

GenFlex Roofing Systems

Material Safety Data Sheet

Material Name: TPO Edge Sealant

February 5, 2008

*** Section 1 - Chemical Product and Company Identification ***

Product Use: Sealant

Manufacturer Information

GenFlex Roofing Systems, LLC
250 West 96th Street
Indianapolis, IN 46260

Phone: 317-575-7190 (Non-Emergency)

Emergency # 1-800-424-9300 (CHEMTREC)

International # 1-703-527-3887 (CHEMTREC)

General Comments

NOTE: CHEMTREC telephone number is to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

*** Section 2- Hazards Identification ***

Emergency Overview

Product is a flammable white, tan or grey liquid. This product is harmful by inhalation, when in contact with the skin and if it is swallowed. Inhalation of vapors may cause CNS depression. This product is a pulmonary aspiration hazard.

Potential Health Effects: Eyes

This product may cause irritation to the eyes. Symptoms include redness, swelling, tearing and blurred vision. Overexposure to vapors, fumes, or particles from this material may cause eye damage, including vacuoles in the cornea and conjunctival irritation.

Potential Health Effects: Skin

This product may cause irritation to the skin. Prolonged or repeated contact may cause redness, cracking and may dry and/or defat the skin. Prolonged or repeated contact with product or contact with processing fumes or dusts may cause an allergic skin sensitization reaction.

Potential Health Effects: Ingestion

This product may be harmful or fatal if swallowed. Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion of large amounts may produce more serious toxicities. Aspiration of small amounts into the lung may produce severe lung damage, including chemical pneumonitis.

Potential Health Effects: Inhalation

Inhalation of vapors may cause irritation of the respiratory tract. Other symptoms may include signs of CNS depression involving weakness, dizziness, giddiness, loss of coordination and judgment. Excessive inhalation of xylene may produce irreversible damage to the central nervous system. Severe overexposure may cause coma and death due to respiratory failure.

HMIS Ratings: Health: 2* Fire: 3 Reactivity: 0 Pers. Prot.: chemical goggles, impervious gloves

(Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard)

*** Section 3 - Composition / Information on Ingredients ***

CAS #	Component	Approx. Weight Percent
1330-20-7	Xylenes (o-, m-, p- isomers)	50-75
8052-41-3	Stoddard solvent	5-20
13463-67-7	Titanium dioxide	1-5
Not Available	Butyl Rubber Compound	<1

Component Information/Information on Non-Hazardous Components

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

*** Section 4 - First Aid Measures ***

First Aid: Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. If irritation develops, seek medical attention.

GenFlex Roofing Systems

Material Safety Data Sheet

Material Name: TPO Edge Sealant

February 5, 2008

First Aid: Skin

For skin contact, wash with soap and water. If irritation develops, seek medical attention.

First Aid: Ingestion

If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting unless instructed to do so by medical personnel.

First Aid: Inhalation

If inhaled, remove immediately to fresh air. If symptoms develop or persist, seek immediate medical attention.

First Aid: Notes to Physician

This material, if aspirated into the lungs, may cause chemical pneumonitis; treat the affected person appropriately.

*** Section 5 - Fire Fighting Measures ***

Flash Point: 81° F (27° C)

Upper Flammable Limit (UFL): 7.0%

Auto Ignition: Not available

Rate of Burning: Not available

General Fire Hazards

Product is a flammable liquid. Highly toxic fumes and gases will be released upon combustion. Empty containers may retain product residue including Flammable or Explosive vapors. Do not cut, drill, grind, or weld near full, partially full, or empty product containers.

Hazardous Combustion Products

Upon combustion the product may yield smoke, fumes, aldehydes, carbon monoxide, carbon dioxide and other low molecular weight hydrocarbons.

Extinguishing Media

Dry chemical, foam, carbon dioxide, water fog. Use water to cool fire-exposed containers and to protect personnel.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective clothing including self contained breathing apparatus.

NFPA Ratings: Health: 2* Fire: 3 Reactivity: 0

(Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe)

*** Section 6 - Accidental Release Measures ***

Containment Procedures

Contain by any means necessary. Eliminate all sources of ignition or flammables that may come into contact with a spill of this material.

Clean-Up Procedures

Absorb spilled material with nonflammable inert absorbent. Do not allow the spilled product to enter public drainage system or open water courses. Ventilate the contaminated area. Thoroughly wash the area with water after a spill or leak clean-up.

Evacuation Procedures

Evacuate the area promptly. Keep upwind of the spilled material and isolate exposure.

Special Procedures

Avoid skin contact and inhalation of vapors during disposal of spills.

*** Section 7 - Handling and Storage ***

Handling Procedures

Do not breathe gas/fumes/vapor/spray. Use this product with adequate ventilation. Do not get this material in your eyes, on your skin, or on your clothing. Wash thoroughly after handling. Keep this product from heat, sparks, or open flame.

