

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : UC-B
 Product code : UC-B
 Other means of identification : UC-B/1, UC-B/2, UC-B/5, UC-B/55

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

Acute toxicity (oral) Category 4 H302
 Skin corrosion/irritation Category 2 H315
 Serious eye damage/eye irritation Category 2A H319
 Respiratory sensitisation Category 1 H334
 Skin sensitization Category 1 H317

Full text of H statements : see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

GHS08

Signal word (GHS-US) :

: Danger

Contains :

: Methylenediphenyl diisocyanate; 2,4'-Methylenebis(phenyl isocyanate); 4,4'-dimethylmethane diisocyanate

Hazard statements (GHS-US) :

: H302 - Harmful if swallowed
 H315 - Causes skin irritation
 H317 - May cause an allergic skin reaction
 H319 - Causes serious eye irritation
 H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

Precautionary statements (GHS-US) :

: P261 - Avoid breathing vapors, fume
 P264 - Wash hands thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P272 - Contaminated work clothing must not be allowed out of the workplace
 P280 - Wear protective clothing
 P284 - [In case of inadequate ventilation] wear respiratory protection
 P301+P312 - If swallowed: Call a doctor if you feel unwell
 P302+P352 - If on skin: Wash with plenty of soap
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing

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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)
P330 - Rinse mouth
P332+P313 - If skin irritation occurs: Get medical advice/attention
P333+P313 - If skin irritation or rash 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 - Take off contaminated clothing and wash it before reuse
P362+P364 - Take off contaminated clothing and wash it before reuse
P501 - Dispose of contents/container to an approved waste disposal plant

2.3. Other hazards

No additional information available

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
Methylenediphenyl diisocyanate	(CAS No) 9016-87-9	30 - 60	Not classified
4,4'-dimethylmethane diisocyanate	(CAS No) 101-68-8	30 - 60	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Resp. Sens. 1, H334
2,4'-Methylenebis(phenyl isocyanate)	(CAS No) 5873-54-1	7 - 13	Not classified

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation : Remove the victim into fresh air.
First-aid measures after skin contact : When symptoms occur: rinse immediately with plenty of water. Wash with plenty of soap and 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. Get medical advice/attention if you feel unwell. Never give anything by mouth to an unconscious person. Rinse mouth with water.

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. May cause an allergic skin reaction.
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

Treat symptomatically.

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

Fire hazard : No data available on direct fire hazard.
Reactivity : Stable under normal conditions.

5.3. Advice for firefighters

Firefighting instructions : Eliminate all ignition sources if safe to do so. Evacuate area.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Absorb spillage to prevent material damage. Remove ignition sources.

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6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Dam up the liquid spill.
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 : Avoid contact with skin, eyes and clothing.
Safe use of the product : Keep container tightly closed when not in use.
Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Keep only in original container.
Incompatible products : Strong bases. Strong acids.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Methylenediphenyl diisocyanate (9016-87-9)		
Not applicable		
2,4'-Methylenebis(phenyl isocyanate) (5873-54-1)		
Not applicable		
4,4'-dimethylmethane diisocyanate (101-68-8)		
ACGIH	ACGIH TWA (ppm)	0.005 ppm (Methylene bisphenyl isocyanate (MDI); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
ACGIH	Remark (ACGIH)	Resp sens
OSHA	OSHA PEL (Ceiling) (mg/m ³)	0.2 mg/m ³
OSHA	OSHA PEL (Ceiling) (ppm)	0.02 ppm

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.
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 : milky White
Odor : slight musty smell

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Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: > 300 °C
Flash point	: 203 °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
Solubility	: Water: Solubility in water of component(s) of the mixture : •: g/100ml (25 °C, insoluble) 7.5E-4 •: g/100ml (25 °C, insoluble) 6.8E-4
Log Pow	: No data available
Auto-ignition temperature	: > 600 °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

Stable under normal conditions.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Oral: Harmful if swallowed.

