SAFETY DATA SHEET

SF Urethane Part B

REVISION DATE JAN 2018

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: SF Urethane Part B
PRODUCT CODES: 3550
MANUFACTURER: South Fork Concrete Coatings
DIVISION: Floor Coating
ADDRESS: 717 Riverside Dr SE
North Bend, WA 98045
PRODUCT USE: Floor Coating
PREPARED BY: South Fork Concrete Coatings

CHEMICAL SPILL
EMERGENCY PHONE: (800) 424-9300
CHEMTEL PHONE: (800) 424-9300
OTHER CALLS:
FAX PHONE:
CHEMICAL NAME:
CHEMICAL FAMILY:
CHEMICAL FORMULA:

SECTION 1 NOTES: This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not Hazardous per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture H332 Acute toxicity (Inhalation) (Category 4)
H335 Respiratory sensitization (Category 1)
H315 Skin sensitization (Category 1)

2.2 GHS label elements

Hazard pictograms/symbols

Signal word Danger

Hazard Statements:
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 - Wash hands, forearms and face thoroughly after handling
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P284 - In case of inadequate ventilation, wear respiratory protection that meets the requirements in OSHA's Respiratory Protection Standard (29 CFR 1910.134) or regional standards.
P302+P352 - If on skin: Wash with plenty of soap
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P321 - Specific treatment (see a doctor if symptoms do not go away. on this label)
P332+P313 - If skin irritation occurs: Get medical advice/attention
P337+P313 - If eye irritation persists: Get medical advice/attention
P342+P311 - If experiencing respiratory symptoms: Call a doctor
P362+P364 - Take off contaminated clothing and wash it before reuse
P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

	WGT%	CAS#
Hexamethylene diisocyanate oligomers, Isocyanurate	80-100 %	TS
Hexamethylene-di-isocyanate	< 10 %	822-06-0

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SECTION 4: FIRST AID MEASURES

EYE CONTACT	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Use lukewarm water if possible. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Then remove contact lenses, if easily removable, and continue eye irrigation for not less than 15 minutes. Get medical attention if irritation develops.
SKIN CONTACT	May cause skin irritation with symptoms of reddening, itching and swelling. Can cause sensitization with symptoms of reddening, itching, swelling and rash.
INHALATION	Move into fresh air and keep at rest. If breathing stops, provide artificial respiration. Get medical attention if any discomfort continues
INGESTION	Do not induce vomiting. Wash mouth out with water. Do not give anything by mouth to an unconscious person. Get medical attention.
GENERAL INFORMATION	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
Carcinogenicity	No carcinogenic substances as defined by IARC, NTP and/or OSHA.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media: dry chemical, carbon dioxide (CO2), foam, water spray for large fires. Use water spray to keep fire-exposed containers cool.

5.2 Special hazards arising from the substance or mixture

During fire, gases hazardous to health may be formed

5.3 Advice for firefighters

Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and NFPA compliant helmet, hood, boots and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear appropriate personal protective equipment. Evacuate surrounding areas and isolate the area.. Keep unnecessary and unprotected personnel from entering. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Implement site emergency response plan.

6.2 Environmental Precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform authorities if the product has caused environmental pollution (sewers, drains, waterways or soil).

6.3 Methods and materials for containment and cleaning up

Cleanup personnel must use appropriate personal protective equipment. Evacuate and keep unnecessary personnel out of spill area. Remove all sources of ignition, including flames, heat, and sparks. Stop leak if without risk. Move containers from spill area. Dike or dam spilled material with non-combustible, absorbent material (e.g., sand, earth, vermiculite or diatomaceous earth) and control further spillage, where possible. Make certain the absorbent material soaks up all liquids. Decontaminate the spill surface area with a neutralization solution. A neutralization solution can be prepared with a combination of two solutions mixed 1:1 by volume: (Solution 1): Mineral Spirits (80%), VVM&P Naptha (15%) and Household Detergent (5%); (Solution 2): Monoethanolamine (50%) and water (50%). Other neutralization solutions include: ZEP® Commercial Heavy-Duty Floor Stripper, EASY OFF® Grill and Oven Cleaner, a solution of Simple Green® Pro HD Heavy-Duty Cleaner (50%) and Household Ammonia (50%), and a solution of Fantastic® Heavy Duty All Purpose Cleaner (90%) and Household Ammonia (10%).

