



FIBRE GLAST DEVELOPMENTS CORP.  
385 CARR DRIVE  
BROOKVILLE, OH 45309

TELEPHONE: (937) 833-5200  
FAX: (937) 833-6555  
**FOR CHEMICAL EMERGENCY  
CALL (800) 424-9300 24 HRS.**

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## SECTION 1 - PRODUCT INFORMATION

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**PRODUCT:** Part #24 MIX AND POUR FOAM

**COMMON CHEMICAL NAME:** URETHANE SYSTEM RESIN COMPONENT

**SYNONYMS:** NONE

**MOLECULAR FORMULA:** MIXTURE

**CHEMICAL FAMILY:** NOT APPLICABLE

**MOLECULAR WT.:** NOT ESTABLISHED

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## SECTION 2 – INGREDIENTS

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CHEMICAL NAME	CAS	AMOUNT
Polyol PEL/TLV Not established	Proprietary	< 80.0%
Flame Retardant PEL/TLV Not established	Proprietary	< 15.0%
Surfactant PEL/TLV Not established	Proprietary	< 3.0%
Catalyst PEL/TLV Not established	Proprietary	< 1.0%
Pentafluoropropane PEL/TLV Not established	460-73-1	< 10.0%

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## SECTION 3 – HAZARDS IDENTIFICATION

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### **EMERGENCY OVERVIEW**

COLOR: Amber

FORM/APPEARANCE: Liquid

ODOR: Amine

### **WARNING STATEMENT:**

CAUTION: At levels above the P.E.L., the fluorocarbon components acts as a weak narcotic. Overexposure causes irritation, tremors, confusion, and possible cardiac sensitization. Based on animal studies and human experience, the organophosphorus flame retardant does not affect nervous system function. Contact with the eyes and skin may cause irritation. Inhalation may result in irritation.

WARNING: Product stored above 80 deg. F may cause bulging of drums. Product stored above 80 deg. F could be pressurized – cool before opening containers. Avoid direct sunlight.

### **POTENTIAL HEALTH EFFECTS:**

#### **PRIMARY ROUTES OF EXPOSURE**

Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

#### **ACUTE OVEREXPOSURE EFFECTS**

Contact with the eyes and skin may result in irritation. At levels above the recommended exposure limited, the fluorocarbon acts as a weak narcotic. Acute overexposure causes tremors, confusion, irritation, suffocation, and any result in cardiac sensitization. Inhalation may result in respiratory irritation. Ingestion may result in gastric disturbances.

#### **CHRONIC OVEREXPOSURE EFFECTS**

Based on animal studies and human experience, the organophosphorus flame retardant does not affect nervous system function.

#### **FIRST AID PROCEDURES – AGGRAVATED MEDICAL CONDITIONS**

Individuals with preexisting diseases of the central nervous system, respiratory or cardiovascular system may have increased susceptibility to excessive exposures.

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## SECTION 4 - FIRST AID MEASURES

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### **FIRST AID PROCEDURES:**

**SKIN** – Wash affected areas with soap and water. Remove and launder contaminated clothing before reuse. Get immediate medical attention.

**EYES** – Immediately rinse eyes with running water for 15 minutes. Get immediate medical attention.

**INGESTION** – If swallowed, dilute with water and immediately induce vomiting. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.

**INHALATION** – Move to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

**NOTES TO PHYSICIANS** – None known. Because of possible disturbances of cardiac rhythm, catecholamine drugs such as epinephrine should be considered only as a last resort in a life-threatening emergency

**AGGRAVATED MEDICAL CONDITIONS** – Individuals with preexisting diseases of the central nervous system, respiratory or cardiovascular system may have increased susceptibility to excessive exposures.

**SPECIAL PRECAUTIONS** - None

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## SECTION 5 - FIRE FIGHTING MEASURES

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**FLASH POINT:** Typical 93      Degree: C      Method: Open Cup

**AUTOIGNITION:** Not Available

**EXTINGUISHING MEDIA:** Use water, dry extinguishing media, carbon dioxide (CO<sub>2</sub>) or foam.

**FIRE FIGHTING PROCEDURES:** Firefighters should be equipped with self-contained breathing apparatus and turn out gear.

**UNUSUAL HAZARDS:** None known.

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## SECTION 6 – ACCIDENTAL RELEASE MEASURES

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**GENERAL:** Spills should be contained, solidified and placed in suitable containers for disposal at a licensed facility.

