



U-POL PLASTX B - HARDENER

Safety Data Sheet

according to the Model Work Health and Safety Regulations

DRIVING SURFACE PERFECTION

Date of issue:21/02/2017

Revision date:03/05/2019

Supersedes: 07/01/2019

Version: 2.2

SECTION 1: Identification : Product identifier and chemical identity

1.1. Product identifier

Product form : Mixture
Trade name : U-POL PLASTX B - HARDENER
Product code : PLAS/B

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Adhesives, sealants

1.4. Supplier's details

Supplier

U-POL AUSTRALIA PTY LIMITED
Unit A, 16 - 20 Cassola Place
Penrith, NSW 2750 - Australia
T 02 4731 2655 - F 02 4731 2611
info@u-pol.co.nz - www.u-pol.com.au

Supplier

U-POL NEW ZEALAND LIMITED
c/o Lindsay & Associates
Unit H, 12 Amara Place, East Tamaki
Manukau City 2013 - New Zealand
T + 612 4731 2655 - F + 612 4731 2611
technicalsupport@u-pol.com - www.u-pol.com

1.5. Emergency phone number

Emergency number : Australia (CHEMTREC): + (61) - 290372994 ; New Zealand (National Poisons Centre): 0800 764 766

SECTION 2: Hazards identification

2.1. Classification of the hazardous chemical

Classification according to the model Work Health and Safety Regulations (WHS Regulations)

Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2A H319
Respiratory sensitisation, Category 1 H334
Skin sensitisation, Category 1 H317
Carcinogenicity, Category 2 H351
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation H335
Specific target organ toxicity — Repeated exposure, Category 2 H373

2.2. Label elements

Hazard pictograms (GHS AU) :



Signal word (GHS AU) :

Danger

Contains :

formaldehyde, oligomeric reaction products with aniline and phosgene (63-83% %); prepolymer based on aromatic polyisocyanate (5-23% %); 4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (5-23% %); o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate (<5% %); 2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate (<5% %)

Hazard statements (GHS AU) :

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.
H335 - May cause respiratory irritation.
H351 - Suspected of causing cancer.
H373 - May cause damage to organs (hearing organs) through prolonged or repeated exposure (if inhaled).

Precautionary statements (GHS AU) :

P260 - Do not breathe fume, vapours.
P264 - Wash hands thoroughly after handling.
P280 - Wear eye protection, protective clothing, protective gloves.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P501 - Dispose of contents/container to hazardous or special waste collection point, in

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accordance with local, regional, national and/or international regulation

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

Name	CAS-No.	%	Classification according to the model Work Health and Safety Regulations (WHS Regulations)
formaldehyde, oligomeric reaction products with aniline and phosgene ()	32055-14-4	63-83%	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
prepolymer based on aromatic polyisocyanate ()	67815-87-6	5-23%	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 STOT RE 2, H373
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate ()	101-68-8	5-23%	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate ()	5873-54-1	<5%	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate ()	2536-05-2	<5%	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
Other substances (not contributing to the classification of this product)		40 - 59.92	

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

4.2. Symptoms caused by exposure

Symptoms/effects after inhalation	: May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.

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

Other medical advice or treatment	: Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
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5.2. Special hazards arising from the substance or mixture

No additional information available

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5.3. Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Safety glasses. Protective clothing. Gloves.
Emergency procedures : Ventilate spillage area. Do not breathe vapours, fume. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage. Contain released product, pump into suitable containers.
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

SECTION 7: Handling and storage, including how the chemical may be safely used

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe vapours, fume. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Storage temperature : < 25 °C
Storage area : Store in a well-ventilated place.
Special rules on packaging : Keep only in original container.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters - exposure standards

