

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	GreenThane 70620
Product Code	70620
Revision Number	2
Prior Version Date	06-08-2015
Intended Use	Roof Coating
Restrictions On Use	For Industrial Use Only
Chemical Family	Urethane Coating

MANUFACTURER

Green Shield Products, LLC
 4008 Louetta Rd. #464
 Spring, TX 77388-4405
 (P)832-957-2925 (F)832-957-3960
 www.greenshieldproducts.com

24 HR. EMERGENCY TELEPHONE NUMBER

CHEMTREC® (US Transportation)	(800) 424-9300
CHEMTREC® (International Transportation)	1 (202) 483-7616

2. HAZARDS IDENTIFICATION

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

**Hazard
Pictograms**



GHS Classification

Serious Eye Damage/Eye Irritation Category 1
 Respiratory Sensitisation Category 1A
 Skin Sensitisation Category 1
 Specific Target Organ Systemic Toxicity (STOT) - Repeated Exposure Category 1
 Skin Corrosion/Irritation Category 2
 Carcinogenicity Category 2
 Flammable Liquid Category 3
 Acute Toxicity - Inhalation Vapour Category 3

Signal Word

Danger

Hazard Statements

Flammable liquid and vapour. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Toxic if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames and hot surfaces. No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust, fume, mist, vapours or spray. Wash thoroughly

Response	<p>after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, protective clothing, eye protection and face protection. Use personal protective equipment as required. In case of inadequate ventilation wear respiratory protection.</p> <p>IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. Immediately call a POISON CENTER or physician. Get medical attention if you feel unwell. If skin irritation or rash occurs: Get medical attention. If experiencing respiratory symptoms: Call a POISON CENTER or physician. Take off contaminated clothing and wash before reuse. In case of fire: Use alcohol resistant foam, carbon dioxide, dry chemical, or water spray for extinction.</p>
Storage	Store locked up. Store in a cool, well-ventilated place. Keep container tightly closed.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards Not Otherwise Classified (HNOC)	Not applicable
Additional Information	Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS *
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<u>Chemical Component</u>	<u>CAS #</u>	<u>%</u>
Polyisocyanate Resin	9057-91-4	10 - 30
Stoddard solvent	8052-41-3	3 - 7
Oxazolidine Hardener	140921-24-0	3 - 7
Butyl carbitol acetate	124-17-4	3 - 7
Quartz (Silica-Crystalline)	14808-60-7	1 - 5
Fumed silica	112945-52-5	1 - 5
Titanium dioxide	13463-67-7	1 - 5
(d)-Limonene	5989-27-5	0.5 - 1.5
Toluene diisocyanate	26471-62-5	0.1 - 1
4,4'-DIPHENYLMETHANE DIISOCYANATE	101-68-8	0.1 - 1
Carbon black	1333-86-4	0.1 - 1
Diphenylmethane-2,4'-diisocyanate	5873-54-1	0.1 - 1

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Inhalation	Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen.
Eye Contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin Contact	Wash with soap and water. Remove contaminated clothing and launder. Get medical attention if irritation develops or persists. Thoroughly wash or discard clothing and shoes before reuse.
Ingestion	No hazard in normal industrial use. Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this SDS. Induce vomiting as a last measure. Induced vomiting may lead to aspiration of the material into the lungs potentially causing chemical pneumonitis that may be fatal.
Most Important Acute Symptoms and Effects	Not Available
Most Important Delayed Symptoms and Effects	Not Available
Special treatment needed:	No additional first aid information available

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Use alcohol resistant foam, carbon dioxide, dry chemical, or water spray when fighting fires. Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the fire. Do not direct a water stream directly into the hot burning liquid.
Unsuitable Extinguishing Media	No data available
Fire and/or Explosion Hazards	Vapors may be ignited by sparks, flames or other sources of ignition if material is above the flash point giving rise to a fire (Class B). Vapors are heavier than air and may travel to a source of ignition and flash back. Container may explode in heat of fire.
Hazardous Combustion Products	Carbon dioxide, Carbon monoxide, Hydrogen cyanide, Nitrogen containing gases, Hydrocarbons, Toxic fumes, Toxic gases, Isocyanates, Isocyanic Acid
Special Protective Equipment and Precautions for Fire-Fighters	Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products. Flammable component(s) of this material may be lighter than water and burn while floating on the surface. Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products. Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures	Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section VIII of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.
Methods and Material for Containment and Cleaning Up	Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Dike with suitable absorbent material. Gather and store in a sealed container pending disposal. Shut off ignition sources; including electrical equipment and flames. Do not allow smoking in the area.

7. HANDLING AND STORAGE
Precautions for Safe Handling

Toxic or severely irritating material. Avoid contacting and avoid breathing the material. Use only in a well ventilated area. As with all chemicals, good industrial hygiene practices should be followed when handling this material. Do not get in eyes, on skin and clothing. Wash thoroughly after handling.

Conditions for Safe Storage

Store in a cool dry place. Keep container(s) closed. Keep away from sources of ignition.

