MATERIAL SAFETY DATA SHEET

Date Issued: 07/11/2011
MSDS No: TC-816 PART A

TC-816 PART A

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TC-816 PART A
GENERAL USE: Polyurethane resin
CHEMICAL FAMILY: Aromatic polyisocyanate

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: Black liquid with an aromatic hydrocarbon odor.

IMMEDIATE CONCERNS: Combustible. Keep away from heat and sources of ignition. Avoid eye and skin contact. Avoid breathing vapors. May cause eye and skin irritation. Use in well ventilated areas. Reacts slowly with water to produce carbon dioxide which may rupture closed containers. This reaction accelerates at higher temperatures. Inhalation at levels above the occupational exposure limit could cause respiratory sensitization and risk of serious damage to respiratory system. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of diisocyanates may develop in sensitized persons.

POTENTIAL HEALTH EFFECTS

EYES: May cause irritation, tearing, reddening, and swelling.

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

INGESTION: Slightly hazardous in case of ingestion.

INHALATION: May be harmful if inhaled. Inhalation at levels above the occupational exposure limit could cause respiratory sensitization and risk of serious damage to the respiratory system. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of diisocyanates may develop in sensitized persons.

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

Chemical Name	Wt.%	CAS
4,4'-Diphenylmethane diisocyanate	5 - 15	101-68-8
Polymeric diphenylmethane diisocyanate	< 15	9016-87-9
Distillates, Petroleum, Hydrotreated Light	2 - 4	64742-47-8
Aromatic hydrocarbon	0.5 - 1.5	64742-94-5

4. FIRST AID MEASURES

EYES: Immediately rinse with water. Remove contact lenses. Hold eyelids apart and flush eyes with water for at least 15 minutes. Get immediate medical attention.

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: 65°C (149°F) T.O.C.

GENERAL HAZARD: Combustible liquid and vapor.

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

HAZARDOUS COMBUSTION PRODUCTS: Carbon monoxide, and carbon dioxide.

EXPLOSION HAZARDS: Combustible. 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.

SENSITIVE TO STATIC DISCHARGE: This material can accumulate static charges which can cause an incendiary electrical discharge.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Eliminate sources of ignition. 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 (earth or sand). Do not use combustible materials such as saw dust. Use only spark resistant and explosion proof recovery devices. 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: Combustible liquid. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Avoid breathing vapor over 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

TC-816 PART A

EXPOSURE GUIDELINES

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)							
		EXPOSURE LIMITS					
		OSHA PEL		ACGIH TLV		SupplierOEL	
Chemical Name		**ppm**	**mg/m³**	**ppm**	**mg/m³**	**ppm**	**mg/m³**
4,4'-Diphenylmethane diisocyanate	**TWA**	NE	NE	0.005	0.051	0.005 [1]	0.05 [1]
	STEL	NE	NE	NE	NE	NE	NE
Polymeric diphenylmethane diisocyanate	**TWA**	NE	NE	NE	NE	0.005 [1]	0.05 [1]
	STEL	NE	NE	NE	NE	NE	NE
Distillates, Petroleum, Hydrotreated Light	**TWA**	NE	NE	NE	NE	NE	NE
	STEL	NE	NE	NE	NE	NE	NE
Aromatic hydrocarbon	**TWA**	NE	NE	NE	NE	17	100
	STEL	NE	NE	NE	NE	NE	NE
OSHA TABLE COMMENTS: **1**. NIOSH REL							

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).

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: Liquid

ODOR: Aromatic hydrocarbon

COLOR: Black

pH: Not Applicable

PERCENT VOLATILE: 5.5

VAPOR PRESSURE: Not Established

VAPOR DENSITY: Not Established

BOILING POINT: > 148.9°C (300°F)

FLASHPOINT AND METHOD: 65°C (149°F) T.O.C.

SOLUBILITY IN WATER: Reacts slowly with water

SPECIFIC GRAVITY: 1.600 (water=1) at 25°C (77°F)

VISCOSITY: 1000 Centipoise at 25°C (77°F)

VOC (Volatile Organic Compound): < 88.000 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: May occur when exposed to heat in the presence of moisture, alkalies, tertiary amines, metal compounds.

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

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide and carbon dioxide.

INCOMPATIBLE MATERIALS: Water, alcohols, strong bases, and metal compounds.

11. TOXICOLOGICAL INFORMATION

TOXICITY TO ANIMALS

Chemical Name	ORAL LD_{50} (rat)	DERMAL LD_{50} (rabbit)	INHALATION LC_{50} (rat)
4,4'-Diphenylmethane diisocyanate	> 5000 mg/kg	> 5000 mg/kg	2240 mg/m3 (1 h of respirable aerosol)
Polymeric diphenylmethane diisocyanate	> 5000 mg/kg	> 5000 mg/kg	Not Established
Distillates, Petroleum, Hydrotreated Light	Not Established	Not Established	Not Established
Aromatic hydrocarbon	Not Established	> 2000 mg/kg	Not Established

CARCINOGENICITY

Chemical Name	IARC Status
4,4'-Diphenylmethane diisocyanate	3
Polymeric diphenylmethane diisocyanate	3

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

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION: No specific ecological data are available for this product. Refer to Section 6 for information regarding accidental release and Section 15 for regulatory reporting information.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: The generation of waste should be avoided or minimized wherever possible. Disposal should be in accordance with local, state, provincial or national regulations.

EMPTY CONTAINER: Containers must be emptied (as defined by RCRA, 40 CFR Section 261.7 or state regulations that may be more stringent) and either passed to an approved recycler or destroyed.

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
4,4'-Diphenylmethane diisocyanate	5 - 15	101-68-8	Diisocyanate Compounds (Category Code N120)
Polymeric diphenylmethane diisocyanate	< 15	9016-87-9	Diisocyanate Compounds (Category Code N120)

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
4,4'-Diphenylmethane diisocyanate	5 - 15	5,000 lbs.

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.

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):
None

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

CANADA

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: D1A, D2A, D2B

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

16. OTHER INFORMATION

REASON FOR ISSUE: Revised format

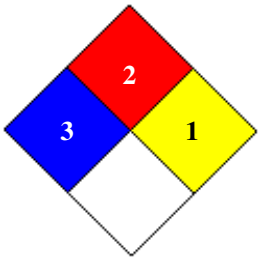
APPROVED BY: Michael Rose **TITLE:** R & D Manager

PREPARED BY: Gus Alidad

HMIS RATING

HEALTH	*	3
FLAMMABILITY		2
PHYSICAL HAZARD		1
PERSONAL PROTECTION		X

NFPA CODES



HMIS RATINGS NOTES: Personal Protection: See Section 8

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