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)		
Australia	Local name	Methylene bisphenyl isocyanate (MDI) (Diphenylmethane diisocyanate)
Australia	TWA (mg/m ³)	0.02 mg/m ³
Australia	STEL (mg/m ³)	0.07 mg/m ³
Australia	Remark (AU)	Carcinogenicity Category 2 – Suspected human carcinogen. The classification of a chemical into this category is on the basis of evidence from human and animal studies, where the evidence is not sufficiently convincing to place the chemical into Category 1 or from limited evidence of carcinogenicity in human or animal studies; Sen - Respiratory and/or Skin Sensitiser.
New Zealand	Local name	Diphenylmethane diisocyanate (Isocyanates)
New Zealand	TWA (mg/m ³)	0.02 mg/m ³
New Zealand	STEL (mg/m ³)	0.07 mg/m ³
New Zealand	Regulatory reference	Workplace Exposure Standards and Biological Exposure Indices, 9th Edition

Exposure limit values for the other components

8.2. Monitoring

No additional information available

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8.3. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.

8.4. Personal protective equipment

Materials for protective clothing : Impermeable clothing
Hand protection : Protective gloves
Eye protection : Safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : [In case of inadequate ventilation] wear respiratory protection.
Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

Physical state : Liquid
Appearance :
Liquid.
Colour : No data available
Odour : No data available
Odour threshold : No data available
pH : No data available
Relative evaporation rate (butylacetate=1) : No data available
Melting point / Freezing point : Melting point : Not applicable
Boiling point : No data available
Flash point : > 100 °C
Auto-ignition temperature : No data available
Flammability (solid, gas) : No data available
Vapour pressure : No data available
Relative density : No data available
Density : No data available
Solubility : No data available
Log Pow : No data available
Viscosity, dynamic : ≈
Explosive properties : No data available
Explosive limits : No data available
Minimum ignition energy : No data available
VOC content - Regulatory : No data available

SECTION 10: Stability and reactivity

Reactivity : The product is non-reactive under normal conditions of use, storage and transport. The product is non-reactive under normal conditions of use, storage and transport
Chemical stability : Stable under normal conditions.
Possibility of hazardous reactions : No dangerous reactions known under normal conditions of use.
Conditions to avoid : None under recommended storage and handling conditions (see section 7).
Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)

LD50 oral rat	> 7616 mg/kg (Equivalent or similar to OECD 401, Rat, Female, Read-across, Oral)
LD50 dermal rabbit	> 9400 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male/female, Read-across, Dermal)
LC50 inhalation rat (mg/l)	0.49 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male/female, Read-across, Inhalation (aerosol))

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2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate (2536-05-2)	
LD50 oral rat	> 2000 mg/kg bodyweight (Other, Rat, Male / female, Read-across, Oral)
LD50 dermal rabbit	> 9400 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Read-across, Dermal)
LC50 inhalation rat (mg/l)	527 mg/m ³ air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male, Experimental value, Inhalation (aerosol))

o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate (5873-54-1)	
LD50 oral rat	> 2000 mg/kg bodyweight (Other, Rat, Male/female, Read-across, Oral)
LD50 dermal rabbit	> 9400 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male/female, Read-across, Dermal)
LC50 inhalation rat (mg/l)	387 mg/m ³ air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male, Experimental value, Inhalation (aerosol))

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: May cause damage to organs (hearing organs) through prolonged or repeated exposure (if inhaled).
Aspiration hazard	: Not classified

SECTION 12: Ecological information

According to the National Code of Practice for the Preparation of Material Safety Data Sheets, Environmental classification information is not mandatory. Information relevant for GHS classification is available on request

12.1. Ecotoxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
LC50 fish 1	> 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration)
EC50 Daphnia 1	129.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect)
BCF fish 1	92 - 200 (OECD 305: Bioconcentration: Flow-Through Fish Test, 4 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, GLP)
Log Pow	5.22 (Estimated value)

2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate (2536-05-2)	
LC50 fish 1	> 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, GLP)
EC50 Daphnia 1	> 1000 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across, GLP)
BCF fish 1	92 - 200 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, GLP)
Log Pow	5.22 (QSAR, KOWWIN)

o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate (5873-54-1)	
LC50 fish 1	> 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Brachydanio rerio, Static system, Fresh water, Read-across, Nominal concentration)
EC50 Daphnia 1	> 1000 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across, Nominal concentration)
BCF fish 1	92 - 200 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), 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)

12.2. Persistence and degradability

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4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
Persistence and degradability	Not readily biodegradable in water.

