

# MATERIAL SAFETY DATA SHEET



**Date Issued :** 12/05/2008  
**MSDS No :** WC-595 PART A  
**Date-Revised :** 01/30/2012  
**Revision No :** 1

## WC-595 PART A

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** WC-595 PART A  
**GENERAL USE:** Polyurethane resin  
**CHEMICAL FAMILY:** Aliphatic isocyanate terminated polyetheryglycol prepolymer

#### MANUFACTURER

BJB Enterprises, Inc.  
 14791 Franklin Avenue  
 Tustin, CA 92780

**Customer Service Number:** (714) 734-8450

**Fax:** (714) 734-8929

#### 24 HR. EMERGENCY TELEPHONE NUMBERS

**CHEMTREC (US Transportation):** (800) 424-9300  
 or (703) 527-3887

### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**PHYSICAL APPEARANCE AND ODOR:** Clear colorless viscous liquid with a slight odor.

**IMMEDIATE CONCERNS:** Toxic by inhalation. Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact. This product is a respiratory irritant and potential respiratory sensitizer: repeated inhalation of vapour or aerosol at levels above the occupational exposure limit could cause respiratory sensitization. A hyper-reactive response to even minimal concentrations of diisocyanates may develop in sensitized persons. The onset of the respiratory symptoms may be delayed for several hours after exposure. Reacts slowly with water to produce carbon dioxide which may rupture closed containers. This reaction accelerates at higher temperatures. Do not breathe vapor or mist. Do not get on skin or clothing. Avoid contact with eyes. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

#### POTENTIAL HEALTH EFFECTS

**EYES:** Irritating. May cause tearing, reddening, and swelling. May cause slight corneal injury.

**SKIN:** Causes irritation and possible allergic sensitivity. Skin inflammation is characterized by itching, scaling, or reddening.

**INGESTION:** May cause irritation with symptoms including abdominal pain, nausea, vomiting, and diarrhea.

**INHALATION:** Highly toxic by inhalation of aerosol or mists. If misted, causes irritation of mucous membrane, nose, eyes, and throat. May cause coughing and difficulty in breathing. Extremely high vapor concentrations may cause lung damage. May cause lung sensitization, an allergic reaction, which becomes evident on re-exposure.

**MEDICAL CONDITIONS AGGRAVATED:** May cause or aggravate dermatitis and asthma.

**ROUTES OF ENTRY:** Eye and skin contact, inhalation of vapors, or accidental ingestion.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

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Chemical Name	Wt.%	CAS
Dicyclohexylmethane-4,4'-diisocyanate	50 - 60	5124-30-1
poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,1'-methylenebis[4-isocyanatocyclohexane]	40 - 50	9042-82-4
Solvent naphtha, petroleum, light aromatic	1 - 2	64742-95-6
Xylene	< 1	1330-20-7
1,2,4-trimethylbenzene	< 0.5	95-63-6
Ethylbenzene	< 0.5	100-41-1
Toluene	< 0.01	108-88-3
Phenyl mercuric acetate (60% as Hg)	0.004	62-38-4

## 4. FIRST AID MEASURES

**EYES:** Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Consult a physician.

**SKIN:** Immediately wash skin with soap and plenty of water. Remove contaminated clothing. Get medical attention if symptoms occur. Wash clothing before reuse.

**INGESTION:** If swallowed, call a physician immediately. Do NOT induce vomiting. Provided the patient is conscious, wash out mouth with water. Never give anything by mouth to an unconscious person.

**INHALATION:** Remove patient from exposure, keep warm and at rest. Obtain immediate medical attention. Treatment is symptomatic for primary irritation or bronchospasm. If breathing is labored, oxygen should be administered by qualified personnel. Apply artificial respiration if breathing has ceased or shows signs of failing.

**NOTES TO PHYSICIAN:** Symptomatic and supportive therapy as needed. Following severe exposure medical follow-up should be monitored for at least 48 hours.

## 5. FIRE FIGHTING MEASURES

**FLASHPOINT AND METHOD:** 96.7°C (206°F) Pensky-Martens CC

**EXTINGUISHING MEDIA:** Water spray, carbon dioxide, dry chemical, or alcohol foam.

**EXPLOSION HAZARDS:** Avoid contact with strong oxidizers and strong acids, as sudden reaction may result in fire and toxic fumes. Reacts slowly with water to produce carbon dioxide which may rupture closed containers. This reaction accelerates at higher temperatures.