UC-B	
ATE US (oral)	500.000 mg/kg body weight
Methylenediphenyl diisocyanate (9016-87-9)	
LD50 oral rat	> 10000 mg/kg (Rat)
2,4'-Methylenebis(phenyl isocyanate) (5873-54-1)	
LD50 oral rat	> 2000 mg/kg body weight (Rat; Other; Read-across)
LD50 dermal rabbit	> 9400 mg/kg body weight (Rabbit; Read-across; Equivalent or similar to OECD 402)
4,4'-dimethylmethane diisocyanate (101-68-8)	
LD50 oral rat	> 7616 mg/kg (Rat; Equivalent or similar to OECD 401; Read-across)

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4,4'-dimethylmethane diisocyanate (101-68-8)

LD50 dermal rabbit	> 9400 mg/kg body weight (Rabbit; Read-across; Equivalent or similar to OECD 402)
ATE US (oral)	500.000 mg/kg body weight

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. May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Methylenediphenyl diisocyanate (9016-87-9)

IARC group	3 - Not classifiable
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4,4'-dimethylmethane diisocyanate (101-68-8)

IARC group	3 - Not classifiable
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Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified

Specific target organ toxicity (repeated exposure)	: Not classified
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Aspiration hazard	: Not classified
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Symptoms/injuries after inhalation	: Irritation of respiratory tract.
Symptoms/injuries after skin contact	: Causes skin irritation. May cause an allergic skin reaction.
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.
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2,4'-Methylenebis(phenyl isocyanate) (5873-54-1)

LC50 fish 1	> 1000 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Brachydanio rerio; Static system; Fresh water; Read-across)
EC50 Daphnia 1	> 1000 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 24 h; Daphnia magna; Static system; Fresh water; Read-across)
Threshold limit algae 1	> 1640 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Scenedesmus subspicatus; Static system; Fresh water; Read-across)

4,4'-dimethylmethane diisocyanate (101-68-8)

EC50 Daphnia 1	129.7 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 24 h; Daphnia magna; Static system; Fresh water; Read-across)
LC50 fish 2	> 1000 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Danio rerio; Static system; Fresh water; Read-across)
Threshold limit algae 1	> 1640 mg/l (EC50; OECD 201: Alga, Growth Inhibition Test; 72 h; Desmodesmus subspicatus; Static system; Fresh water; Read-across)

12.2. Persistence and degradability

UC-B

Persistence and degradability	Not established.
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Methylenediphenyl diisocyanate (9016-87-9)

Persistence and degradability	Biodegradability in soil: no data available. No (test)data on mobility of the components available.
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2,4'-Methylenebis(phenyl isocyanate) (5873-54-1)

Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available.
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4,4'-dimethylmethane diisocyanate (101-68-8)

Persistence and degradability	Not readily biodegradable in water. No (test)data on mobility of the substance available.
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12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
Methylenediphenyl diisocyanate (9016-87-9)	
Bioaccumulative potential	No bioaccumulation data available.
2,4'-Methylenebis(phenyl isocyanate) (5873-54-1)	
BCF fish 1	92 - 200 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 28 days; Cyprinus carpio; Flow-through system; Fresh water; Read-across; GLP)
Log Pow	4.51 (Conclusion by analogy; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
4,4'-dimethylmethane diisocyanate (101-68-8)	
BCF fish 2	92 - 200 (BCF; OECD 305: Bioconcentration: Flow-Through Fish Test; 4 weeks; Cyprinus carpio; Flow-through system; Fresh water; Experimental value; GLP)
Log Pow	5.22 (Estimated value; 4.51; Experimental value; OECD 117: Partition Coefficient (n-octanol/water), HPLC method; 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

UC-B	
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 disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

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

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

UC-B		
Listed on the United States TSCA (Toxic Substances Control Act) inventory		

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.

Methylenediphenyl diisocyanate	CAS No 9016-87-9	30 - 60%
4,4'-dimethylmethane diisocyanate	CAS No 101-68-8	30 - 60%

4,4'-dimethylmethane diisocyanate (101-68-8)	
CERCLA RQ	5000 lb

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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

Methylenediphenyl diisocyanate (9016-87-9)

U.S. - New Jersey - Right to Know Hazardous Substance List

4,4'-dimethylmethane diisocyanate (101-68-8)

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
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled

NFPA health hazard

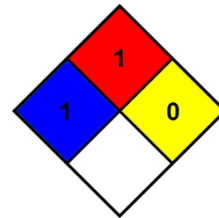
: 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.

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