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## SECTION 7 – STORAGE AND HANDLING

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**GENERAL:** Do not allow to become overheated in storage. Do not store in direct sunlight or heat. Store in a ventilated storage area between 70-80°F. Avoid excessive temperatures, low or high. Avoid moisture.

**OTHER STORAGE AND HANDLING DATA:** No other specific storage requirements.

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## SECTION 8 –PERSONAL PROECTION

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**CLOTHING:** Gloves, coveralls, apron, boots as necessary to prevent skin contact.

**EYES:** Chemical goggles; also wear a face shield if splashing hazard exists.

**RESPIRATION:** Approved organic vapor mist respirator as necessary.

**VENTILATION:** Use local exhaust to control vapors/mists.

**EXPLOSION PROOFING:** None required.

**OTHER PERSONAL PROTECTION DATA:** Avoid contact with skin as required by good normal hygiene practices.

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## SECTION 9 – PHYSICAL PROPERTIES

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**COLOR:** Amber

**FORM/APPEARANCE:** Liquid

**ODOR:** Amine

**ODOR INTENSITY:** Slight

	TYPICAL	LOW/HIGH	U.O.M.
<b>SPECIFIC GRAVITY:</b>	Not Available		
<b>BULK DENSITY:</b>	9.06		LB/GAL
<b>VISCOSITY:</b>	3,000		Centipoise @ 8.3 Deg.
<b>pH:</b>	Not Available		

	TYPICAL	LOW/HIGH	DEG. @	PRESSURE
<b>BOILING PT:</b>	15.6		C 2	Lbs./ In. GA
<b>FREEZING PT:</b>	Not Available			
<b>DECOMP. TMP.:</b>	Not Available			
<b>SOLUBILITY IN WATER DESCRIPTION:</b> Slightly Soluble				
<b>VAPOR PRESSURE:</b>		3	Lbs./IN. GAX	23 DEG. C XX
<b>pH:</b>	Basic			

## SECTION 10 – STABILITY & REACTIVITY

**STABILITY DATA:** Stable

**INCOMPATIBILITY:** Avoid Moisture to protect product quality.

**CONDITIONS/HAZARDS TO AVOID:** Exposure to moisture and temperatures >80F

**HAZARDOUS DECOMPOSITION/POLYMERIZATION:**

Hazardous Decomposition Products – Hydrofluorocarbons (HFC) can decompose by high temperatures (open flames, glowing metal surfaces, etc.) forming hydrofluoric acid and possibly carbonyl fluoride.

Hazardous Decomposition Products: CO and CO2.

**CORROSIVE PROPERTIES:** Not corrosive.

**OXIDIZER PROPERTIES:** Not an oxidizer

**OTHER REACTIVITY DATA:** None known.

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## SECTION 11 - TOXICOLOGICAL INFORMATION

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No applicable data for this section.

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## SECTION 12 – ECOLOGICAL INFORMATION

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No applicable data for this section.

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## SECTION 13 – DISPOSAL CONSIDERATIONS

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**WASTE DISPOSAL:** Incinerate in a licensed facility. Do not discharge into waterways or sewer systems.

**CONTAINER DISPOSAL:** Steel drums must be emptied (as defined by RCRA, Section 261.7 or state regulations that may be more stringent) and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill. Drums destined for a scrap dealer or landfill must be punctured or crushed to prevent reuse.

