

# Material Safety Data Sheet

## FLEX-TEC PART A

Date of Preparation: 05/10/2008

### Section 1 - Chemical Product and Company Identification

Product Name: *FLEX-TEC* PART A

Product Class: Polyurethane resin

Chemical Type: Aliphatic isocyanate terminated polyetherglycol prepolymer

Manufacturer: His Glassworks, Inc., 91 Webb Cove Road, Asheville, NC 28804, Phone (828) 254-2559, Fax (828) 254-2581

(M-F: 8:30-4:30 EST)

### Section 2 - Composition / Information on Ingredients

Ingredient Name	CASRN	% wt		
I. Dicyclohexylmethane - 4,4 diisocyanate	5124-30-1	<60		
Trace Impurities: N/A				
Ingredient	OSHA PEL TWA STEL	ACGIH TLV TWA STEL	NIOSH REL TWA STEL	NIOSH IDLH
#1	0.01 ppm NE	0.005 ppm NE	NE NE	NE

### Section 3 - Hazards Identification

#### \*\*\*\*\* Emergency Overview \*\*\*\*\*

Appearance: Clear/colorless viscous liquid; Odor: Slight; May cause eye and skin irritation; Avoid contact with strong oxidizers and strong acids as sudden reaction may result in fire and toxic fumes/gases.

#### Potential Health Effects

**Primary Entry Routes:** Eye and skin contact; inhalation of vapors, accidental ingestion.

**Inhalation/Ingestion:** May cause irritation to respiratory tract, asthmatic symptoms, and/or skin irritation.

**Eye:** May cause redness, swelling or burning.

**Skin:** May cause redness or swelling. Sensitization is possible. Rash may develop.

**Medical Conditions Aggravated by Long-Term Exposure:** Existing skin disorders, asthma, or prior sensitization to isocyanates.

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### Section 4 - First Aid Measures

**Inhalation:** Not likely. Remove to fresh air environment.

**Ingestion:** If swallowed, call a physician immediately. Remove stomach contents by gastric suction or induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person.

**Eye Contact:** Flush eyes with clean, lukewarm water for 15 minutes. Obtain medical attention if irritation develops.

**Skin Contact:** Remove contaminated clothing and wash affected areas well with soap and water. Launder contaminated clothing before use.

**Note to Physicians:** Treat any ill effects symptomatically.

### Section 5 - Fire-Fighting Measures

**Flash Point/Method:** >350°F (>177°C) closed cup

**Extinguishing Media:** Water, carbon dioxide, or dry chemical.

**Unusual Fire or Explosion Hazards:** Avoid contact with strong oxidizers and strong acids as sudden reaction may result in fire and toxic fumes/gases.

**Fire-Fighting Instructions:** Cool fire exposed containers with water spray. Remove containers from fire area if possible.

Do not release runoff from fire control methods to sewers or waterways.

**Fire-Fighting Equipment:** Firefighters should wear positive pressure self-contained breathing apparatus (SCBA) and consider use of unmanned hose holders or monitor nozzles for fighting large fires.



### Section 6 - Accidental Release Measures

**Spill /Leak Procedures:** Provide adequate ventilation and wear personal protective equipment. Evacuate personnel as a precaution. Prevent product spill from entering sewers, streams, or drinking water supplies. Collect liquid or soak up with inert filler or an absorbent, such as dry earth, sand, or oil absorbent (sweeping) compound. Collect material into suitable containers for disposal. Wash area with dilute ammonia solution.

**Containment:** For large spills, dike ahead of liquid spill for later neutralization, absorption, clean up, and disposal.

## FLEX-TEC PART A

### Section 7 - Handling and Storage

**Handling Precautions:** Avoid contact with eyes, skin and clothing. Avoid breathing vapor over open container.

**Storage Requirements:** Store in a cool, dry place away from excessive heat in original or similar waterproof containers. Avoid unnecessary contact. Protect from freezing. Containers should be tightly sealed to prevent contamination with foreign materials. Store product under inert atmosphere.

**Shelf life:** 6 months from date of shipment under manufacturers recommended storage conditions.

### Section 8 - Exposure Controls / Personal Protection

**Eye Protection Requirements:** Safety goggles or glasses are recommended. Plastic face shield should be worn for complete face protection.

**Skin Protection Requirements:** Impermeable gloves should be worn. Employees should wash their hands and face before eating, drinking, or using tobacco products.

**Ventilation Requirements:** Local exhaust or extremely well ventilated area must be provided.

**Respiratory Requirements:** Vapor TLV concentration must not be exceeded in work place. Use of OSHA approved cartridge filter respirator/mask or positive pressure supplied air respirator is highly recommended during any extensive handling. Consider the type of application, environmental concentrations and other materials being used concurrently when determining respirator use and selection. Observe OSHA regulations for respirator use (29 CFR 1910.134).