Storage Procedures

Keep this material in a cool, well-ventilated place. Eliminate all sources of ignition.

GenFlex Roofing Systems Material Safety Data Sheet

Material Name: TPO Edge Sealant

February 5, 2008

*** Section 8 - Exposure Controls / Personal Protection ***

Exposure Guidelines

A: General Product Information

Follow all applicable exposure limits.

B: Component Exposure Limits

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: 100 ppm TWA
150 ppm STEL
OSHA: 100 ppm TWA; 435 mg/m3 TWA
150 ppm STEL; 655 mg/m3 STEL
NIOSH: 100 ppm TWA; 435 mg/m3 TWA

Stoddard solvent (8052-41-3)

ACGIH: 100 ppm TWA
OSHA: 100 ppm TWA; 525 mg/m3 TWA
NIOSH: 350 mg/m3 TWA
1800 mg/m3 Ceiling

Titanium dioxide (13463-67-7)

ACGIH: 10 mg/m3 TWA
OSHA: 10 mg/m3 TWA (total dust)

Engineering Controls

Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces. Special care must be taken to avoid inhalation exposure when using this product at high temperatures.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear chemical goggles; face shield (if splashing is possible).

Personal Protective Equipment: Skin

Use impervious gloves. Use of protective coveralls and long sleeves is recommended.

Personal Protective Equipment: Respiratory

If ventilation is not sufficient to effectively remove and prevent buildup of dusts or processing fumes, appropriate NIOSH approved respirator must be provided.

Personal Protective Equipment: General

Use good industrial hygiene practices in handling this material.

*** Section 9 - Physical & Chemical Properties ***

Appearance:	White, Tan or Grey liquid.	Odor:	Not available
Physical State:	Liquid	pH:	Not available
Vapor Pressure:	Not available	Vapor Density:	Heavier than air
Boiling Point:	281°F-398°F @ 760.00 mm Hg	Melting Point:	Not available
Solubility (H2O):	Insoluble	Specific Gravity:	0.93517
Evaporation Rate:	Slower than n-butyl acetate	Weight % Volatile:	82.6%
Weight % VOC:	Approximately 97% by weight	Flash Point:	81° (27° C)

*** Section 10 - Chemical Stability & Reactivity Information ***

Chemical Stability

Stable under normal conditions.

Chemical Stability: Conditions to Avoid

Avoid open flame and excessive temperatures. Keep away from ignition sources and incompatible materials.

GenFlex Roofing Systems

Material Safety Data Sheet

Material Name: TPO Edge Sealant

February 5, 2008

Incompatibility

This product may react with strong acids, strong bases and oxidizing agents. Avoid extreme heat which can result in thermal decomposition releasing toxic gases.

Hazardous Decomposition

Upon decomposition this product may yield smoke, fumes, aldehydes, carbon monoxide, carbon dioxide and other low molecular weight hydrocarbons.

Hazardous Polymerization

Hazardous polymerization will not occur.

*** Section 11 - Toxicological Information ***

Acute Toxicity

A: General Product Information

No information available for the product. Vapors may be irritating to the skin, eyes and respiratory system. Overexposure to this product may cause central nervous system (CNS) depression with symptoms including nausea, vomiting, weakness, dizziness, giddiness, loss of coordination and judgment. Severe overexposure may cause coma and death due to respiratory failure. Stoddard solvent is a mild eye, skin and respiratory tract irritant. However, overexposure to stoddard solvents may cause kidney damage, chemical pneumonitis and pulmonary edema which follow pulmonary aspiration of the liquid into the lungs. Chronic overexposure to xylene may produce headache, tremors, apprehension, memory loss, loss of appetite, nausea, irritability, thirst, anemia, mucosal bleeding, enlarged liver, kidney damage, heart arrhythmias and hyperplasia as well as irreversible damage to the central nervous system.

B: Component Analysis - LD50/LC50

Xylenes (o-, m-, p- isomers) (1330-20-7)

Inhalation LC50 Rat: 5000 ppm/4H

Oral LD50 Rat: 4300 mg/kg

Dermal LD50 Rabbit: >1700 mg/kg

Carcinogenicity

A: General Product Information

No information available for the product. A weak association between occupational exposure to titanium dioxide and bladder cancer has been reported.

B: Component Carcinogenicity

Xylenes (o-, m-, p- isomers) (1330-20-7)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 71, 1999; Monograph 47, 1989 (Group 3 (not classifiable))

Titanium dioxide (13463-67-7)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 47, 1989 (Group 3 (not classifiable))

NIOSH: occupational carcinogen

Epidemiology

No information available for this product.

Neurotoxicity

No information available for this product. Chronic xylene exposure has produced irreversible damage to the central nervous system including hearing damage.

Mutagenicity

No information available for the product. Occupational exposure to xylene has been reported to elevate sister chromatid exchanges and chromosome aberrations in exposed laboratory workers and their children.