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Do not breathe vapors, mists, or dusts. Use adequate ventilation to keep airborne isocyanate levels below the exposure limits. Wear respiratory protection if material is heated, sprayed, used in a confined space, or if the exposure limit is exceeded.

7.2 Conditions for safe storage, including any incompatibilities

STORAGE TEMPERATURE: Minimum: 4 °C (39.2 °F) Maximum: 50 °C (122 °F). STORAGE PERIOD: 12 Months: after receipt of material by customer. Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled, unapproved or reactive containers. Use appropriate containment to avoid environmental contamination. Personnel education and training in the safe use and handling of this product are required under OSHA Hazard Communication Standard 29 CFR 1910.1200

Incompatible Materials or Ignition Sources: Hazardous polymerization does not occur. Avoid water, amines, strong bases, alcohols, and copper alloys.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Homopolymer of Hexamethylene Diisocyanate (28182-81-2)

Time Weighted Average (TWA): 0.5 mg/m3 Exposure Limit Short Term Exposure Limit (STEL): 1.00 mg/m3 (15-min)

Polyisocyanate Based on Hexamethylene Diisocyanate (HDI) (CAS# is a trade secret)

Time Weighted Average (TWA): 0.50 mg/m3 Exposure Limit Short Term Exposure Limit (STEL): 1.00 mg/m3

Hexamethylene-1,6-Diisocyanate (822-06-0)

US. ACGIH Threshold Limit Values Time Weighted Average (TWA): 0.005 ppm Exposure Limit Ceiling Limit Value: 0.02 ppm

TWA = Time-Weighted Averages are based on 8h/day 40hr/week exposures : STEL = Short Term Exposure Limits are based on 15 minute exposures

8.2 Exposure controls

Appropriate engineering controls

General dilution and local exhaust as necessary to control airborne vapors, mists, dusts, and thermal decomposition products below appropriate airborne concentration standards and guidelines. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Curing ovens must be ventilated to prevent the build-up of explosive atmospheres and to prevent off-gases.

Personal protective equipment

Industrial Hygiene/ Good industrial hygiene practice dictates that worker protection should be achieved through engineering controls, such as ventilation, whenever feasible. When such controls are not feasible to achieve full protection, the use of respirators and other personal protective equipment is mandated. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Curing ovens must be ventilated to prevent emissions into the workplace. If oven off-gases are not vented properly (i.e. they are released into the work area), it is possible to be exposed to airborne monomeric HDI.

Hand Protection: Gloves should be worn, Nitrile rubber gloves, Butyl rubber gloves, Neoprene gloves.

Eye Protection: When handling liquid product, chemical goggles should be worn. Chemical safety goggles in combination with a full face shield if a splash hazard exists.

Skin and body protection: Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact., Gloves, long sleeved shirts and pants.

Respiratory protection : In case of inadequate ventilation, wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Use positive pressure supplied air respirator when airborne concentrations are not known, when airborne levels are 10 times the appropriate TLV, and when spraying is performed or product is applied by aerosol in a confined space or area with limited ventilation. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Contact health and safety professional or manufacturer for specific information.

Medical Surveillance All applicants who are assigned to an isocyanate work area should undergo a pre-placement medical evaluation. A history of eczema or respiratory allergies such as hay fever, are possible reasons for medical exclusion from isocyanate areas. Applicants who have a history of adult asthma should be restricted from work with isocyanates. Applicants with a history of prior isocyanate sensitization should be excluded from further work with isocyanates. A comprehensive annual medical surveillance program should be instituted for all employees who are potentially exposed to diisocyanates. Once a worker has been diagnosed as sensitized to any isocyanate, no further exposure can be permitted. Refer to the EPOXY2U pamphlet (Medical Surveillance Program for Isocyanate Workers) for additional guidance.