**Additional Protective Measures:** Safety showers and eye wash stations should be easily accessible to the work area. Working training is important. Follow all label precautions.

### Section 9 - Physical and Chemical Properties

Physical State: Moderately viscous liquid

Appearance and Odor: Clear/colorless; Slight odor

Vapor Pressure: 0.001 mm Hg

Vapor Density (Air=1): N/A

Specific Gravity (H<sub>2</sub>O=1): 1.07

pH: N/A

Water Solubility: Nil, reacts slowly

Other Solubilities: N/A

Boiling Point: Decomposes

Freezing/Melting Point: N/ A

Viscosity: 3,000 cps @ 77°F (25°C)

% Volatile: 1.0

V.O.c. (ref EPA meth 24): 10 g/l

### Section 10 - Stability and Reactivity

**Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Polymerization:** Hazardous polymerization will not occur.

**Chemical Incompatibilities/Conditions to Avoid:** Moisture, acids, and amines.

**Hazardous Decomposition:** Toxic fumes/gases may be generated during combustion or high heat exposure.

### Section 11- Toxicological Information

No Toxicological Information Available

### Section 12 - Ecological Information

No Ecological Information Available

### Section 13 - Disposal Considerations

**Waste Disposal Method:** Landfill burial/incineration unless prohibited. Dispose of in compliance with federal, state, or local environmental control regulations.

### Section 14 - Transport Information

**DOT**

Not regulated

**IATA/IACO**

Not regulated

**IMO/IMDG**

Not regulated

## FLEX-TEC PART A

### Section 15 - Regulatory Information

U.S. Federal Regulations:

OSHA:

This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard.

SARA **TITLE III:**

Sections 311/312 Hazard Classification:

None

Section 313: This product contains the following substances subject to the reporting requirements of EPCRA, Section 313 and 40 CFR Part 372:

Dicyclohexylmethane - 4,4' diisocyanate	CAS# 5124-30-1	60% (max)
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TSCA: This product or its components are listed in or exempt from the TSCA inventory requirements.

This product contains the following substances subject to export notification under Section 12 (b) of TSCA:

None

### Section 16 - Other Information

**Disclaimer: This information is furnished without warranty, expressed or implied, except that it is accurate to the best knowledge of His Glassworks, Inc. The data on this sheet relates only to the specific material designated herein. His Glassworks, Inc. assumes no legal responsibility for use or reliance upon these data.**

# Material Safety Data Sheet

FLEX-TEC PART B

Date of Preparation: 05/10/2008

## Section 1 - Chemical Product and Company Identification

**Product Name:** FLEX-TEC PART B

**Product Class:** Polyol

**Chemical Type:** Polyether Polyol Mixture

**Manufacturer:** His Glassworks, Inc., 91 Webb Cove Road, Asheville, NC 28804, Phone (828) 254-2559, Fax (828) 254-2581, (M-F: 8:30-4:30)

## Section 2 - Composition / Information on Ingredients

Ingredient Name	CASRN	%wt
I. Phen I mercuric acetate	62-38-4	<0.2

Trace Impurities: N/ A

Ingredient	OSHA PEL		ACGIH TLV		NIOSH REL		NIOSH IDLH
	TWA	STEL	TWA	STEL	TWA	STEL	
#1	0.1 mg/m <sup>3</sup>	NE	0.1 mg/m <sup>3</sup>	NE	NE	NE	NE

## Section 3 - Hazards Identification

### \*\*\*\*\* Emergency Overview \*\*\*\*\*

Appearance: Clear/colorless liquid; Odor: Glycol odor; Avoid skin contact. Avoid breathing vapors. May cause eye and skin irritation. Harmful if inhaled. Use in well-ventilated areas. Burning material will generate trace amounts of toxic fumes/gases.

### Potential Health Effects

**Primary Entry Routes:** Eye and skin contact; inhalation of vapors, accidental ingestion.

**Inhalation/Ingestion:** Excessive vapors caused by heat or spray mist can cause respiratory problems/May cause gastric irritation.

**Eye:** May cause irritation.

**Skin:** May cause irritation and possible allergic sensitivity with repeated contact. Medical

**Conditions Aggravated by Long-Term Exposure:** Acute asthma.

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<b>F</b> 1
<b>R</b> 0
<b>PPE</b> †
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## Section 4 - First Aid Measures

**Inhalation:** Not likely. Remove to fresh air environment.

**Ingestion:** If swallowed, call a physician immediately. Remove stomach contents by gastric suction or induce vomiting only as directed by medical personnel. Never give anything by mouth to an unconscious person.