Materials to Avoid/Chemical Incompatibility

Oxidizing agents, Metals, Acids, Amines, Caustics (bases, alkalis), Water, Alcohols

8. EXPOSURE CONTROLS\PERSONAL PROTECTION
Exposure Limits

<u>Chemical Component</u>	<u>OSHA PEL</u>	<u>ACGIH TLV-TWA</u>	<u>ACGIH STEL</u>
Stoddard solvent	500 ppm TWA; 2900 mg/m ³ TWA	100 ppm TWA; 572 mg/m ³ TWA	
Quartz (Silica-Crystalline)	see Table Z-3	0.05 mg/m ³ TWA (respirable fraction)	
Fumed Silica (Particles not otherwise regulated)	50 mppcf (15mg/m ³) TWA Total Dust; 15 mppcf (5mg/m ³) TWA Respirable fraction		
Titanium dioxide	15 mg/m ³ TWA (total dust)	10 mg/m ³ TWA	
Toluene diisocyanate		0.005 ppm TWA	0.02 ppm
Carbon black	3.5 mg/m ³ TWA	3.5 mg/m ³ TWA	

Appropriate Engineering Controls

Local exhaust ventilation or other engineering controls may be required when handling or using this product to avoid overexposure. Engineering controls must be designed to meet the OSHA chemical specific standard in 29 CFR 1910.

Respiratory Protection

General or local exhaust ventilation is the preferred means of protection. In cases where ventilation is inadequate, respiratory protection may be required to avoid overexposure. Follow respirator manufacturer's directions for respirator use.

Eye Protection

Wear safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Have an eye wash station available.

Skin Protection

Avoid all skin contact by covering as much of the exposed skin area as possible with appropriate clothing to prevent skin contact. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work. Clothing suitable to prevent skin contact.

General Hygiene Conditions

As with all chemicals, good industrial hygiene practices should be followed when handling this material. Do not get in eyes, on skin and clothing. Wash thoroughly after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES
Appearance
Physical State

Liquid

Color

Grey

Odor

Hydrocarbon

Odor Threshold

No data available

pH

No data available

Melting Point/Freezing Point (F/C)	No data available / No data available
Initial Boiling Point and Boiling Range	
Low (F)	350.0
High (F)	456.0
Flash Point (F/C)	108 / 42
Evaporation Rate	0.05
Flammability (solid, gas)	No data available
Upper Flammable/Explosive Limit	10.7
Lower Flammable/Explosive Limit	0.8
Vapor Pressure	68°F 0.52 MM HG
Vapor Density	7.00 (air = 1)
Relative Density	2.400
Solubility in Water	Reacts slowly with water.
Partition coefficient: n-octanol/water	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature:	No data available
Viscosity	105 - 120 KU
Volatiles, % by volume	23.24
Volatiles, % by weight	15.41
Volatile Organic Chemicals (g/L)	
(Regulatory, Calculated)	197.43
(Actual, Calculated)	197.40
Density	10.63 - 10.83 lbs./Gal

10. STABILITY AND REACTIVITY

Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	No data available
Conditions to Avoid	Temperatures above flash point in combination with sparks, open flames, or other sources of ignition. Contamination. Contact with water.
Incompatible Materials	Oxidizing agents, Metals, Acids, Amines, Caustics (bases, alkalis), Water, Alcohols
Hazardous Decomposition Products	Carbon dioxide, Carbon monoxide, Hydrogen cyanide, Nitrogen containing gases, Hydrocarbons, Toxic fumes, Toxic gases, Hydrogen chloride

11. TOXICOLOGICAL INFORMATION

Routes of Exposure	Eye contact Inhalation Skin contact Ingestion
Immediate (Acute) Health Effects by Route of Exposure	
Inhalation Irritation	Inhalation of dusts produced during cutting, grinding or sanding of this product may cause irritation of the respiratory tract.
Inhalation Toxicity	Vapor harmful. May affect the brain or nervous system causing dizziness, headache or nausea.
Skin Contact	Can cause moderate skin irritation. May cause allergic skin reaction.
Skin Absorption	May be harmful if absorbed through skin.
Eye Contact	Causes eye irritation.
Ingestion Toxicity	Harmful if swallowed. Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal.

Long-Term (Chronic) Health Effects **Carcinogenicity**

Cancer hazard: Contains Crystalline Silica, which can cause cancer. Risk of cancer depends on duration and level of exposure to dust generated from

sanding surfaces or spray mists.

Contains Titanium Dioxide which is listed by IARC as possibly carcinogenic to humans (Group 2B). This listing is based on inadequate evidence with respect to humans and sufficient evidence in experimental animals.

Possible cancer hazard. Contains toluene diisocyanate which may cause cancer based on animal data. (Risk of cancer depends on duration and level of exposure.)

Possible cancer hazard. Contains carbon black which may cause cancer based on animal data. (Risk of cancer depends on duration and level of exposure.)

Inhalation

NOTICE: Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

Overexposure may cause lung damage.

Skin Contact

Prolonged contact may cause an allergic skin reaction.