Additional Protective Measures: Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees in the safe use and handling of this product. Emergency showers and eye wash stations should be available**.**

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form: Liquid
Color: Colorless
Odor: Minimal odor
pH: Not Applicable
Freezing Point: No Data Available
Boiling Point/Range: Approximately 285°C (545°F) ca
Flash Point: 170°C (338°F) ca

Lower Explosion Limit: Approximately 0.90 %(V) for the solvent
Upper Explosion Limit: Approximately 12.5 %(V) for the solvent
Vapor Pressure: HDI Polyisocyanate: 5.2 X 10-9 @ 68°F (20°C) mmHg
10 mmHg @ 20 °C (68 °F)

Specific Gravity: Approximately 1.16
Solubility in Water: Insoluble - Reacts slowly with water to liberate CO2 gas
Bulk Density: Approximately 9.64 lb/gal Estimated based on component(s)

9.2 Other safety information

No data available

SECTION 10: STABILITY AND REACTIVITY

10.1 REACTIVITY No data available

10.2 Chemical stability

Stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions

Hazardous Reactions: Contact with moisture, other materials that react with isocyanates, or temperatures above 350 F (177 C), may cause polymerization.

Materials to avoid: Water, Amines, Strong bases, Alcohols, copper alloys

Conditions to avoid: Heat, flames and sparks.

Hazardous decomposition products: By Fire and High Heat: Carbon dioxide (CO2), carbon monoxide (CO), oxides of nitrogen (NOx), dense black smoke, Hydrogen cyanide, Isocyanate, Isocyanic Acid, Other undetermined compounds

SECTION 11 – TOXICOLOGICAL INFORMATION

TOXICITY DATA FOR HOMOPOLYMER OF HEXAMETHYLENE DIISOCYANATE

Acute Oral Toxicity	LD50: > 5,000 mg/kg (Rat) Estimated Value
Acute Inhalation Toxicity	LC50: 390-453 mg/m3, aerosol, 4 hrs (Rat, Male/Female) RD50: 20.8 mg/m3, 3 hrs
Acute dermal toxicity	LD50: > 5,000 mg/kg (rabbit)
Skin Irritation	rabbit, Draize, Slightly irritating
Eye Irritation	rabbit, Draize, Slightly irritating
Sensitization	dermal: sensitizer (guinea pig, Maximisation Test (GPMT)) dermal: non-sensitizer (Guinea pig, Buehler) inhalation: non-sensitizer (guinea pig)
Repeated Dose Toxicity	3 wks, inhalation: NOAEL: 3.7 - 4.3 mg/m3, (Rat) 90 ds, inhalation: NOAEL: 3.3 - 3.4 mg/m3, (Rat) Irritation to lungs and nasal cavity.
Mutagenicity	Genetic Toxicity in Vitro: Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

TOXICITY DATA FOR T-BUTYL ACETATE

Acute Oral Toxicity	LD50: 4,500 mg/kg (Rat)
Acute Inhalation Toxicity	LC50: > 4000 ppm, (rat)
Acute dermal toxicity	LC50: > 4000 ppm, (rat)
Skin Irritation	Skin Irritation
Eye Irritation	Eye Irritation
Repeated Dose Toxicity	inhalation: NOAEL: Not Estalbished (<120 ppm), (rat,)

TOXICITY DATA FOR BENZENE, 1-CHLORO-4-(TRIFLUOROMETHYL

Acute Oral Toxicity	LD50: > 10,000 mg/kg (rat)
Acute Inhalation Toxicity	LC50: > 10,000 mg/l, (rat)
Acute dermal toxicity	LD50: > 2,700 mg/kg (rabbit)
Skin Irritation	rabbit, Non-irritating
Eye Irritation	rabbit, Non-irritating
Repeated Dose Toxicity	28 d, inhalation: NOAEL: Not Established (<100 ppm), (rat, Male/Female)

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SECTION 12 – ECOLOGICAL INFORMATION

Ecological Data for Homopolymer of Hexamethylene Diisocyanate Biodegradation: 0 %, Exposure time: 28 Days, Not readily biodegradable.

