalene	STEL	No data available	15 ppm	ACGIH TLV
Diphenylmethane-4,4'- diisocyanate (MDI)	CLV	0.2 mg/m ³	0.02 ppm	OSHA PEL
Diphenylmethane-4,4'- diisocyanate (MDI)	TWA	No data available	0.005 ppm	ACGIH TLV
P-MDI	CLV	0.2 mg/m ³	0.02 ppm	OSHA PEL
P-MDI	TWA	No data available	0.005 ppm	ACGIH TLV
Solvent naphtha	PEL	400 mg/m ³	100 ppm	OSHA PEL
Solvent naphtha	TWA	400 mg/m ³	100 ppm	OSHA PEL

Advice on system design: Provide local exhaust ventilation to maintain recommended P.E.L.

Personal Protection:

Respiratory protection: When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators. When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) NIOSH-certified air-purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place. For emergency or non-routine, high exposure situations, including confined space entry, use a NIOSH-certified full face-piece pressure demand self-contained breathing apparatus (SCBA) or a full face-piece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection: Chemical resistant protective gloves should be worn to prevent all skin contact. Suitable materials may include, chloroprene rubber (Neoprene), nitrile rubber (Buna N), chlorinated polyethylene, polyvinylchloride (Pylox), butyl rubber, depending upon conditions of use.

Eye protection: Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Skin protection: Cover as much of the exposed skin as possible to prevent all skin contact. Suitable materials may include, saran-coated material, depending upon conditions of use.

Hygiene measures: Wear protective clothing as necessary to prevent contact. Eye wash fountains and safety showers must be easily accessible. Observe the appropriate PEL or TLV value. Wash soiled clothing immediately. Contaminated equipment or clothing should be cleaned after each use or disposed of.

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SECTION 9 Physical and Chemical Properties

Appearance: Brown liquid.
Physical state: Liquid.
Odor: Aromatic. Solvent-like.
Odor threshold: Not applicable.
pH: Not applicable.
Freezing point: 32°F (0°C)
Initial boiling point and boiling range: 392°F (200 °C)
Flash point: 142°F (61°C)
Evaporation rate: Not available.
Flammability: Flammable liquid
Flammability limit – lower: Not available.
Flammability limit – upper: Not available.
Explosive limit - lower (%) Not available.
Explosive limit - upper (%) Not available.
Vapor pressure: 0.01 mm/Hg @ 77°F (25°C)
Vapor density Relative density: Not available.
Solubility (water): Not available.
Partition coefficient: Not available.
Auto-ignition temperature: >482°F (>250°C)
Decomposition temperature: Not available.
Viscosity Not available.

SECTION 10 Stability and Reactivity

Stability: The product is stable if stored and handled as prescribed/indicated.

Reactivity: No corrosive effect on metals.

Conditions to avoid: Avoid moisture.

Possibility of hazardous reactions: Reacts with water, with formation of carbon dioxide. Risk of bursting. Reacts with alcohols. Reacts with acids. Reacts with alkalis. Reacts with amines. Risk of exothermic reaction. Risk of polymerization. Contact with certain rubbers and plastics can cause brittleness of the substance/product with subsequent loss in strength.

Materials to avoid: Acids, amines, alcohols, water, alkalines, strong bases, substances/products that react with isocyanates.

Thermal decomposition: No decomposition if stored and handled as prescribed/indicated.

SECTION 11 Toxicological Information

Primary Routes of Exposure: Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases

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Acute Toxicity / Effects: Inhalation of vapors may cause irritation of the mucous membranes of the nose, throat or trachea, breathlessness, chest discomfort, difficult breathing and reduced pulmonary function. Inhalation exposure well above the PEL may result additionally in eye irritation, headache, chemical bronchitis, asthma-like findings or pulmonary edema. Isocyanates have also been reported to cause hypersensitivity pneumonitis, which is characterized by flu-like symptoms, the onset of which may be delayed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Diphenylmethane-4,4'-diisocyanate (MDI) 101-68-8	>2000 mg/kg (Rat)	> 9400 mg/kg (Rabbit)	2 mg/L (Rat) aerosol

Irritation / corrosion: Irritating to eyes, respiratory system and skin. Skin contact may result in dermatitis, either irritating or allergic.

Respiratory sensitization: Causes temporary irritation of the respiratory tract.

Sensitization: Sensitization after skin contact possible. The substance may cause sensitization of the respiratory tract. As a result of previous repeated overexposures or a single large dose, certain individuals will develop isocyanate sensitization (chemical asthma) which will cause them to react to a later exposure to isocyanate at levels well below the PEL/TLV. These symptoms, which include chest tightness, wheezing, cough, shortness of breath, or asthmatic attack, could be immediate or delayed up to several hours after exposure. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This increased lung sensitivity can persist for weeks and in severe cases for several years. Chronic overexposure to isocyanates has also been reported to cause lung damage, including a decrease in lung function, which may be permanent. Prolonged contact can cause reddening, swelling, rash, scaling, or blistering. In those who have developed a skin sensitization, these symptoms can develop as a result of contact with very small amounts of liquid material, or even as a result of vapor-only exposure. Animal tests indicate that skin contact may play a role in causing respiratory sensitization.