**FIRE FIGHTING PROCEDURES:** Cool fire exposed containers with water spray. Remove containers from the 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.

## 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** Evacuate the area. Clean-up should only be performed by trained personnel. People dealing with a major spill should wear full protective clothing including appropriate respiratory protection. Prevent product spill from entering sewers or waterways. Neutralize small spills with a decontaminant.

**LARGE SPILL:** Contain and absorb large spills onto an inert, non-flammable adsorbent carrier (such as earth or sand). Shovel into open-top drums or plastic bags for further decontamination, if necessary. Wash the spill area clean with a liquid decontaminant. Remove and properly dispose of residues. Notify applicable government authorities if release is reportable. (See CERCLA in Section 15).

**RELEASE NOTES:** US regulations require reporting spills of this material that could reach any surface waters. The toll free number for the US Coast Guard National Response Center is (800) 424-8802.

## 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Avoid breathing vapor over

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open containers. Avoid open container exposure to damp air. Avoid breathing aerosols, mists, and vapors.

**HANDLING:** Use appropriate personal protective equipment as specified in Section 8. Handle in a well ventilated area. Handle and use in a manner consistent with good industrial/manufacturing techniques and practices.

**STORAGE:** Store in a cool, dry place, away from excessive heat, in original or similar container. 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.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****EXPOSURE GUIDELINES**

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		Supplier OEL	
Chemical Name		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Dicyclohexylmethane-4,4'-diisocyanate	TWA	NE	NE	0.005	0.054	0.01 <sup>[1]</sup>	0.11 <sup>[1]</sup>
	STEL	NE	NE	NE	NE	NE	NE
poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro.-omega.-hydroxy-, polymer with 1,1'-methylenebis[4-isocyanatocyclohexane]	TWA	NE	NE	NE	NE	NE	NE
	STEL	NE	NE	NE	NE	NE	NE
Solvent naphtha, petroleum, light aromatic	TWA	NE	NE	NE	NE	NE	NE
	STEL	NE	NE	NE	NE	NE	NE
Xylene	TWA	100	435	100	434	NE	NE
	STEL	NE	NE	150	651	NE	NE
1,2,4-trimethylbenzene	TWA	NE	NE	25	123	25 <sup>[1]</sup>	125 <sup>[1]</sup>
	STEL	NE	NE	NE	NE	NE	NE
Ethylbenzene	TWA	100	NE	125	NE	NE	NE
	STEL	NE	NE	NE	NE	NE	NE
Toluene	TWA	200	NE	50	188	100 <sup>[1]</sup>	375 <sup>[1]</sup>
	STEL	300	NE	NE	NE	150 <sup>[1]</sup>	560 <sup>[1]</sup>
Phenyl mercuric acetate (60% as Hg)	TWA	NE	NE	NE	NE	NE <sup>[1]</sup>	0.01 <sup>[1]</sup>
	STEL	NE	NE	NE	NE	NE <sup>[2]</sup>	0.03 <sup>[2]</sup>
<b>OSHA TABLE COMMENTS:</b>							
1. NIOSH REL (ceiling)							
2. NIOSH REL (skin)							

**ENGINEERING CONTROLS:** Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

**PERSONAL PROTECTIVE EQUIPMENT**

**EYES AND FACE:** Safety goggles or glasses are recommended. Plastic face shields should be used for complete face protection to protect against possible splashing or spraying of material. ANSI Z87.1 or approved equivalent.

**SKIN:** Chemical-resistant gloves and chemical goggles, face-shield, and synthetic apron or coveralls should be used to prevent contact with eyes, skin, or clothing. Wear nitrile or neoprene gloves. Chemical resistant gloves lined with polyethylene offer maximum protection.

**RESPIRATORY:** Exhaust ventilation recommended. An organic vapor cartridge or fresh air supplied respirator (NIOSH approved) 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).

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**PROTECTIVE CLOTHING:** Protective clothing should be selected and used in accordance with 'Guidelines for the Selection of Chemical Protective Clothing' published by ACGIH.

**WORK HYGIENIC PRACTICES:** Contaminated clothing should be changed and washed before reuse. Eating, drinking and smoking in immediate work area should be prohibited. Wash hands before eating.

