

# SAFETY DATA SHEET

## ULTRA-FLEX Part B

This SDS complies with 29 CFR 1910.1200 (OSHA Hazard Communication Standard)

### Section 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Identity:** ULTRA-FLEX Part B

**Intended Use:** Cross Linking Catalyst. This product is one part of a 2 part product. Read and understand the hazard information on the SDS for Part A before using this product.

**Manufacturer:** TEMP-COAT Brand Products LLC  
17351 Hard Hat Row, B18  
Covington, La 70435

**Telephone:** (985) 875-2471

**Fax:** (985) 875-2470

**Internet:** [www.tempcoat.com](http://www.tempcoat.com)

**Emergency Phone:** Chemtrec 800-424-9300

**SDS Date of Preparation:** 04/02/2013

### Section 2. HAZARDS IDENTIFICATION

#### GHS / HAZCOM 2012 Classification:

Health	Physical
Acute Toxicity Inhalation Category 4 Eye Irritant Category 2 Respiratory Sensitizer Category 1 Skin Irritant Category 2 Skin Sensitizer Category 1 Specific Target Organ Toxicity – Repeated exposure Category 2 (Lungs) Specific Target Organ Toxicity – Single exposure Category 3 (Respiratory irritation)	Not Hazardous

#### Label Elements



**DANGER!** Contains Isocyanates

Causes skin irritation

May cause an allergic skin reaction

Causes serious eye irritation

Harmful if inhaled

May cause allergy or asthma symptoms or breathing difficulties if inhaled

May cause respiratory irritation

May cause damage to lungs through prolonged or repeated exposure.

**Prevention:**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Do not breathe mist, vapours, or spray.

Wash exposed skin thoroughly after handling.

Do not eat, drink or smoke when using this product.

Use only outdoors or in a well-ventilated area.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves, protective clothing, and eye protection.

In cases of inadequate ventilation, wear respiratory protection.

**Response:**

IF ON SKIN: Wash with plenty of soap and water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If exposed or if you feel unwell: Call a POISON CENTER, or a doctor

If skin irritation or rash occurs: Get medical attention.

If eye irritation persists: Get medical attention.

If experiencing respiratory symptoms: Call a POISON CENTER, or a doctor

Take off contaminated clothing.

Wash contaminated clothing before reuse.

**Storage:**

Store locked up.

**Disposal:**

Dispose of contents and container in accordance with local and national regulations.

**Section 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS#	Percentage
Polymeric Diphenylmethane Diisocyanate (PDMI)	9016-87-9	< 55
Diphenylmethane-4, 4'-diisocyanate (MDI)	101-68-8	< 40

Diphenylmethane-4, 4'-diisocyanate Mixed Isomers	26447-40-5	< 10
--	------------	------

#### Section 4. FIRST AID MEASURES

**Inhalation:** Immediate remove victim to fresh air. If breathing is difficult, have qualified personnel administer oxygen. If breathing has stopped, administer CPR. Get immediate medical attention.

**Skin:** Wash skin thoroughly with soap and water after handling. Get medical attention if irritation or rash develop. Remove and launder contaminated clothing before reuse.

**Eye:** Immediately flush victim's eyes with large quantities of water for at least 15 minutes, holding the eyelids apart. Remove contact lenses if present after the first 5 minutes and continue flushing. Get immediate medical attention.

**Ingestion:** Do not induce vomiting. If the victim is conscious and alert, rinse the mouth with a small amount of water. Get immediate medical advice by calling a poison center or hospital emergency department.

**Most important symptoms and effects, acute and delayed:**

Harmful if inhaled. Causes eye, skin and respiratory irritation. This product contains isocyanates. May cause allergic skin reaction. May cause allergic or asthmatic symptoms or breathing difficulties if inhaled. Symptoms may include eye irritation, sore throat, nasal discharge, coughing, difficulty breathing and a feeling of tightness in the chest. Fever, chills, headache and fatigue may also occur. Effects may be delayed. Severe exposures may cause inflammation of the lung (chemical pneumonitis), asthmatic symptoms with wheezing and accumulation of fluid in the lungs (pulmonary edema) which can be fatal. Persons who are allergic to isocyanates should avoid contact with this product.