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## SECTION 14 - TRANSPORT INFORMATION

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**DOT PROPER SHIPPING NAME:** N/A

**DOT TECHNICAL NAME:** N/A

**DOT PRIMARY HAZARD CLASS:** N/A

**DOT SECONDARY HAZARD CLASS:** N/A

**DOT LABEL REQUIRED:** N/A

**DOT PLACARD REQUIRED:** N/A

**DOT POISON CONSTITUENT:** N/A

**BILLING OF LADING DESCRIPTION:** Not regulated by the Department of Transportation

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## SECTION 15 - REGULATORY INFORMATION

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**TSCA INVENTORY STATUS LISTED ON INVENTORY:** Yes

**RCRA HAZ. WASTE NO.:** N/A

**CERCLA:** No Reportable Qty.: (if yes)

SARA TITLE III; SECTION 313: NOT LISTED  
THIS PRODUCT MAY CONTAIN ONE OR MORE CHEMICALS KNOWN TO THE STATE  
OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS AND/OR OTHER  
REPRODUCTIVE HARM

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## SECTION 16- OTHER INFORMATION

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While **Fibre Glast Developments Corporation** believes the data set forth herein are accurate as the date hereof. **Fibre Glast Developments** makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for consideration, investigation, and verification.



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## SECTION 1 - PRODUCT IDENTIFICATION

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**PRODUCT:** PART #25 MIX AND POUR FOAM

**COMMON CHEMICAL NAME:** POLYMETHYLEN POLYPHENYLISOCYANATE

**SYNONYMS:** POLYMERIC MID, PMDI

**MOLECULAR FORMULA:** MIXTURE

**CHEMICAL FAMILY:** AROMATIC ISOCYANATES

**MOLECULAR WT.:** NOT ESTABLISHED

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## SECTION 2 - INGREDIENTS

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CHEMICAL NAME	CAS NUMBER	% (BY WEIGHT)
4,4" -Diphenylmethane Diisocyanate ACGIH TLV TWA OSHA PEL CEIL	101-68-8 0.005 PPM 0.02 PPM	42.0
Polymeric MDI PEL/TLV Not Established	9016-87-9	> 50.0
MDI MIXED ISOMERS PEL/TLV Not Established	26447-40-5	< 5.0

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## SECTION 3 - HAZARDS IDENTIFICATION

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### **EMERGENCY OVERVIEW**

**Color:** Dark Brown  
**Form/Appearance:** Liquid  
**Odor:** Aromatic

### **WARNING STATEMENT**

**CAUTION:** Contains Diphenylmethane Diisocyanate (CAS No. 101-68-8). Inhalation of MDI 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 Isocyanate may cause sensitization in some individuals, resulting in allergic respiratory reactions including wheezing, shortness of breath and difficulty breathing.

### **POTENTIAL HEALTH EFFECTS**

**PRIMARY ROUTES OF EXPOSURE:** Routes of entry for solids and liquids include eye and skin contact, ingestion and inhalation. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

**ACUTE OVEREXPOSURE EFFECTS:** Eye contact with isocyanates may result in conjunctival irritation and mild corneal opacity. Skin contact may result in dermatitis, either irritative or allergic.

Inhalation of MDI vapors may cause irritation of the mucous membranes of the nose, throat or trachea, breathlessness, chest discomfort, difficult breathing and reduced pulmonary function. Airborne overexposure well above the PEL may result additionally in eye irritation, headache, chemical bronchitis, asthma-like symptoms or pulmonary edema. Isocyanates have also been reported to cause hyper sensitivity pneumonitis, which is characterized by flu-like symptoms, the onset of which may be delayed. Gastrointestinal symptoms include nausea, vomiting and abdominal pain.

**CHRONIC OVEREXPOSURE EFFECTS:** Results from a lifetime inhalation study in rats indicate that MDI aerosol was carcinogenic at 6 mg/m<sup>3</sup>, the highest dose tested. This is well above the recommended TLV of 5 ppb (0.05 mg/m<sup>3</sup>). Only irritation was noted at the lower concentration of 0.2 and 1 mg/m<sup>3</sup>. No birth defects or teratogenic effects were reported in a teratology study with rats exposed to 1, 4, and 12 mg/m<sup>3</sup> polymeric MDI for 6 hr/day on days 6-15 of gestation. Embryotoxicity and fetotoxicity was reported at the top dose in the presence of maternal toxicity. As a result of previous repeated overexposures or a single large dose, certain individuals will develop Isocyanate sensitization (chemical asthmas) 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. Sensitization may be either temporary or 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.

