

MATERIAL SAFETY DATA SHEET



Date Issued: 07/25/2006
MSDS No: TC-280 PART A
Date-Revised: 07/26/2006
Revision No: New MSDS

TC-280 PART A

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TC-280 PART A
GENERAL USE: Polyurethane resin
CHEMICAL FAMILY: Aromatic diisocyanate

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: Pale yellow liquid with a slight musty odor.

IMMEDIATE CONCERNS: May cause eye and skin irritation. Use in well ventilated areas. Avoid breathing vapors. 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 containers. This reaction accelerates at higher temperatures.

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

<u>Chemical Name</u>	<u>Wt. %</u>	<u>CAS</u>
4,4'-Diphenylmethane diisocyanate	40 - 60	000101-68-8
Modified MDI	40 - 60	Proprietary

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. Have eyes examined and tested by medical personnel.

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: > 110°C (230°F) Closed Cup

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

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

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 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 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)

<u>Chemical Name</u>	<u>EXPOSURE LIMITS</u>						
	<u>OSHA PEL</u>		<u>ACGIH TLV</u>		<u>SupplierOEL</u>		
	<u>ppm</u>	<u>mg/m³</u>	<u>ppm</u>	<u>mg/m³</u>	<u>ppm</u>	<u>mg/m³</u>	
4,4'-Diphenylmethane diisocyanate	TWA -	0.02	0.2	0.005	0.05	0.005 ^[1]	0.05 ^[1]
	STEL -	NE	NE	NE	NE	NE	NE
Modified MDI	TWA -	NE	NE	NE	NE	NE	NE
	STEL -	NE	NE	NE	NE	NE	NE

OSHA TABLE COMMENTS:

- 1. NIOSH REL

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: Impermeable gloves. Employees should wash their hands and face before eating, drinking, or using tobacco products.

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.

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: Slightly musty

APPEARANCE: Transparent

COLOR: Pale yellow

pH: Not Applicable

PERCENT VOLATILE: 0

VAPOR PRESSURE: < 0.001 mmHg at 20°C (68°F)

VAPOR DENSITY: 8.5

BOILING POINT: > 300°C (572°F) decomposes

SOLUBILITY IN WATER: Reacts slowly with water

SPECIFIC GRAVITY: 1.150 (water=1) at 25°C (77°F)

VISCOSITY #1: 425 Centipoise at 25°C (77°F)

VOC (Volatile Organic Compound): None

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, carbon dioxide, nitrous oxide, and HCN.

INCOMPATIBLE MATERIALS: Moisture, strong acids, amines, and metal carboxylates.

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	Not Established
Modified MDI	Not Established	Not Established	Not Established

12. ECOLOGICAL INFORMATION

AQUATIC TOXICITY

96-HOUR LC₅₀: > 1000 mg/l Zebra Fish

48-HOUR EC₅₀: > 1000 mg/l Daphnia magna (24 hour)

96-HOUR EC₅₀: > 100 mg/l E.Coli

CHEMICAL FATE INFORMATION: It is unlikely that significant environmental exposure in the air or water will arise based on consideration of the production and use of the substance.

GENERAL COMMENTS: Immiscible with water, but will react with water to produce an inert, non-biodegradable solids.

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, Section 261.7 or state regulation 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)

NOTE: Not Regulated

VESSEL (IMO/IMDG)

NOTE: 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 CFR Part 372:

EPCRA SECTION 313 SUPPLIER NOTIFICATION

Chemical Name	Wt. %	CAS	Comments
4,4'-Diphenylmethane diisocyanate	40 - 60	000101-68-8	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	40 - 60	5000 lb

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.

16. OTHER INFORMATION

REASON FOR ISSUE: Revised format

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

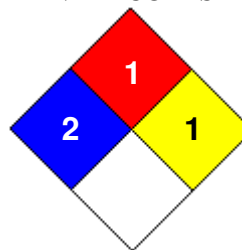
PREPARED BY: Gus Alidad

REVISION SUMMARY: New MSDS

HMIS RATING

HEALTH:	*	2
FLAMMABILITY:		1
PHYSICAL HAZARD:		1
PERSONAL PROTECTION:		X

NFPA CODES



HMIS RATINGS NOTES: Personal Protection: See Section 8

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