**Indication of immediate medical attention and special treatment needed, if necessary:**

Immediate medical attention is required for allergic respiratory reactions, and eye contact. May be required for inhalation overexposures, and allergic skin reactions.

#### Section 5. FIRE FIGHTING MEASURES

**Suitable (and Unsuitable) Extinguishing Media:** Use carbon dioxide, dry chemical, water spray or foam. Do not use solid water stream.

**Specific Hazards Arising from the Chemical:** This product is combustible but will not burn readily. This material can burn if strongly heated. Combustions will produce hazardous decomposition products including Oxides of carbon and nitrogen, isocyanate vapors, hydrogen cyanide, and various hydrocarbons.

**Special Protective Equipment and Precautions for Fire-fighters:** Firefighters should wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Do not get water inside containers. Do not breathe combustion products. Do not release water from firefighting to sewers or waterways.

#### Section 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, Protective equipment, and Emergency procedures:** Wear appropriate protective clothing as described in Section 8. Eliminate all ignition sources. Ventilate the area.

**Methods and Materials for Containment and Cleaning up:** Stop leak if you can do so without risk. Contain spill and absorb with an inert, non-combustible absorbent material (dry earth, sand, commercial absorbent). Decontaminate the collected material and the spill area with a solution of 90% water, 2% detergent and 8% concentrated ammonium. Add at a 10 to 1 ratio. Allow deactivated material to stand at least 48 hours to allow before shoveling into drums. Carefully sweep up or shovel, avoiding creating airborne dust. Place in an appropriate containers for disposal. Do not seal containers as chemical reaction that may generate carbon dioxide may rupture closed containers. Collect washings for proper disposal. Prevent spill from entering sewers and water courses. Report releases as required by local, state and federal authorities.

## Section 7. HANDLING AND STORAGE

**Precautions for Safe Handling:** Avoid contact with the eyes, skin and clothing. Do not breathe aerosols and vapors. Wear protective clothing and equipment as described in Section 8. Use only with adequate ventilation. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep away from excessive heat, flames and other sources of ignition. Persons with asthma or known sensitivity to isocyanates should not be exposed to this product. Keep product away from water and moisture.

Do not reuse containers. Empty containers retain product residues can be hazardous. Follow all SDS precautions when handling empty containers. Do not cut, drill, weld, braze, etc. on or near containers, even empty containers. Residue inside containers may ignite explosively leading to injury or death.

**Conditions for Safe Storage, Including any Incompatibilities:** Store in a cool, dry, well ventilated area away from heat, direct sunlight, water, moisture and incompatible materials such as alcohol, amines, acids, and bases. Store in accordance with local and federal fire codes. Use proper labeling in accordance with 29CFR1910.1200 regulation. Improper storage or contamination of containerized product with water or other chemicals may result in a hazardous condition and rupture of containers.

## Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines:

Component	Exposure Limit
Polymeric Diphenylmethane Diisocyanate (PDMI)	None Established
Diphenylmethane-4, 4'-diisocyanate (MDI)	0.005 ppm TWA ACGIH TLV 0.02 ppm Ceiling OSHA PEL
Diphenylmethane-4, 4'-diisocyanate Mixed Isomers	0.005 ppm TWA ACGIH TLV 0.02 ppm Ceiling OSHA PEL

**Appropriate Engineering Controls:** Use with adequate ventilation to maintain exposure levels below the occupational exposure limits.

### Personal Protective Equipment:

**Respiratory Protection:** In operations where exposure limits are exceeded or exposure levels are unknown, a NIOSH or other authority approved supplied air respirator appropriate for the form and concentration of the contaminants should be used. Air-purifying respirators may be used under some conditions with a cartridge change schedule that is based on the expected airborne exposure levels. Since MDI is odorless, the odor threshold for MDI cannot be used to detect unsafe conditions. Selection and use

of respiratory equipment must be in accordance with OSHA 1910.134 or other applicable regulations and good industrial hygiene practice.