**FIRST AID PROCEDURES - Aggravated Medical Conditions:** Individuals, who are sensitized to isocyanates and those with pre-existing lung diseases or conditions, including non-specific bronchial hyper-reactivity or asthma, must avoid all exposure to isocyanates.

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## SECTION 4 - FIRST AID MEASURES

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### **FIRST AID PROCEDURES**

**SKIN** – Wash affected areas with soap and water. Remove and launder contaminated clothing before reuse. Get immediate medical attention.

**EYES** – Immediately rinse eyes with running water for 15 minutes. Get immediate medical attention.

**INGESTION** – If swallowed, dilute with water. DO NOT INDUCE VOMITING. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.

**INHALATION** – Move to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

**NOTES TO PHYSICIANS** – There is no specific antidote to counteract the effects of MDI. Care should be supportive and treatment should be based on the judgment of the physician in response to the reaction of the patient.

**AGGRAVATED MEDICAL CONDITIONS** – Individuals who are sensitized to isocyanates and those with pre-existing lung diseases or conditions, including non-specific bronchial hyperactivity or asthma, must avoid all exposure to isocyanates.

**SPECIAL PRECAUTIONS** – None

### **OTHER FIRST AID PROCEDURES**

Medical supervision of all employees who handle or come into contact with MDI is recommended. Preemployment and periodic medical examinations with respiratory function test (FEV<sub>1</sub>, PVC 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 MDI. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to MDI, further exposure is not permissible.

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## SECTION 5 - FIRE FIGHTING MEASURES

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	Typical	Low/High	Degree	Method
<b>FLASH POINT:</b>	>400		F	Closed Cup

**AUTOIGNITION TEMPERATURE:** Not available

### **EXTINGUISHING MEDIA**

Use water, dry extinguishing media, carbon dioxide (CO<sub>2</sub>) or foam.

### **FIRE FIGHTING PROCEDURES**

Personnel engaged in fighting isocyanate fires must be protected against nitrogen dioxide fumes as well as isocyanate vapors. Firefighters must wear self-contained breathing apparatus and turnout gear.

### **UNUSUAL HAZARDS**

Reacts exothermically with water to form carbon dioxide gas, which may create excessive pressure in closed containers. Reacts exothermically with polyol and alcohols. Reacts exothermically and possibly violently with acids, amines and alkaline solutions.

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

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### **GENERAL**

Evacuate and ventilate spill area, dike spill to prevent entry into water system, wear full protective equipment including respiratory equipment during clean up.

### **MAJOR SPILL**

If transportation spill involved, call CHEMTREC @1-800-424-9300. If temporary control of Isocyanate vapor is required a blanket of protein foam or other suitable foam (available at most fire departments), may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.

### **MINOR SPILL**

Absorb the Isocyanate with an acceptable absorbent; see 40 CFR sections 260, 264 and 265 for further information. Shovel into open containers. Do not make pressure tight. Move to a well ventilated area (outside) and neutralize with a mixture of 90% water, 3-8% ammonia and 2-7% detergent. Add a 10 to 1 ratio. Let stand for 48 hours letting evolved CO<sub>2</sub> escape. Proceed with final clean up of spill area.

**CLEAN UP**

Decontaminate spill area using neutralizing solution and let stand for at least 10 minutes.

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**SECTION 7 - STORAGE AND HANDLING**

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**GENERAL** - Keep containers closed.

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**SECTION 8 – PERSONAL PROTECTION**

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**CLOTHING**

Rubber gloves, coveralls, hard hat, boots and rubber apron to avoid skin contact. Contaminated equipment or clothing should be cleaned after each use or disposed of.

**EYES**

Wear fitted chemical goggles or face shield and safety glasses.

**RESPIRATION**

For situations where the airborne concentrations may exceed the level for which an air purifying respirator is effective, or where the levels are unknown or Immediately Dangerous to Life or Health (IDLH), select and use an appropriate positive pressure air supplying respirator (airline or self-contained breathing apparatus). When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) approved 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.