Chronic Toxicity/Effects

Repeated Dose Toxicity: The substance may cause damage to the olfactory epithelium after repeated inhalation. The substance may cause damage to the lung after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure.

Genetic toxicity: The substance was mutagenic in various bacterial test systems; however, these results could not be confirmed in tests with mammals.

Carcinogenicity: A carcinogenic potential cannot be excluded after prolonged exposure to severely irritating concentrations. These effects are not relevant to humans at occupational levels of exposure.

Reproductive toxicity: Repeated inhalative uptake of the substance did not cause damage to the reproductive organs.

Teratogenicity: The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Development The substance did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

Symptoms of Exposure: Eye irritation, skin irritation, allergic symptoms.

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Medical conditions aggravated by overexposure: The isocyanate component is a respiratory sensitizer. It may cause allergic reaction leading to asthma-like spasms of the bronchial tubes and difficulty in breathing. Medical supervision of all employees who handle or come into contact with isocyanates is recommended. Contact may aggravate pulmonary disorders. Persons with history of respiratory disease or hypersensitivity should not be exposed to this product. Preemployment and periodic medical examinations with respiratory function tests (FEV, FVC as a minimum) are suggested. Persons with asthmatic conditions, chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with isocyanates. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to isocyanates, further exposure is not recommended.

SECTION 12 Ecological Information

Eco toxicity - Toxic to aquatic life. Acutely harmful for aquatic organisms. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product has not been tested. The statement has been derived from the properties of the individual components.

Toxicity

Chemical Name	CAS No	Species	LC/EC50 (mg/L)	Exposure (Method)
Naphthalene	91-20-3	(Fish) Oncorhynchus gorboscha	0.9 – 1.1	48 h (flow-through)
Naphthalene	91-20-3	(Crustacea) Daphnia magna	2.6	48 h
Naphthalene	91-20-3	(Aquatic plant) Skeletonema costatum	0.4	72 h
Naphthalene	91-20-3	(Microorganisms) Bacteria	29	24 h

Persistence and degradability: Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis. In contact with water the substance will hydrolyze slowly.

Bio accumulative potential: Significant accumulation in organisms is not to be expected.

Mobility in soil: The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

SECTION 13 Disposal Considerations

Disposal instructions: Dispose in accordance with all applicable regulations. Incinerate or dispose of in a licensed facility. Do not discharge substance/product into sewer system. Do not contaminate ponds, waterways or ditches with chemical or used container.

Section 14 Transport Information

DOT: Classified as combustible liquid in containers greater than 119 gallons. Product is not offered in single receptacle package size that approaches reportable quantity.

IATA: Not classified as a dangerous good under transport regulations.

IMDG: Not classified as a dangerous good under transport regulations.

SECTION 15 Regulatory Information



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US federal regulations: All components are on the U.S. EPA TSCA Inventory List.

SARA 311/312 Hazardous chemical: Acute; Chronic; Fire

SARA 313 (TRI reporting):

Diphenylmethane-4,4'-diisocyanate (MDI) (CAS 101-68-8) listed
P-MDI (CAS 9016-87-9) listed
Naphthalene (CAS 91-20-3) listed

CERCLA Reportable Quantities:

5000 lbs. Diphenylmethane-4,4'-diisocyanate (MDI) (CAS 101-68-8)
5000 lbs. P-MDI (CAS 9016-87-9)
100 lbs. Naphthalene (CAS 91-20-3)

US state regulations

US. Massachusetts RTK - Substance List:

Diphenylmethane-4,4'-diisocyanate (MDI) (CAS 101-68-8)
Solvent naphtha (CAS 64742-94-5)
P-MDI (CAS 9016-87-9)
Naphthalene (CAS 91-20-3)
Benzene (CAS 71-43-2)

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

Diphenylmethane-4,4'-diisocyanate (MDI) (CAS 101-68-8)
Solvent naphtha (CAS 64742-94-5)
P-MDI (CAS 9016-87-9)
Naphthalene (CAS 91-20-3)
Methylenediphenyl diisocyanate (CAS 26447-40-5)
Benzene (CAS 71-43-2)

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

Diphenylmethane-4,4'-diisocyanate (MDI) (CAS 101-68-8)
Solvent naphtha (CAS 64742-94-5)
P-MDI (CAS 9016-87-9)
Naphthalene (CAS 91-20-3)
Benzene (CAS 71-43-2)

US. California Proposition 65: WARNING: This product contains a chemical(s) known to the state of California to cause cancer and birth defects or other reproductive harm.

SECTION 16 Other Information

Recommended restriction: for use by trained professionals, having read the complete SDS

Hazard Ratings

	<i>health</i>	<i>flammability</i>	<i>reactivity</i>
HMIS	2	2	1
NFPA	2	2	1

To the best of our knowledge the information contained here is accurate. However, neither the above named manufac-



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turer nor any of its distributors assumes any liability whatsoever for the accuracy or the completeness of the information contained herein. Final determination of the suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.