

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : ESD-200-B
 Product code : ESD-200-B
 Other means of identification : ESD-200-B/1

1.2. Relevant identified uses of the substance or mixture and uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Protective Industrial Polymers
 7875 Bliss Parkway
 North Ridgeville, Ohio 44039 - USA-Ohio
 T 440-327-0015
www.protectpoly.com

1.4. Emergency telephone number

Emergency number : Chemtrec: 800-427-9300 (Outside USA) 703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin corrosion/irritation Category 2 H315
 Serious eye damage/eye irritation Category 2A H319
 Respiratory sensitisation Category 1 H334

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS08

Signal word (GHS-US) : Danger
 Contains : Hexamethylene Diisocyanate; Hexane, 1,6-diisocyanato-; Isocyanic acid, hexamethylene ester
 Hazard statements (GHS-US) : H315 - Causes skin irritation
 H319 - Causes serious eye irritation
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled
 Precautionary statements (GHS-US) : P261 - Avoid breathing fume, vapors
 P264 - Wash hands, forearms and face thoroughly after handling
 P280 - Wear protective clothing
 P284 - In case of poor ventilation
 P302+P352 - If on skin: Wash with plenty of soap
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
 P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 P321 - Specific treatment (see a doctor if symptoms do not go away. on this label)
 P332+P313 - If skin irritation occurs: Get medical advice/attention
 P337+P313 - If eye irritation persists: Get medical advice/attention
 P342+P311 - If experiencing respiratory symptoms: Call a doctor
 P362+P364 - Take off contaminated clothing and wash it before reuse
 P501 - Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean containers which can be disposed of as non-hazardous waste

2.3. Other hazards

Other hazards not contributing to the : None under normal conditions.

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classification

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Hexamethylene Diisocyanate	(CAS No) 28182-81-2	80 - 90	Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317
Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester	(CAS No) 822-06-0	0 - 0.5	Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1C, H314 Resp. Sens. 1, H334

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Get medical advice/attention if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: When symptoms occur: rinse immediately with plenty of water.
First-aid measures after eye contact	: Rinse immediately with plenty of water.
First-aid measures after ingestion	: Give nothing or a little water to drink. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after inhalation	: Irritation of respiratory tract.
Symptoms/injuries after skin contact	: Causes skin irritation.
Symptoms/injuries after eye contact	: Causes eye irritation.
Symptoms/injuries after ingestion	: Irritation of the gastric/intestinal mucosa.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Alcohol resistant foam, water, water fog, CO2, dry chemical, dry sand, limestone powder.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions : Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

No special environmental precautions required.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Dam up the liquid spill.

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Methods for cleaning up : Absorb spillage to prevent material damage. Cover the solid spill with dry sand/earth/vermiculite soda ash or powdered limestone.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Work under local exhaust/ventilation. Wear personal protective equipment.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use. Store in a dry place. Store in a closed container.
Incompatible products : Strong acids. Strong bases.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Hexamethylene Diisocyanate (28182-81-2)		
Not applicable		
Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)		
ACGIH	ACGIH TWA (ppm)	0.005 ppm (Hexamethylene diisocyanate; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	URT irr; resp sens

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Personal protective equipment : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
Hand protection : Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product.
Eye protection : Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH.
Skin and body protection : Wear suitable protective clothing.
Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Color : Colourless to light yellow
Odor : Faint Odor
Odor threshold : No data available
pH : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : 208 °C
Relative evaporation rate (butyl acetate=1) : No data available
Flammability (solid, gas) : No data available
Explosion limits : No data available
Explosive properties : No data available
Oxidizing properties : No data available
Vapor pressure : No data available
Relative density : No data available
Relative vapor density at 20 °C : No data available

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Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: > 200 °C
Decomposition temperature	: No data available
Viscosity	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Will not occur.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong acids, strong bases and oxidation agents.

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)	
LD50 oral rat	745 mg/kg (Rat)
LD50 dermal rabbit	599 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	0.31 mg/l/4h (Rat)
LC50 inhalation rat (ppm)	45 ppm/4h (Rat)
ATE US (oral)	745.000 mg/kg body weight
ATE US (dermal)	599.000 mg/kg body weight
ATE US (gases)	45.000 ppmV/4h
ATE US (vapors)	0.310 mg/l/4h
ATE US (dust, mist)	0.310 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. Not classified.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified
Aspiration hazard	: Not classified
Symptoms/injuries after inhalation	: Irritation of respiratory tract.
Symptoms/injuries after skin contact	: Causes skin irritation.

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Symptoms/injuries after eye contact : Causes eye irritation.
Symptoms/injuries after ingestion : Irritation of the gastric/intestinal mucosa.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified due to lack of data.

Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

LC50 fish 1	22 mg/l (LC0; Other; 96 h; Brachydanio rerio; Static system)
EC50 Daphnia 1	< 0.33 mg/l (EC0; Other; 24 h; Daphnia magna; Static system)
LC50 fish 2	31 mg/l (LC100; Other; 96 h; Brachydanio rerio; Static system)

12.2. Persistence and degradability

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Persistence and degradability : Not established.

Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

Persistence and degradability : Not readily biodegradable in water. Low potential for adsorption in soil.

12.3. Bioaccumulative potential

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Bioaccumulative potential : Not established.

Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

Log Pow : 1.08 (QSAR)
Bioaccumulative potential : Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

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Ecology - soil : No Data Available.

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Collect all waste in suitable and labeled containers and dispose according to local legislation.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT
Not regulated for transport

TDG

No additional information available

Transport by sea

No additional information available

Air transport

Proper Shipping Name (IATA) : Not Regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester	CAS No 822-06-0	0 - 0.5%
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Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

CERCLA RQ 100 lb

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Hexane,1,6-diisocyanato-;Isocyanic acid, hexamethylene ester (822-06-0)

U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

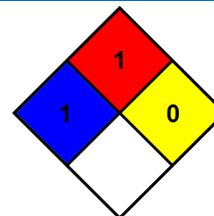
SECTION 16: Other information

Other information : Disclaimer: This SDS to the best of our knowledge conforms to the requirements of OSHA 20 CFR 1910.1200 and summarizes the health and safety hazard information and general guidance on how to safely handle the material at the date of issue. Each user must review the SDS in the context of how the product will be handled and used in the workplace.

Full text of H-phrases:

H302	Harmful if swallowed
H311	Toxic in contact with skin
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H330	Fatal if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled

NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
NFPA fire hazard : 1 - Must be preheated before ignition can occur.
NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible
Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product