**Skin Protection:** Wear impervious gloves such as butyl rubber, neoprene or nitrile rubber to avoid skin contact. Contact your glove supplier for specific recommendations. Wear protective clothing as needed to avoid skin contact and prevent contamination of personal clothing.

**Eye Protection:** Chemical safety goggles recommended.

**Other protective equipment or clothing:** Wear protective clothing as needed to avoid skin contact and prevent contamination of personal clothing.

## Section 9. PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** Yellow to amber liquid

**ODOR:** Slight odor.

**ODOR THRESHOLD:** Not determined

**pH:** Not determined

**MELTING / FREEZING POINT:** 3°C (37.4°F)

**BOILING POINT / RANGE:** 200°C (392°F)

**FLASH POINT:** 220°C (428°F) Open cup

**EVAPORATION RATE:** Not determined

**FLAMMABILITY (Gas, Solid):** Not applicable

**FLAMMABILITY LIMITS: LEL:** Not determined **UEL:** Not determined

**VAPOR PRESSURE:** 0.00016 mmHg at 20°C

**VAPOR DENSITY:** (Air = 1) ~ 8.5

**RELATIVE DENSITY:** 1.22 at 20°C

**SOLUBILITY IN WATER:** Reacts with water.

**OCTANOL/WATER COEFFICIENT:** Not determined

**AUTOIGNITION TEMPERATURE:** >250°C (>482°F)

**DECOMPOSITION TEMPERATURE:** >260°C (>500°F)

**VISCOSITY:** 200 mPa. S at 20°C

## Section 10. STABILITY AND REACTIVITY

**Reactivity:** Will react with materials containing active hydrogen such as water, alcohol, amines, acids, and bases.

**Chemical Stability:** Stable under recommended storage and handling conditions.

**Possibility of Hazardous Reactions:** Polymerization may occur at elevated temperatures 232.2°C (450°F) and in the presence of alkalis, tertiary amines, and metal compounds.

**Conditions to avoid:** High temperatures. Avoid freezing.

**Incompatible Materials:** Materials containing active hydrogen such as water, alcohol, amines, acids, and bases.

**Hazardous Decomposition Products:** Thermal decomposition will generate oxides of carbon and nitrogen, isocyanate vapors, hydrogen cyanide, and various hydrocarbons.

## Section 11. TOXICOLOGICAL INFORMATION

### Potential Health Effects:

### Acute Hazards:

**Ingestion:** Ingestion may cause mouth, throat and gastrointestinal irritation. Based on animal data, this product is not expected to be toxic by ingestion.

**Inhalation:** Polymeric Diphenylmethane Diisocyanate has an extremely low vapor pressure making inhalation exposure very unlikely unless this product is heated or a mist or aerosol is formed by spraying or surface agitation. Harmful if inhaled. Breathing vapors may cause irritation of the nose, throat and upper respiratory tract. May cause allergic respiratory reaction in individuals who are sensitized to isocyanates. Symptoms may include eye irritation, sore throat, nasal discharge, coughing, difficulty breathing and a feeling of tightness in the chest. Fever, chills, headache and fatigue may also occur. Effects may be delayed. Severe exposures may cause inflammation of the lung (chemical pneumonitis), asthmatic symptoms with wheezing and accumulation of fluid in the lungs (pulmonary edema) which can be fatal.

**Eye Contact:** Causes irritation of the eyes with redness, pain and tearing. Corneal injury is possible.

**Skin Contact:** May cause irritation. May cause allergic skin reaction (rash, itching and swelling). Skin contact may also cause an allergic respiratory reaction as described under inhalation.

**Chronic Effects:** Repeated skin contact or inhalation may cause sensitization with allergic reaction or asthmatic symptoms upon future exposure. Sensitized individuals react to very low concentrations of MDI, below 0.001 ppm. Symptoms can occur immediately following exposures or can be delayed for several hours. Exposure to isocyanates can also cause hypersensitivity pneumonitis (an allergic lung disease) with symptoms of fever, shortness of breath, malaise, cough and chills. Chronic exposure to MDI may also cause impaired lung capacity. Cross sensitivity to other isocyanates may occur.