Acute and Prolonged Toxicity to Fish: LC0: > 100 mg/l (Zebra fish (Brachydanio rerio), 96 hrs)

Acute Toxicity to Aquatic Invertebrates: EC0: > 100 mg/l (Water flea (Daphnia magna), 48 hrs)

Toxicity to Aquatic Plants: EC50: > 1,000 mg/l, (Green algae (Scenedesmus subspicatus), 72 hrs)

Toxicity to Microorganisms: EC50: > 1,000 mg/l, (Activated sludge microorganisms, 3 hrs)

Ecological Data for t-Butyl Acetate Biodegradation: Readily biodegradable.

Bioaccumulation: approximately 10 BCF

Acute and Prolonged Toxicity to Fish: LC50: 327 mg/l (Fathead minnow (Pimephales promelas), 96 h)

Acute Toxicity to Aquatic Invertebrates: EC50: 3,968 mg/l (Water flea (Daphnia magna)**)**

Toxicity to Aquatic Plants: 420 mg/l, EC5, (other: algae)

Ecological Data for Benzene, 1-chloro-4-(trifluo omethyl)-Biodegradation: Not readily biodegradable.

Acute and Prolonged Toxicity to Fish: LC50: 13.5 mg/l (Bluegill (Lepomis macrochirus), 96 h)

Acute Toxicity to Aquatic Invertebrates: 12.4 mg/l LC50 (Water flea (Daphnia magna), 48 h)

Toxicity to Aquatic Plants: 500 mg/l, IC50, (Blue-green algae (Anabaena flosaquae), 72 h)

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD	Waste disposal should be in accordance with existing federal, state and local environmental control laws. Incineration is the preferred method.
EMPTY CONTAINER PRECAUTIONS	Empty containers retain product residue; observe all precautions for product. Do not heat or cut empty container with electric or gas torch because highly toxic vapors and gases are formed. Do not reuse without thorough commercial cleaning and reconditioning.

SECTION 14: TRANSPORT INFORMATION

LAND TRANSPORT (DOT)	Not regulated.
SEA TRANSPORT (IMDG)	Not regulated.
AIR TRANSPORT (ICAO/IATA)	Not regulated.

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

OSHA Hazcom Standard Rating: Hazardous
US. Toxic Substances Control Act: Listed on the TSCA Inventory.
US. EPA CERCLA Hazardous Substances (40 CFR 302):
Components: t-Butyl Acetate Reportable quantity: 5,000 lbs

SARA Section 311/312 Hazard Categories: Acute Health Hazard
US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):'
Components: None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A):
Components: None

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notifi ation Required
Components: None

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):
When discarded in its purchased form, this product meets the criteria of ignitability, and should be managed as a hazardous waste (EPA Hazardous Waste Number D001). (40 CFR 261.20-24)

State Right-To-Know Information
The following chemicals are specifically lis ed by individual states; other product specific health and sa ety data in other sections of the MSDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:

Chemical Name	CAS Number	% By Weight
Homopolymer of Hexamethylene Diisocyanate	28182-81-2	60 - 100%
Polyisocyanate Based on Hexamethylene Diisocyanate (HDI)	Trade Secret	10 - 20%

New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:

Chemical Name	CAS Number	% By Weight
Hexamethylene-1,6-Diisocyanate	822-06-0	≤ 0.3%

California Prop. 65: To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

SECTION 16 – OTHER INFORMATION

NFPA 704M RATING

Health	2
Flammability	1
Reactivity	1
Other	

0=Insignificant 1=Slight 2=Moderate
3=High 4=Extreme

NFPA 704M RATING

Health	2*
Flammability	1
Physical Hazard	1

0=Minimal 1=Slight 2=Moderate 3=Serious
4=Severe * = Chronic Health Hazard

The method of hazard communication for South Fork Concrete Coatings is comprised of Product Labels and Safety Data Sheets. HMIS and NFPA ratings are provided by Statewide as a customer service. The handling of products containing reactive HDI polyisocyanate/ prepolymer and/or monomeric HDI requires appropriate protective measures referred to in this SDS. These products are therefore recommended only for use in industrial or trade (commercial) applications.

The information herein is given in good faith, but no warranty expressed or implied is made. South Fork Concrete Coatings urges suppliers and users of this product to evaluate its suitability and compliance with local regulations as South Fork Concrete Coatings cannot foresee the nature of the final application nor final location of usage