**OTHER USE PRECAUTIONS:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Training is important. Follow all label precautions.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL STATE:** Viscous liquid

**ODOR:** Slight

**COLOR:** Colorless

**pH:** Not Applicable

**PERCENT VOLATILE:** 1.9

**VAPOR PRESSURE:** < 0.1 mmHg at 25°C (77°F)

**VAPOR DENSITY:** Not Established

**BOILING POINT:** Decomposes

**FLASHPOINT AND METHOD:** 96.7°C (206°F) Pensky-Martens CC

**SOLUBILITY IN WATER:** Insoluble, reacts slowly with water

**SPECIFIC GRAVITY:** 1.070 (water=1) at 25°C (77°F)

**VISCOSITY:** 2400 Centipoise at 25°C (77°F)

**VOC (Volatile Organic Compound):** 20.300 g/l Calculated. Theoretical VOC minus water and exempt solvents.

**10. STABILITY AND REACTIVITY**

**STABILITY:** This product is stable under normal ambient conditions of temperature and pressure.

**POLYMERIZATION:** Product may foam when exposed to heat and moisture.

**CONDITIONS TO AVOID:** High temperatures, moisture, and freezing conditions.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide, carbon dioxide, nitrous oxide, and HCN.

**INCOMPATIBLE MATERIALS:** Water, strong bases, alcohols, amines, metals, and oxidizing agents.

**11. TOXICOLOGICAL INFORMATION****TOXICITY TO ANIMALS**

Chemical Name	ORAL LD <sub>50</sub> (rat)	DERMAL LD <sub>50</sub> (rabbit)	INHALATION LC <sub>50</sub> (rat)
Dicyclohexylmethane-4,4'-diisocyanate	9900 mg/kg	> 10000 mg/kg	0.29 to 0.30 mg/l (4 h of aerosols)
poly[oxy(methyl-1,2-ethanediyl)], .alpha.-hydro-.omega.-hydroxy-, polymer with 1,1'-methylenebis[4-isocyanatocyclohexane]	Not Established	Not Established	Not Established
Solvent naphtha, petroleum, light aromatic	Not Established	Not Established	Not Established
Xylene	4300 mg/kg	14100 uL/kg	4550 ppm (4 h)
1,2,4-trimethylbenzene	12.7 g/kg	Not Established	18 g/m <sup>3</sup>
Ethylbenzene	Not Established	Not Established	Not Established
Toluene	636 mg/kg	2 to 14 g/kg	26700 ppm (1h)
Phenyl mercuric acetate (60% as Hg)	41 mg/kg	Not Established	Not Established

**CARCINOGENICITY**

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Chemical Name	IARC Status
Toluene	3

**IARC:** This product contains substances that are not classifiable as carcinogens to humans.

## 12. ECOLOGICAL INFORMATION

## AQUATIC TOXICITY

**96-HOUR LC<sub>50</sub>:** >= 8.1 mg/l Brachydanio rerio (96 hours)

**48-HOUR EC<sub>50</sub>:** >= 8.3 mg/l Daphnia magna

**96-HOUR EC<sub>50</sub>:** >= 5.0 mg/l Scenedesmus subspicatus (72 hours)

**Notes:** This information is based only on the Dicyclohexylmethane-4,4'-diisocyanate.

## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protections and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## 14. TRANSPORT INFORMATION

## DOT (DEPARTMENT OF TRANSPORTATION) LAND

**NOTE:** Not Regulated

**AIR (ICAO/IATA):** Not Regulated

**VESSEL (IMO/IMDG):** Not Regulated

## 15. REGULATORY INFORMATION

## UNITED STATES

## SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

**311/312 HAZARD CATEGORIES:** Acute health hazard. Chronic health hazard

**313 REPORTABLE INGREDIENTS:** This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

## EPCRA SECTION 313 SUPPLIER NOTIFICATION

Chemical Name	Wt.%	CAS	Comments
Dicyclohexylmethane-4,4'-diisocyanate	50 - 60	5124-30-1	Diisocyanate Compounds (Category Code N120)
Phenyl mercuric acetate (60% as Hg)	0.004	62-38-4	Mercury Compounds (Category Code N458)

## CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

**CERCLA REGULATORY:** For this/these chemicals, release of more than the Reportable Quantity to the environment in a 24-hour period requires notification to the National Response Center (800-424-8802 or 202-426-2675):

Chemical Name	Wt.%	CERCLA RQ
Xylene	< 1	100 lbs.
Ethylbenzene	< 0.5	1000
Toluene	< 0.01	1,000 lbs.
Phenyl mercuric acetate (60% as Hg)	0.004	100 lbs.

