

## 1. IDENTIFICATION

**Product identifier**

**Product Name** EPIC Part B

**Other means of identification**

**Part Number(s)** 210000, 210101, 210202, 210700

**Recommended use of the chemical and restrictions on use**

**Recommended use** Intermediate (isolated), Hardener for coating materials for industrial or professional use, Isocyanate used in the manufacturing of polyurethanes

**Uses advised against** Consumer

**Details of the supplier of the safety data sheet**

**Manufacturer Address**

ULTRA DURABLE TECHNOLOGIES  
 355 6<sup>th</sup> Ave. North  
 Waite Park, MN 56387  
 320-258-2266

**Emergency telephone number**

**Emergency Telephone** Chemtrec 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

**Classification**

**OSHA Regulatory Status**

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Acute Toxicity	Category 4
Skin Sensitization	Category 1
Specific target organ toxicity (single exposure) (respiratory tract irritation) - category 3	Category 3

**Label elements**

Pictogram



**Signal Word:**

Warning

**Hazard statements**

Harmful if inhaled.  
 May cause an allergic skin reaction.

May cause respiratory irritation.

**Appearance** No information available

**Physical state** Liquid

**Odor** No information available

#### Precautionary Statements - Prevention

Wear protective gloves.  
Use only outdoors or in a well-ventilated area.  
Do not breathe mist or vapor.  
Contaminated work clothing should not be allowed out of the workplace.

#### Precautionary Statements - Response

Call a POISON CENTER or physician if you feel unwell.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical attention.  
Take off contaminated clothing and wash it before reuse.

#### Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.

#### Precautionary Statements - Disposal

Dispose of contents/container in accordance with local regulations

#### Hazards not otherwise classified (HNOC)

No specific dangers known if the regulations/notes for storage and handling are considered.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%	Trade Secret
(OLIGOMER) Hexamethylene diisocyanate isocyanurate-type oligomers	28182-81-2	>= 95.0 - <= 100.0%	*
1,6-hexamethylene diisocyanate	822-06-0	>= 0.0 - < 0.1%	*

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

#### Description of first aid measures

<b>Eye contact</b>	Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist. Remove contact lenses if present. If symptoms persist, seek medical advice.
<b>Skin Contact</b>	Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.
<b>Inhalation</b>	Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.
<b>Ingestion</b>	Immediately rinse mouth and then drink 200 - 300 ml water, do not induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

#### Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	Overexposure may cause: Eye irritation, skin irritation, erythema, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps.
-----------------	---

#### Indication of any immediate medical attention and special treatment needed

**Note to physicians**

Treatment: Inhale corticosteroid dose aerosol. Treat according to symptoms (decontamination, vital functions), no known specific antidote, administer corticosteroid dose aerosol to prevent pulmonary edema.

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

Use dry powder, foam.

**Unsuitable extinguishing media** No data available.

**Specific hazards arising from the chemical**

Harmful vapors. Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

**Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures****Personal precautions**

Ensure adequate ventilation, especially in confined areas.

**Environmental precautions****Environmental precautions**

This product is regulated by CERCLA ('Superfund').

**Methods and material for containment and cleaning up****Methods for containment**

Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up**

Use personal protective equipment as required. Spills should be contained, solidified, and placed in suitable containers for disposal. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

**Precautions for safe handling****Advice on safe handling**

Keep away from sources of ignition - No smoking.  
Protection against fire and explosion:  
Avoid all sources of ignition: heat, sparks, open flame.

**Conditions for safe storage, including any incompatibilities****Storage Conditions**

Keep container tightly closed and dry; store in a cool place.

**Incompatible materials**

None known based on information supplied.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters**

**Exposure Guidelines**

1,6-hexamethylene diisocyanate ACGIH, US: TWA value 0.005 ppm ;

Advice on system design: Ensure adequate ventilation.

**Other Information** none.**Appropriate engineering controls****Engineering Controls** Showers  
Eyewash stations  
Ventilation systems.**Individual protection measures, such as personal protective equipment****Eye/face protection** Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.**Skin and body protection** Chemical resistant protective gloves and impermeable protective clothing.**Respiratory protection** Respiratory protection in case of vapor/aerosol release. Combination filter for gases/vapors of organic compounds and solid and liquid particles (f.e. EN 14387 Type A-P2).**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.**9. PHYSICAL AND CHEMICAL PROPERTIES****Information on basic physical and chemical properties**

<b>Physical State</b>	Liquid
<b>Appearance</b>	
<b>Color</b>	Clear and Colorless to yellowish
<b>Odor</b>	Almost Odorless
<b>Odor Threshold</b>	Not determined due to potential health hazard by inhalation

<b><u>Property</u></b>	<b><u>Values</u></b>	<b><u>Remarks • Method</u></b>
<b>pH</b>	No information available	
<b>Melting point / freezing point</b>	No information available	
<b>Boiling point / boiling range</b>	300 - 355 °C / 176 °F	
<b>Flash point</b>	237.5 °C	
<b>Evaporation rate</b>	No information available	
<b>Flammability (solid, gas)</b>	Not flammable	
<b>Flammability Limit in Air</b>		
<b>Upper flammability limit:</b>	No information available	
<b>Lower flammability limit:</b>	No information available	
<b>Vapor pressure</b>	3 mbar ( 20 °C)	
<b>Vapor density</b>	1.168 g/cm <sup>3</sup> ( 20 °C)	
<b>Specific Gravity</b>	No information available	
<b>Water solubility</b>	Reacts with water, not soluble	
<b>Solubility in other solvents</b>	No information available	
<b>Partition coefficient</b>	No information available	
<b>Autoignition temperature</b>	No information available	
<b>Decomposition temperature</b>	No information available	

<b>Kinematic viscosity</b>	No information available
<b>Dynamic viscosity</b>	No information available
<b>Explosive properties</b>	No information available

## 10. STABILITY AND REACTIVITY

### **Reactivity**

Oxidizing properties:  
not fire-propagating

### **Chemical stability**

The product is stable if stored and handled as prescribed/indicated.

### **Possibility of hazardous reactions**

Reacts with alcohols. Reacts with amines. Reacts with substances which contain active hydrogen.  
Reacts with water, with formation of carbon dioxide. The formation of gaseous decomposition products builds up pressure in tightly closed containers

### **Conditions to avoid**

Avoid moisture.

### **Incompatible materials**

water, alcohols, amines

### **Hazardous decomposition products**

Decomposition products:

Hazardous decomposition products:

No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

The indicated value is for inert gas atmosphere.

The indicated value is for inert gas atmosphere.

The indicated value is for inert gas atmosphere.

No exothermic decomposition within the mentioned temperature range.

Oxidization on contact with air above the mentioned temperature.

140 °C, 2.5 K/min (DSC (DIN 51007))

290 °C, 2.5 K/min (DSC (DIN 51007))

425 °C, 2.5 K/min (DSC (DIN 51007))

20 - 145 °C (Warm storage test)

125 °C, 2.5 K/min (DSC (DIN 51007))

## 11. TOXICOLOGICAL INFORMATION

### **Primary routes of exposure**

Routes of entry for solids and liquids are ingestion and inhalation but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

### **Acute Toxicity/Effects**

#### **Acute toxicity**

Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Of moderate toxicity after short-term inhalation.

Information on: (OLIGOMER) Hexamethylene diisocyanate isocyanurate-type oligomers

Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Of moderate toxicity after short-term inhalation.

Information on: 1,6-hexamethylene diisocyanate

Assessment of acute toxicity: Of high toxicity after short-term inhalation. In animal studies the substance is virtually nontoxic after a single skin contact. Of moderate toxicity after single ingestion.

#### **Oral**

Type of value: LD50

Species: rat (female)

Value: > 2,500 mg/kg (OECD Guideline 423)

#### **Inhalation**

Type of value: LC50

Species: rat (male/female)

Value: 0.467 mg/l (OECD Guideline 403)

Exposure time: 4 h

The test result applies only to the substance transferred into respirable aerosol (particles < 20 µm). The substance from the isocyanate substance class has been tested in a form (respirable aerosol) that is different from the forms in which the product is placed on the market and used. Therefore, the test result is not adequate for the purpose of classification and labelling of the product. Based on expert judgement and available data, a modified classification and labeling for acute inhalation toxicity is justified. The generation of a respirable aerosol must be prevented!

#### **Dermal**

Type of value: LD50

Species: rat (male/female)

Value: > 2,000 mg/kg (OECD Guideline 402)

#### **Assessment other acute effects**

Assessment of STOT single:

Causes temporary irritation of the respiratory tract.

#### **Irritation / corrosion**

Assessment of irritating effects: May cause slight irritation to the skin. May cause slight irritation to the eyes.

Information on: (OLIGOMER) Hexamethylene diisocyanate isocyanurate-type oligomers

Assessment of irritating effects: May cause slight irritation to the skin. May cause slight irritation to the eyes.

Information on: 1,6-hexamethylene diisocyanate

Assessment of irritating effects: Irritating to eyes and skin.

-----

#### **Skin**

Species: rabbit

Result: Slightly irritating.

Method: OECD Guideline 404

#### **Eye**

Species: rabbit

Result: Slightly irritating.

Method: OECD Guideline 405

#### **Sensitization**

Assessment of sensitization: Caused skin sensitization in animal studies.

Information on: (OLIGOMER) Hexamethylene diisocyanate isocyanurate-type oligomers

Assessment of sensitization:

Caused skin sensitization in animal studies.

Information on: 1,6-hexamethylene diisocyanate

Assessment of sensitization:

The substance may cause sensitization of the respiratory tract. Sensitization after skin contact possible.

-----

Guinea pig maximization test

Species: guinea pig

Result: sensitizing

sensitizing effect in animal tests

#### **Aspiration Hazard**

No aspiration hazard expected.

#### **Chronic Toxicity/Effects**

#### **Repeated dose toxicity**

Assessment of repeated dose toxicity: After repeated exposure the prominent effect is local irritation.

#### **Genetic toxicity**

Assessment of mutagenicity: The substance was not mutagenic in bacteria. The substance was not mutagenic in mammalian cell culture.

**Carcinogenicity**

Assessment of carcinogenicity: Study scientifically not justified.

**Reproductive toxicity**

Assessment of reproduction toxicity: Study scientifically not justified.

**Teratogenicity**

Assessment of teratogenicity: Study scientifically not justified.

## 12. ECOLOGICAL INFORMATION

**Toxicity****Aquatic toxicity****Assessment of aquatic toxicity:**

The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. There is a high probability that the product is not acutely harmful to aquatic organisms. The product may hydrolyse. The test result maybe partially due to degradation products.

**Toxicity to fish**

LC0 (96 h)  $\geq$  100 mg/l, Brachydanio rerio (OECD 203; ISO 7346; 92/69/EEC, C.1, static)

The product may hydrolyse. The test result maybe partially due to degradation products. The product has low solubility in the test medium. An eluate has been tested. Nominal concentration.

**Aquatic invertebrates**

EL50 (48 h) 127 mg/l, Daphnia magna (Directive 92/69/EEC, C.2, static)

Nominal concentration. The product may hydrolyse. The test result maybe partially due to degradation products.

**Aquatic plants**

EC50 (72 h)  $>$  1,000 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)

Nominal concentration. The product may hydrolyse. The test result maybe partially due to degradation products.

**Chronic toxicity to fish**

Study not necessary due to exposure considerations.

**Chronic toxicity to aquatic invertebrates**

Study not necessary due to exposure considerations.

**Assessment of terrestrial toxicity**

No data available concerning terrestrial toxicity.

Study not necessary due to exposure considerations.

**Microorganisms/Effect on activated sludge****Toxicity to microorganisms**

OECD Guideline 209 static activated sludge of a predominantly domestic sewage/EC20 (3 h): 880 mg/l

Nominal concentration. The product may hydrolyse. The test result maybe partially due to degradation products.

**Persistence and degradability****Assessment biodegradation and elimination (H2O)**

Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis.

**Elimination information**

1 % BOD of the ThOD (28 d) (OECD 301D; EEC 92/69, C.4-E) (aerobic, activated sludge, domestic, non-adapted)

**Assessment of stability in water**

In contact with water the substance will hydrolyse rapidly.

Information on Stability in Water (Hydrolysis)

t1/2 < 1 h, (OECD Guideline 111, pH 4)

t1/2 < 1 h, (OECD Guideline 111, pH 7)

t1/2 < 1 h, (OECD Guideline 111, pH 9)

#### **Bioaccumulative potential**

##### **Assessment bioaccumulation potential**

Significant accumulation in organisms is not to be expected.

The product has not been tested. The statement has been derived from the structure of the product.

#### **Bioaccumulation potential**

Bioconcentration factor: 367.7, Fish (calculated)

Analogous: Assessment derived from products with similar chemical character.

#### **Mobility in soil**

##### **Assessment transport between environmental compartments**

The substance will not evaporate into the atmosphere from the water surface.

No data available.

#### **Additional information**

Other ecotoxicological advice:

Do not release untreated into natural waters. The local regulations on waste-water treatment must be followed.

### **13. DISPOSAL CONSIDERATIONS**

#### **Waste disposal of substance**

Dispose of in a licensed facility. Do not discharge into waterways or sewer systems without proper authorization.

#### **Container disposal**

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

#### **RCRA**

None

### **14. TRANSPORT INFORMATION**

#### **Land transport**

USDOT - Not classified as a dangerous good under transport regulations

#### **Sea transport**

IMDG - Not classified as a dangerous good under transport regulations

#### **Air transport**

IATA/ICAO - Not classified as a dangerous good under transport regulations

### **15. REGULATORY INFORMATION**

#### **Federal Regulations**

##### **Registration status:**

Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

##### **NFPA Hazard codes:**

Health: 2 Fire: 1 Reactivity: -W- Special:

### **16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION**

Revision Date

4-April-2024

Revision Note

General formatting updates

#### **Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Shipping information may vary based upon container size and shipping destination. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage, or



release to the environment. The manufacturer assumes no responsibility for injury to the recipient or third persons, or for any damages to any property resulting from misuse of the product.

End of Safety Data Sheet

End of Safety Data Sheet