Product Toxicology Data

Oral Acute Toxicity Estimate (ATE) 2,487.38 mg/kg

Dermal Acute Toxicity Estimate (ATE) 6,308.43 mg/kg

Component Toxicology Data

Chemical Component	Oral LD50	Dermal LD50	Inhalation LC50
1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with 1,3-diisocyanatomethylbenzene and alpha.-hydro- omega. -hydroxypoly[oxy(methyl-1,2-ethanediyl)]	Oral LD50 Rat > 5000 mg/kg	Dermal LD50 Rabbit > 5000 mg/kg	Inhalation LC50 (4h) Rat > 20.00 mg/L
Stoddard solvent	Oral LD50 Rat > 15,000 mg/kg	Dermal LD50 Rabbit > 3400 mg/kg	Inhalation LC50 Rat > 13.10 mg/L
Butyl carbitol acetate	Oral LD50 Rat 6500 mg/kg	Dermal LD50 Rabbit 14,500 mg/kg	Inhalation LC50 (4h) Rat 72.50 mg/L
Quartz	Oral LD50 Rat > 22,500 mg/kg	Dermal LD50 Rabbit > 2000 mg/kg	Inhalation LC50 (4h) Rat > 20.00 mg/L
Fumed silica	Oral LD50 Rat > 1000 mg/kg		
Titanium dioxide	Oral LD50 Rat > 25,000 mg/kg	Dermal LD50 Rabbit > 10,000 mg/kg	Inhalation LC50 (4h) Rat > 6.82 mg/L
(d)-Limonene	Oral LD50 Rat > 5000 mg/kg	Dermal LD50 Rabbit > 5000 mg/kg	
Toluene diisocyanate	Oral LD50 Rat 6170 mg/kg	Dermal LD50 Rabbit > 16,000 mg/kg	Inhalation LC50 (4h) Rat 0.10 mg/L
Carbon black	Oral LD50 Rat > 8000 mg/kg	Dermal LD50 Rabbit > 2000 mg/kg	

Carcinogen Information

Chemical Name	IARC Carcinogen	OSHA Carcinogen	NTP Carcinogen
Quartz	1		1
Titanium dioxide	2B		
Toluene diisocyanate	2B		2
Carbon black	2B		

12. ECOLOGICAL INFORMATION

Ecotoxicity (aquatic and terrestrial, where available) No data available



Mobility in soil No data available

13. DISPOSAL CONSIDERATIONS

Safe Handling of Waste

Refer to other sections of this SDS to determine the toxicity and physical characteristics of the material to determine the proper waste identification and disposal in compliance with applicable regulations.

14. TRANSPORT INFORMATION

This section provides basic shipping classification information and does not contain all regulatory transportation details. Refer to all applicable regulations for domestic, international, air, vessel and ground transportation requirements and restrictions.

DOT Basic Description: Paint
Hazard Class: 3
UN Number: UN1263
Packing Group: III
Other: Not regulated for non-bulk domestic ground shipments for packaging of 450 liters (119 gallons) or less (DOT 49CFR 173.150(f)).

IATA Air Shipping Name: Paint
IATA Hazard Class: 3
IATA UN Number: UN1263
IATA Packing Group: III

IMO Shipping Name: Paint
IMO Hazard Class: 3
IMO UN Number: UN1263
IMO Packing Group: III

Marine Pollutant: N

15. REGULATORY INFORMATION

TSCA Status All components of this product are either listed on the TSCA Inventory; or, are not subject to the inventory notification requirements.

Regulated Components

SARA EHS Chemicals
Toluene Diisocyanate CAS # 26471-62-5 % 0.1 - 1

CERCLA
Toluene Diisocyanate CAS # 26471-62-5 0.1 - 1

SARA 313
2-(2-Butoxyethoxy)ethyl acetate 124-17-4 3 - 7
Toluene diisocyanate (mixed isomers) 26471-62-5 0.1 - 1

SARA 311/312
Health (Acute): Y
Health (chronic): Y
Fire (Flammable): Y
Pressure: N
Reactivity: Y

U. S. State Regulations:

California Prop 65 Chemicals

Cancer	CAS #	%
Crystalline Silica	14808-60-7	1 - 5
Titanium dioxide	13463-67-7	1 - 5
Toluene Diisocyanate	26471-62-5	0.1 - 1
Carbon Black	1333-86-4	0.1 - 1
Cumene	98-82-8	0.01 - 0.1
Benzene	71-43-2	0.001- 0.01
Arsenic	7440-38-2	< 10 ppb
Lead	7439-92-1	< 10 ppb
Nickel	7440-02-0	< 10 ppb
Reproductive		
Methyl Alcohol	67-56-1	0.001- 0.01
Benzene	71-43-2	0.001- 0.01
Lead	7439-92-1	< 10 ppb

Canadian Regulations:

CEPA DSL: The components of this product ARE listed on the Canadian Domestic Substances List.

WHMIS Hazard Class: B3 D2A

16. OTHER INFORMATION
**Revision Date
Disclaimer**

09-03-2015

This SDS has been prepared in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200) and Canada's Controlled Product Regulations (CPR). To the best of our knowledge the information contained herein is accurate. Determination of safe handling, application and use of this material is the responsibility of the end user. This information is furnished without warranty, expressed or implied.