**WC-595 PART A****TSCA (TOXIC SUBSTANCE CONTROL ACT)**

**TSCA STATUS:** This product or its components are listed in or exempt from the TSCA inventory requirements.

**OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)**

**29 CFR1910.119---PROCESS SAFETY MANAGEMENT OF HIGHLY HAZARDOUS CHEMICALS:** None of the chemicals in this product are considered highly hazardous by OSHA.

**REGULATIONS**

**STATE REGULATIONS:** California Proposition 65: This product contains chemical(s) which are known to the State of California to cause cancer, birth defects or other reproductive harm, and may be subject to the requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):

**CALIFORNIA PROPOSITION 65**

Chemical Name	Wt. %	Listed
Ethylbenzene	< 0.5	Cancer
Toluene	< 0.01	<ul style="list-style-type: none"> <li>● Cancer</li> <li>● Developmental Toxicity</li> </ul>
Phenyl mercuric acetate (60% as Hg)	0.004	<ul style="list-style-type: none"> <li>● Developmental Toxicity</li> </ul>

**OSHA HAZARD COMM. RULE:** The contents of the MSDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200.

**CANADA****WHMIS HAZARD SYMBOL AND CLASSIFICATION**

Toxic

Class D-1A: Material causing immediate and serious toxic effects (Very toxic).

Class D-2A: Material causing other toxic effects (Very toxic).

Class D-2B: Material causing other toxic effects (Toxic).

**WHMIS (WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM):** This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

**WHMIS CLASS:** The D1A classification applies for this material in aerosol or mist form.

**DOMESTIC SUBSTANCE LIST (INVENTORY):** All components in this product are included on the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL).

**EUROPEAN COMMUNITY**

**WC-595 PART A****EEC LABEL SYMBOL AND CLASSIFICATION**

"T" - Toxic



"Xn" - Harmful

**RISK PHRASES**

R20: Harmful by inhalation.

R23: Toxic by inhalation.

R36/37/38: Irritating to eyes, respiratory system and skin.

R42/43: May cause sensitization by inhalation and skin contact.

R45: May cause cancer.

R46: May cause heritable genetic damage.

R48/20: Harmful : danger of serious damage to health by prolonged exposure through inhalation.

R65: Harmful: may cause lung damage if swallowed.

**SAFETY PHRASES**

S1/2: Keep locked up and out of reach of children.

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S28: After contact with skin, wash immediately with plenty of water and soap.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S38: In case of insufficient ventilation, wear suitable respiratory equipment.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S46: If swallowed, seek medical advice immediately and show this container or label.

S53: Avoid exposure - obtain special instructions before use.

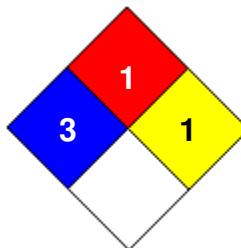
S62: If swallowed, do not induce vomiting : seek medical advice immediately and show this container or label.

**16. OTHER INFORMATION****REASON FOR ISSUE:** Revision**APPROVED BY:** Michael Rose    **TITLE:** R & D Manager**PREPARED BY:** Gus Alidad

**REVISION SUMMARY:** This MSDS replaces the 12/05/2008 MSDS. Revised: **Section 1:** REASON FOR ISSUE. **Section 2:** EMERGENCY OVERVIEW - IMMEDIATE CONCERNS POTENTIAL HEALTH EFFECTS ( INHALATION ). **Section 3:** Wt.%. **Section 9:** VISCOSITY. **Section 13:** EMPTY CONTAINER. **Section 15:** CERCLA REGULATORY, WHMIS CLASS.

**HMIS RATING**

<b>HEALTH</b>	*	<b>3</b>
<b>FLAMMABILITY</b>		<b>1</b>
<b>PHYSICAL HAZARD</b>		<b>1</b>
<b>PERSONAL PROTECTION</b>		<b>X</b>

**NFPA CODES****HMIS RATINGS NOTES:** Personal Protection: See Section 8

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