**Eye Contact:** Flush eyes with clean, lukewarm water for 15 minutes. Obtain medical attention if irritation develops.

**Skin Contact:** Remove contaminated clothing and wash affected areas well with soap and water. Launder contaminated clothing before use.

**Note to Physicians:** Treat any ill effects symptomatically.

## Section 5 - Fire-Fighting Measures

**Flash Point/Method:** >350°F (> 177°C) S.E.T.A.

**Extinguishing Media:** Water spray, foam, and dry chemical extinguisher.

**Unusual Fire or Explosion Hazards:** None

**Fire-Fighting Instructions:** None. NFPA ratings not established.

**Fire-Fighting Equipment:** Firefighters should wear positive pressure self-contained breathing apparatus (SCBA) and consider use of unmanned hose holders or monitor nozzles for fighting large fires.



## Section 6 - Accidental Release Measures

**Spill/Leak Procedures:** Provide adequate ventilation and wear personal protective equipment. Evacuate personnel as a precaution. Prevent product spill from entering sewers, streams, or drinking water supplies. Collect liquid or soak up with inert filler or an absorbent, such as dry earth, sand, or oil absorbent (sweeping) compound. Collect material into suitable containers for disposal. Wash area with dilute ammonia solution.

**Containment:** For large spills, dike ahead of liquid spill for later neutralization, absorption, clean up, and disposal.

## FLEX-TEC PART B

### Section 7 - Handling and Storage

**Handling Precautions:** Avoid contact with eyes, skin and clothing. Avoid breathing vapor over open container.

**Storage Requirements:** Store in a cool, dry place away from excessive heat in original or similar waterproof containers. Avoid unnecessary contact. Protect from freezing. Containers should be tightly sealed to prevent contamination with foreign materials.

**Shelf life:** 6 months from date of shipment under manufacturers recommended storage conditions.

### Section 8 - Exposure Controls / Personal Protection

**Eye Protection Requirements:** Safety goggles or glasses are recommended. Plastic face shield should be worn for complete face protection.

**Skin Protection Requirements:** Impermeable gloves should be worn. Employees should wash their hands and face before eating, drinking, or using tobacco products.

**Ventilation/Respiratory Requirements:** Exhaust ventilation recommended. An organic vapor cartridge or fresh air supplied respirator (NIOSH certified) may be necessary for certain applications. Consider the type of application, environmental concentrations, and other materials being used concurrently when determining respirator use and selection. Observe OSHA regulations for respirator use (29 CFR 1910.134).

**Additional Protective Measures:** Safety showers and eye wash stations should be easily accessible to the work area. Training is important. Follow all label precautions.

### Section 9 - Physical and Chemical Properties

Physical State: Medium Viscous Liquid

Appearance and Odor: Clear/Colorless; Glycol odor

Vapor Pressure: N/A

Specific Gravity (H<sub>2</sub>O=1): 1.03

pH: N/A

Water Solubility: Slight

Boiling Point: N/A

Viscosity: 350 cps

% Volatile: <0.1

V.O.C. (ref EPA meth 24): 1 g/l

### Section 10 - Stability and Reactivity

**Stability:** Stable at room temperature in closed containers under normal storage and handling conditions.

**Hazardous Polymerization:** Will not occur.

**Chemical Incompatibilities/Conditions to Avoid:** Isocyanates, oxidizers and mineral acids.

**Hazardous Decomposition:** Decomposition and combustion products may be hazardous.

### Section 11- Toxicological Information

No Toxicological Information Available

### Section 12 - Ecological Information

No Ecological Information Available

### Section 13 - Disposal Considerations

Waste Disposal Method: Landfill burial unless prohibited. Dispose of in compliance with federal, state, or local environmental control regulations.

### Section 14 - Transport Information

**DOT**

Not regulated

**IATA/ICAO**

Not regulated

**IMO/IMDG**

Not regulated

**FLEX-TEC PART B**  
**Section 15 - Regulatory Information**

U.S. Federal Regulations:

OSHA:

This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard.

SARA TITLE III:

Sections 311/312 Hazard Classification:

None

Section 313: This product contains the following substances subject to the reporting requirements of EPCRA, Section 313 and 40 CFR Part 372:

Phenyl mercuric acetate	CAS Number - 62-38-4	0.2% max
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TSCA: This product or its components are listed in or exempt from the TSCA inventory requirements.

This product contains the following substances subject to export notification under Section 12 (b) of TSCA:

None

**Section 16 - Other Information**

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