**Carcinogenicity Listing:** None of the components is listed as a carcinogen or suspected carcinogen by IARC, NTP or OSHA. In inhalation studies with rats, an increased incidence of benign tumor of the lung (adenoma) and a single malignant tumor of the lung (adenocarcinoma) were observed in the highest MDI exposure group (6 mg/m<sup>3</sup>, 6 hours/day, 5 days/week for a lifetime). MDI administration did not change the distribution and incidence of tumors from those seen in the controls. The increased incidence of lung tumors is associated with prolonged respiratory irritation. In the absence of prolonged exposure to high concentrations leading to chronic irritation and lung damage, it is highly unlikely that tumor formation will occur.

#### **ACUTE TOXICITY VALUES:**

Diphenylmethane-4, 4'-diisocyanate (MDI): LD50 oral rat 9,200 mg/kg; LC50 inhalation rat: 369 mg/m<sup>3</sup>/4 hr.  
Polymeric Diphenylmethane Diisocyanate: LD50 oral rat 49,000 mg/kg; LD50 dermal rabbit >9,400 mg/kg.  
LC50 inhalation rat: 490 mg/m<sup>3</sup>/4 hr.  
Diphenylmethane-4, 4'-diisocyanate Mixed Isomers: LD50 oral rat >2000 mg/kg

## **Section 12. ECOLOGICAL INFORMATION**

**Ecotoxicity:** Polymeric Diphenylmethane Diisocyanate: EC50 Daphnia Magna 1000 mg/L/24 hr. LD50 zebra fish >1000 mg/L

**Persistence and Degradability:** 4,4'-methylenediphenyl diisocyanate will hydrolyze rapidly in water with an estimated half-life of a few minutes to a few hours

**Bioaccumulative Potential:** 4,4'-Methylenediphenyl diisocyanate hydrolyzes rapidly in aqueous solution; therefore, bioconcentration will not be an important environmental fate process.

**Mobility in Soil:** 4,4'-Methylenediphenyl diisocyanate hydrolyzes rapidly in aqueous solution; therefore, leaching and adsorption to moist soil and sediment will not be an important environmental fate process.

**Other Adverse Effects:** None known

### Section 13. DISPOSAL CONSIDERATIONS

Dispose in accordance with local, state and federal environmental regulations.

### Section 14. TRANSPORT INFORMATION

#### **Transportation of Dangerous Goods Description:**

Proper Shipping Name: Not regulated when packaged in container with 5000 lbs or less.

UN Number: None

Hazard Class/Packing Group: Not applicable

Labels Required: None

Note: Packages containing more than 5000 lbs of product must be shipped under RQ provisions and named: UN3082, Environmentally Hazardous Substance, liquid, n.o.s. (Methylene Diphenyl Diisocyanate), 9, III

### Section 15. REGULATORY INFORMATION

**CERCLA/SUPERFUND:** Spills of this product over the RQ (reportable quantity) must be reported to the National Response Center. The RQ for this product, based on the RQ for Methylene Diphenyl Diisocyanate (100% maximum) of 5,000 lbs, is 5,000 lbs. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

**SARA HAZARD CATEGORY (311/312):** Acute Health, Chronic Health

**SARA 313 INFORMATION:** This product contains the following chemicals subject to Annual Release Reporting Requirements Under SARA Title III, Section 313 (40 CFR 372): Diisocyanate compounds 100%

**EPA TSCA INVENTORY:** All of the ingredients in this product are listed on the EPA TSCA Inventory.

#### **CALIFORNIA PROPOSITION 65**

This product contains the following chemicals known to the State of California to cause cancer or reproductive toxicity: None

### 16. OTHER INFORMATION

**NFPA RATING:** Health = 2      Fire = 1      Instability = 1

**HMIS RATING:** Health = 2\*      Fire = 1      Physical Hazard = 1

04/02/2013: New SDS