GenFlex Roofing Systems

Material Safety Data Sheet

Material Name: TPO Edge Sealant

February 5, 2008

Teratogenicity

No information available for the product. Xylene crosses the placenta and has elevated the risk of spontaneous abortion in women exposed during their first trimester. Although xylene is not considered teratogenic, it is embryotoxic and fetotoxic, particularly at doses which cause maternal toxicity.

*** Section 12 - Ecological Information ***

Ecotoxicity

A: General Product Information

No information available for product. Organic solvents may produce significant toxicity to aquatic organisms and ecosystems.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Xylenes (o-, m-, p- isomers) (1330-20-7)

Test & Species

LC50 (96 hr) fathead minnow 13.4 mg/L

LC50 (96 hr) rainbow trout 8.05 mg/L

LC50 (96 hr) bluegill 16.1 mg/L

24 hr EC50 Photobacterium 0.0084 mg/L

phosphoreum

EC50 (48 hr) water flea 3.82 mg/L.

Conditions

Flow-through, 16.7-17.7 °C, pH 7.39-0.22, 43.0 mg/L CaCO₃.

Flow-through, 16.7-17.7 °C, pH 7.39-0.22, 43.0 mg/L CaCO₃.

Flow-through, 16.7-17.7 °C, pH 7.17-7.61, 43.0 mg/L CaCO₃.

Environmental Fate

No information available for the product.

*** Section 13 - Disposal Considerations ***

US EPA Waste Number & Descriptions

A: General Product Information

If discarded, this product is considered a RCRA ignitable waste, D001. Waste should be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

B: Component Waste Numbers

Xylenes (o-, m-, p- isomers) (1330-20-7)

RCRA: waste number U239; (Ignitable waste, Toxic waste)

Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

*** Section 14 - Transportation Information ***

US DOT Information

Shipping Name: Adhesives

Hazard Class: 3

UN/NA #: UN1133

Packing Group: III

Required Label(s): Flammable Liquid.

Additional Info.: None.

GenFlex Roofing Systems Material Safety Data Sheet

Material Name: TPO Edge Sealant

February 5, 2008

International Transportation Regulations

International Transportation Regulations

International Air Transportation Association (IATA):

Adhesives

Hazard Class: 3

UN/NA #: UN1133

Packing Group: III

Required Label(s): Flammable Liquid

International Maritime Dangerous Goods (IMDG) Code:

Adhesives

Hazard Class: 3

UN/NA #: UN1133

Packing Group: III

Required Label(s): Flammable Liquid

*** Section 15 - Regulatory Information ***

US Federal Regulations

A: General Product Information

No additional information.

B: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Xylenes (o-, m-, p- isomers) (1330-20-7)

SARA 313: form R reporting required for 1.0% de minimis concentration

CERCLA: final RQ = 100 pounds (45.4 kg)

State Regulations

A: General Product Information

Other state regulations may apply. Check individual state requirements. This product may contain trace levels of silica, crystalline quartz.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	FL	MA	MN	NJ	PA
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes	Yes	Yes	Yes
Stoddard solvent	8052-41-3	Yes	Yes	Yes	Yes	Yes	Yes
Titanium dioxide	13463-67-7	No	No	Yes	Yes	Yes	Yes

Other Regulations

A: General Product Information

No additional information.

GenFlex Roofing Systems Material Safety Data Sheet

Material Name: TPO Edge Sealant

February 5, 2008

B: Component Analysis – Inventory

Component	CAS #	TSCA	DSL	EINECS
Xylenes (o-, m-, p- isomers)	1330-20-7	Yes	Yes	Yes
Stoddard solvent	8052-41-3	Yes	Yes	Yes
Titanium dioxide	13463-67-7	Yes	Yes	Yes

C: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS #	Minimum Concentration
Stoddard solvent	8052-41-3	1%; English Item 1468; French Item 1498

*** Section 16 - Other Information ***

Date of Previous MSDS: April 4, 2007

Changes Since Previous MSDS: Section 1 – Product name change and company address change.

Key/Legend

EPA = Environmental Protection Agency; TSCA = Toxic Substance Control Act; ACGIH = American Conference of Governmental Industrial Hygienists; IARC = International Agency for Research on Cancer; NIOSH = National Institute for Occupational Safety and Health; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; NFPA = National Fire Protection Association; HMIS = Hazardous Material Identification System; CERCLA = Comprehensive Environmental Response, Compensation and Liability Act; SARA = Superfund Amendments and Reauthorization Act

*** Disclaimer ***

The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. GenFlex Roofing Systems, LLC, a subsidiary of Bridgestone Firestone Diversified Products, LLC, assumes no responsibility for injury to the buyer, the buyer's employees, or any third persons, if reasonable safety procedures are not followed. Additionally, GenFlex Roofing Systems, LLC assumes no responsibility for injury to buyer, the buyer's employees, or any third persons caused by abnormal use of this material, even if reasonable safety procedures are followed.