2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate (2536-05-2)	
Persistence and degradability	Not readily biodegradable in water.

o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate (5873-54-1)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
BCF fish 1	See section 12.1 on ecotoxicology
Log Pow	See section 12.1 on ecotoxicology
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate (2536-05-2)	
BCF fish 1	See section 12.1 on ecotoxicology
Log Pow	See section 12.1 on ecotoxicology
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate (5873-54-1)	
BCF fish 1	See section 12.1 on ecotoxicology
Log Pow	See section 12.1 on ecotoxicology
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
Surface tension	Data waiving
Log Pow	See section 12.1 on ecotoxicology
Ecology - soil	No (test)data on mobility of the substance available.

2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate (2536-05-2)	
Log Pow	See section 12.1 on ecotoxicology
Ecology - soil	No (test)data on mobility of the substance available.

o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate (5873-54-1)	
Log Pow	See section 12.1 on ecotoxicology
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Other adverse effects

Ozone : Not classified
Other adverse effects : No additional information available

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Fluorinated greenhouse gases	False

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
Fluorinated greenhouse gases	False

prepolymer based on aromatic polyisocyanate (67815-87-6)	
Fluorinated greenhouse gases	False

2,2'-methylenediphenyl diisocyanate; diphenylmethane-2,2'-diisocyanate (2536-05-2)	
Fluorinated greenhouse gases	False

o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate (5873-54-1)	
Fluorinated greenhouse gases	False

formaldehyde, oligomeric reaction products with aniline and phosgene (32055-14-4)	
Fluorinated greenhouse gases	False

SECTION 13: Disposal considerations

Regional legislation (waste) : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

14.1. UN number

Not regulated for transport

14.2. Proper Shipping Name - Addition

Not applicable

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14.3. Transport hazard class(es)

ADG

Transport hazard class(es) (ADG) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

14.4. Packing group

Packing group (ADG) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

14.5. Environmental hazards

Marine pollutant : No

14.6. Special precautions for user

Specific storage requirement : No data available

Shock sensitivity : No data available

14.7. Additional information

Other information : No supplementary information available

Transport by road and rail

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

14.8. Hazchem or Emergency Action Code

Hazchemcode : Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

No additional information available

Hazardous Substances and New Organisms Act

HSNO Approval Number : HSR002679

Group standard : Surface coatings and colourants

15.2. International agreements

No additional information available

SECTION 16: Any other relevant information

Revision date : 03/05/2019

Classification:

Skin Irrit. 2	H315
Eye Irrit. 2A	H319
Resp. Sens. 1	H334
Skin Sens. 1	H317
Carc. 2	H351
STOT SE 3	H335
STOT RE 2	H373

Full text of H-statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A

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Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity — Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.

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For professional use only.

The information contained within this Safety Data Sheet (SDS) is believed to be correct as of the date issued however it is subject to change from time to time. It does not purport to be all inclusive or exhaustive and shall only be used as a guide. U-POL makes no warranties, expressed or implied, including but not limited to, any implied warranty of fitness for a given purpose or usage. It is the Buyers responsibility to ensure the suitability of the products for their own use and to check the information is up to date. U-POL cannot be held responsible for the suitability of use for any of its products, considering the wide range of factors such as application, substrates and handling methods. Since these conditions of use are outside of our control, the company shall not be held liable for any damage resulting from handling or from contact with the product detailed. Moreover, addition of reducers, hardeners or other additives over and above U-POL's recommendations for use, may substantially alter the composition and hazards of the product. U-POL data sheets are available via the U-POL website at WWW.U-POL.COM.