**VENTILATION**

Use local exhaust as necessary to maintain P.E.L.

**EXPLOSION PROOFING**

None required.

**OTHER PERSONAL PROTECTION DATA**

Eyewash fountains and safety showers must be easily accessible. Maintain work area below P.E.L.

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**SECTION 9 - PHYSICAL PROPERTIES**

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**COLOR** - Dark Brown

**FORM/APPEARANCE** – Liquid

**ODOR** – Aromatic

**ODOR INTENSITY** – Slight

	Typical	Low/High		U.O.M.
<b>SPECIFIC GRAVITY</b> -	Not Available			
<b>BULK DENSITY</b> -	10.22			LB/GAL
<b>VISCOSITY</b> -	200			Centipoise@77°
<b>pH</b> -	Not Available			
<b>BOILING PT</b> -	Typical 625	Low/High	Deg. 7	@ 760 Pressure MM HG
<b>FREEZING PT</b> -	Not Available			
<b>DECOMP. TMP.</b> -	Not Available			

**SOLUBILITY IN WATER DESCRIPTION** – Water reactive

**VAPOR PRESSURE** – 0.00001 mm Hg @ 25 deg. C

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## SECTION 10 - STABILITY AND REACTIVITY

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**STABILITY DATA:** Stable

**INCOMPATIBILITY:** Water, alcohols and strong bases

**CONDITIONS/HAZARDS TO AVOID:** Reaction with moisture may form CO<sub>2</sub>.

**HAZARDOUS DECOMPOSITION/POLYMERIZATION:** Hazardous decomposition products: CO, NO<sub>x</sub>, HCN and MDI vapors. Polymerization: May occur.

**CORROSIVE PROPERTIES:** Not corrosive

**OXIDIZER PROPERTIES:** Not an oxidizer

**OTHER REACTIVITY DATA:** Hazardous polymerization may occur. Avoid contamination with moisture and other products that react with isocyanates. Contact with certain rubbers and plastics can cause embrittlement of the material with subsequent loss in strength.

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## SECTION 11 - TOXICOLOGICAL INFORMATION

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No applicable data for this section.

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## SECTION 12 - ECOLOGICAL INFORMATION

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No applicable data for this section.

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## SECTION 13 - DISPOSAL CONSIDERATIONS

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**WASTE DISPOSAL:** Incinerate or landfill in a licensed facility. Do not discharge into waterways or sewer systems.

**CONTAINER DISPOSAL:** Steel drums must be emptied (as defined by RCRA, Section 261.7 or state regulations that may be more stringent) and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer, or an approved landfill. Check with reconditioner to determine if they require them to be decontaminated. Drums destined for a scrap dealer or landfill must be decontaminated and punctured or crushed to prevent reuse.

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## SECTION 14 - TRANSPORTATION INFORMATION

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**DOT PROPER SHIPPING NAME:** See below

**DOT TECHNICAL NAME:** See below

**DOT PRIMARY HAZARD CLASS:** See below

**DOT SECONDARY HAZARD CLASS:** See below

**DOT LABEL REQUIRED:** See below

**DOT PLACARD REQUIRED:** See below

**DOT POISON CONSTITUENT:** See below

**BILL OF LADING DESCRIPTION:** 793 gallons not regulated by the Department of Transportation. 793 gallons Rq. other regulated substances, liquid, NOS (MDI), 9, NA3082, PG III.

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**SECTION 15 - REGULATORY INFORMATION**

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**TSCA INVENTORY STATUS LISTED ON INVENTORY:** Yes

**SARA – 313 LISTED CHEMICALS**

CAS: 28 Amount: 100.0%  
NAME: Diiosyanates

**RCRA HAZ. WASTE NO:** No

**CERCLA:** Yes Reportable Qty.: (If Yes)  
XXXXXX XXXXXXXXXXXXXXXX 5000 Lbs.

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**SECTION 16 - COMMENTS**

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The information accumulated herein is believed to be accurate but is not warranted to be, whether originating with Fibre Glast Developments Corporation or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances