

1. IDENTIFICATION

Product identifier

Product Name EPIC Part B

Other means of identification

Part Number(s) 210000, 210102, 210202

Recommended use of the chemical and restrictions on use

Recommended use Hardener for coating materials; isocyanate used in the manufacturing of polyurethanes; for professional use only

Uses advised against Not intended for consumer use

Details of the supplier of the safety data sheet
Manufacturer Address

Ultra Durable Technologies
 355 6th Ave. North
 Waite Park, MN 56387
 320-258-2266
 Ultrad.com

Emergency telephone number

Emergency Telephone Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2024 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute Inhalation Toxicity	Category 4
Skin Sensitization	Category 1
STOT – Single Exposure, Respiratory Tract	Category 3

GHS Label elements, including precautionary statements


Signal Word **Warning**

Hazard statements

Harmful if inhaled.
 May cause an allergic skin reaction.
 May cause respiratory irritation.
 May cause drowsiness or dizziness.

Precautionary Statements – Prevention

Avoid breathing fumes, mist, or spray.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing should not be allowed out of the workplace.
 Wear protective gloves.

Precautionary Statements – Response

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

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 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

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS #	Weight %
Hexamethylene diisocyanate isocyanurate-type oligomers	28182-81-2	100
1,6-hexamethylene diisocyanate	822-06-0	< 0.2

Trade Secret statement (OSHA 1910.1200(i)). Specific chemical identities and concentrations for one or more listed chemicals are being withheld as trade secrets under the US regulation 29 CFR 1910.1200(i).

4. FIRST AID MEASURES**Description of first aid measures****Eye contact**

Wash affected eyes for at least 15 minutes under running water with eyelids held open. Consult an eye specialist. Remove contact lenses if present and easy to do so. If symptoms persist, seek medical advice.

Skin Contact

Wash affected areas thoroughly with soap and water. Remove contaminated clothing and wash before use or discard. If irritation develops, seek medical attention.

Inhalation

Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

Ingestion

Immediately rinse mouth and then drink 8oz 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

Overexposure may cause: eye irritation, skin irritation, erythema, nausea, headache, vomiting, dizziness, diarrhea, or abdominal cramps.

Immediate medical attention and special treatment, if necessary

If inhaled and victim is having difficulty breathing, assist in artificial life support (CPR) until emergency medical personnel are available.

Special Instructions for Physicians

Inhale corticosteroid dose aerosol.

Treat symptomatically

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

Dry powder. Chemical foam. Carbon Dioxide. Dry chemical.

Unsuitable extinguishing media

Water

Specific hazards arising from the chemical

Material is combustible. Toxic vapors, fumes, and fog are released under combustion.

Hazardous decomposition products include oxides of carbon and nitrogen. Corrosive fumes emitted.

Protective equipment and precautions for fire-fighters

Evacuate area. Eliminate all ignition sources if safe to do so. Exercise caution when fighting any chemical fire. Wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation, especially in confined areas.

Evacuate area. Only qualified personnel equipped with suitable protective equipment may intervene.

Avoid breathing fumes/mist/vapor.

Environmental precautions

Avoid release to the environment. Do not allow product to enter drains, sewers, public water, surface water, or groundwater. If contact is made, notify authorities. Product is regulated by CERCLA.

Methods and material for containment and cleaning up

Use personal protective equipment as required. Stop flow of material if able to do so safely. Contain discharged material. Small spills should be absorbed using absorbent, non-combustible material such as earth, sand, or vermiculite. Take up mechanically to an appropriate disposal container. Dispose of in accordance with local, state, and federal regulations. Clean affected area with an appropriate detergent mixture (90% water, 8% concentrated ammonia, and 2% detergent). Large spills should be pumped into an open container for disposal. If control of isocyanate vapor is required, blanket with protein foam or other suitable foam. Residues may be scrubbed up with detergent mixture. Let stand 10 minutes and remove.

7. HANDLING AND STORAGE**Precautions for safe handling**

Wear appropriate personal protective equipment – gloves, safety glasses, appropriate clothing. Wash hands thoroughly after use. Practice good industrial hygiene when using product. Keep away from sources of ignition. Keep away from moisture.

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

Store in a cool, dry place away from direct sunlight and sources of heat or ignition. Store locked up. Keep container tightly closed when not in use.

Incompatible materials

Moisture/water.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Engineering Controls**

The use of local exhaust ventilation is recommended. Eyewash stations, chemical showers recommended.

Exposure Guidelines

Chemical Name	STEL	ACGIH TLV	OSHA TWA
Hexamethylene diisocyanate isocyanurate-type oligomers	Not established	0.005 ppm	Not established
1,6-hexamethylene diisocyanate	Not established	0.005 ppm	Not established

Individual protection measures, such as personal protective equipment**Eye/Face Protection**

Protective Eyewear (chemical goggles). Face shield if splash hazard exists.

Skin and Body Protection

Nitrile gloves > 480 min permeation time. Protective clothing.

Respiratory Protection

In the event that misting occurs, wear appropriate respirator. Combination filter for gases vapors of organic compounds and solid and liquid particles (EN 14387 Type A-P2 or equivalent)

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practices.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Color	Clear, colorless
Odor	Mild, sweet
Melting point	< -20°C
Boiling point	> 428°F (> 220°C)
Flammability	Will Burn
Upper flammability limit	No information
Lower flammability limit	No information
Flash point	228°C/ 442°F
Autoignition Temperature	460°C/860°F
Decomposition temperature	No information
pH	No information
Dynamic Viscosity	1200 mPas
Kinematic Viscosity	No information
Solubility	Reacts with water, soluble with ketones, aromatic hydrocarbons, and esters
Partition coefficient n-octanol/water (Log Pow)	No information
Vapor pressure	2.25 mmHg @ 20°C
Density	1.16 g/cm ³ (9.68 lb/gal)
Relative Density	No information
Volatile Organic Compounds	No information

10. STABILITY AND REACTIVITY

Reactivity

This product has oxidizing properties. Not fire-propagating.

Chemical stability

Stable under normal conditions.

Hazardous reactions

Reacts with alcohols, amines, bases, protic solvents, strong acids, strong oxidizers, and substances which contain active hydrogen.

Reacts with water, forming carbon dioxide. Formation of gaseous decomposition products builds pressure in tightly closed containers.

Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

Avoid moisture.

Incompatible materials

Water, alcohols, amines.

Hazardous decomposition products

Thermal decomposition products include toxic gases and oxides of carbon and possible harmful vapors.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation	Inhalation of gas or vapor
Eye Contact	Liquid material splash, gas, or vapor
Skin Contact	Liquid material splash
Ingestion	Liquid material

Symptoms related to the physical, chemical, and toxicological characteristics

Inhalation may cause breathing difficulties, shortness of breath, and dizziness before loss of consciousness if not treated immediately. Continued respiratory exposure can cause allergy or asthma-like symptoms and sensitivity to isocyanates.

Skin irritation and rash are possible while continued exposure may lead to skin sensitization.

Delayed and immediate effects and also chronic effects from short- and long-term exposure

Respiratory sensitization including asthma-like symptoms. Skin sensitization.

Numerical Values of Toxicity – Component Information

Chemical Name	Oral LD ₅₀	Dermal LD ₅₀	Inhalation LC ₅₀
Hexamethylene diisocyanate isocyanurate-type oligomers	> 2,500 mg/kg (Rat)	> 2,000 mg/kg (Rat)	0.390 mg/L (Rat)
1,6-hexamethylene diisocyanate	> 2,500 mg/kg (Rat)	> 2,000 mg/kg (Rat)	0.467 mg/L* (Rat, 4h)

*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!

Skin Corrosion/Irritation	Not classified
Serious Eye Damage/Irritation	Not classified
Respiratory or Skin Sensitization	May cause sensitization of skin and respiratory tract
Germ Cell Mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive Toxicity	Not classified
STOT – Single Exposure	Causes temporary irritation of the respiratory tract
STOT – Repeated Exposure	Not classified
Aspiration Hazard	Not classified

Numerical Values of Toxicity – Product Information

The following values are calculated using Chapter 3 of the GHS document.

Chemical Name	Oral LD ₅₀	Dermal LD ₅₀	Inhalation LC ₅₀
EPIC Part B	> 2,500 mg/kg	> 2,000 mg/kg	0.390 mg/L

Acute Toxicity (oral)	Not classified
Acute Toxicity (dermal)	Not classified
Acute Toxicity (inhalation)	May cause breathing difficulties, shortness of breath, and dizziness leading to unconsciousness

Interactive effects

Pre-existing skin allergies and conditions may be aggravated with exposure to the product. Repeated exposure may further exaggerate skin conditions or lead to skin sensitization.

Pre-existing respiratory conditions (asthma) may be aggravated with exposure to the product. Repeated exposure may further exaggerate conditions or lead to respiratory sensitization.

Inhalation of the product could cause asthma symptoms and sensitization.

12. ECOLOGICAL INFORMATION

Ecotoxicity

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 will hydrolyze rapidly. The test result may be partially due to degradation products.

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Hexamethylene diisocyanate isocyanurate-type oligomers	EC ₅₀ = 370 mg/L (Desmodesmus subspicatus, 72 h) ErC ₅₀ > 1,000 mg/L (Desmodesmus subspicatus, 72 h)	LC ₅₀ ≥ 82.8 mg/L (Brachydanio rerio, 96h)	EC ₅₀ = 127 mg/L (Daphnia rerio, 48h)
1,6-hexamethylene diisocyanate	EC ₅₀ > 1,000 mg/L (Scenedesmus subspicatus, 72h)	LC ₅₀ > 100 mg/L (Brachydanio rerio, 96h)	EL ₅₀ = 127 mg/L (Daphnia magna, 48h)

Chemical Name	Algae/aquatic plants	Fish	Crustacea
EPIC Part B	EC ₅₀ = 370 mg/L (Desmodesmus subspicatus, 72 h) ErC ₅₀ > 1,000 mg/L (Desmodesmus subspicatus, 72 h)	LC ₅₀ ≥ 82.8 mg/L (Brachydanio rerio, 96h)	EC ₅₀ = 127 mg/L (Daphnia rerio, 48h)

Chronic Toxicity studies not necessary to due exposure considerations.

Persistence and Degradability

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

Bioaccumulation Potential

Bioconcentration Factor (BCF)

EPIC Part B	367.7
1,3-hexamethylene diisocyanate	3.2
Hexamethylene diisocyanate isocyanurate-type oligomers	58

Chemical Name	Partition Coefficient n-octanol/water (Log P _{ow})
Hexamethylene diisocyanate isocyanurate-type oligomers	7.8
1,6-hexamethylene diisocyanate	5861

Assessment

Significant accumulation in organisms is not expected.

Mobility in Soil

No information available

Other adverse effects

Elimination information

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

Water hydrolysis

In contact with water the substance will hydrolyze rapidly.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

Disposal should be in accordance with applicable regional, national, and local laws and regulation. Do not discharge product into sewer system.

Contaminated Packaging

Do not reuse container.

14. TRANSPORT INFORMATION

UN Number	Not applicable
UN Proper Shipping Name	Not applicable
Transport Hazard Class(es)	
DOT	Not applicable
IOMDG	Not applicable
IATA	Not applicable
Packing Group	
DOT	Not applicable
IMDG	Not applicable
IATA	Not applicable
Environmental Hazards	None
Special Precautions for User	None

NOTE Transportation information provided is for reference only. Client is urged to consult CFR 49 parts 100-177, IMDG, IATA, EC, Canadian TDG, and United Nations TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

15. REGULATORY INFORMATION

Chemical Inventories

TSCA

All components of this product are listed on the TSCA Inventory or are exempted from listing.

US Federal Regulations

SARA 313

Section 313 of the Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains no chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations. Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes - Inhalation
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No
Carcinogenicity	No
Respiratory or Skin Sensitization	Yes – Skin and Respiratory
Germ Cell Mutagenicity	No
Serious Eye Damage/Irritation	No

US State Regulations

California Proposition 65 – This product does not contain any substances believed by the State of California to cause cancer, developmental, and/or reproductive harm.

State Right to Know – Massachusetts, New Jersey, Pennsylvania

HMIS Hazard codes

Health	2
Fire	1
Reactivity	1

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

Preparation Date	7-February-2025
Revision Date	28-April-2025
Revision Note	Updated Sections 1, 2, 4, 11, 12, and 15.

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