PU Wood Adhesive (30 minute Liquid)- Safety Data Sheet

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Name:	PU Wood Adhesive (30 minute Liquid)
Product Code:	247834
UFI:	1000-A0PG-V008-26VD

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

Identified uses	Adhesive.
Uses advised against	No specific uses advised against are identified.

1.3. Details of the supplier of the safety data sheet

Supplier:	T.I Midwood & Co. Ltd TIMCO House Green Lane Wardle Nantwich CW5 6BJ	T.I Midwood & Co. Ltd Aviemore House Hill Street Monahan Ireland

Emergency Help Line: 01865 407333 (24 hour service)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1 - H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373
Environmental hazards	Not Classified
Human health	Contains non-volatile isocyanate. Heating may generate vapours which irritate the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2. Label elements

Pictogram

Signal word	Danger
Hazard statements	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 through prolonged or repeated exposure.
Precautionary statements	EUH204 Contains isocyanates. May produce an allergic reaction. P260 Do not breathe vapour/ spray. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P281 Use personal protective equipment as required. P284 [In case of inadequate ventilation] wear respiratory protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P313 Get medical advice/ attention. P501 Dispose of contents/ container in accordance with national regulations. RCH004a Persons already sensitised to diisocyanates may develop allergic reactions when using this product. RCH004b Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. RCH004c This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.
Contains	DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES), METHYLENEDIPHENYL DIISOCYANATE

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)	**10-30%**
CAS number: 9016-87-9	REACH registration number: 01-2119457024-46-0006

Classification
Acute Tox. 4 - H332
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319
Resp. Sens. 1 - H334
Skin Sens. 1 - H317
Carc. 2 - H351
STOT SE 3 - H335
STOT RE 2 - H373

METHYLENEDIPHENYL DIISOCYANATE **10-30%**

CAS number: 26447-40-5 | EC number: 247-714-0 | REACH registration number: 01-2119457014-47

Classification
Acute Tox. 4 - H332
Skin Irrit. 2 - H315
Eye Irrit. 2 - H319
Resp. Sens. 1 - H334
Skin Sens. 1 - H317
Carc. 2 - H351
STOT SE 3 - H335
STOT RE 2 - H373

2,2'DIMORPHOLINYLDIETHYL ETHER **<1%**

CAS number: 6425-39-4 | EC number: 229-194-7 | REACH registration number: 01-2119969278-20-0000

Classification
Eye Irrit. 2 - H319

Dioctylzinndilaurat **<1%**

CAS number: 3648-18-8 | REACH registration number: 01-2119979527-19-0000

Classification
STOT SE 2 - H371
STOT RE 2 - H373
Aquatic Chronic 3 - H412

BENZOYL CHLORIDE **<1%**

CAS number: 98-88-4 | EC number: 202-710-8 | REACH registration number: 01-2119487138-29-0002

Classification
Acute Tox. 4 - H302
Acute Tox. 4 - H312
Acute Tox. 3 - H331
Skin Corr. 1B - H314
Skin Sens. 1 - H317

PHOSPHORIC ACID ...% **<1%**

CAS number: 7664-38-2 | EC number: 231-633-2 | REACH registration number: 01-2119485924-24-0070

Classification
Met. Corr. 1 - H290
Acute Tox. 4 - H302
Skin Corr. 1B - H314

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Remove affected person from source of contamination.
Inhalation	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Ingestion	DO NOT induce vomiting. Get medical attention immediately.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if any discomfort continues.
Eye contact	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing. Show this Safety Data Sheet to the medical personnel.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	Irritation of nose, throat and airway. Coughing, chest tightness, feeling of chest pressure.
Ingestion	May cause discomfort if swallowed.
Skin contact	Prolonged skin contact may cause redness and irritation.
Eye contact	Severe irritation, burning and tearing.

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

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	The product is non-combustible. Irritating gases or vapours. Not known.
Hazardous combustion products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

5.3. Advice for firefighters

Protective actions during firefighting	Containers close to fire should be removed or cooled with water. Do not allow water to contact any leaked material.
Special protective equipment for firefighters	Wear chemical protective suit. Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions	Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Absorb spillage with non-combustible, absorbent material. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Provide adequate ventilation. Contain spillage with sand, earth or other suitable non-combustible material. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid inhalation of vapours and spray/mists. Avoid contact with skin and eyes. Do not use in confined spaces without adequate ventilation and/or respirator. Spraying is permitted only in closed systems, spray cabinets or spray boxes with adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in closed original container at temperatures between 5°C and 25°C.

Storage class Chemical storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Long-term exposure limit (8-hour TWA): WEL 0.07 mg/m³
Short-term exposure limit (15-minute): WEL 0.02 mg/m³

METHYLENEDIPHENYL DIISOCYANATE

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m3(Sen)
Short-term exposure limit (15-minute): WEL 0.07 mg/m3(Sen)

PHOSPHORIC ACID ...%

Long-term exposure limit (8-hour TWA): WEL 1 mg/m³
Short-term exposure limit (15-minute): WEL 2 mg/m³
WEL = Workplace Exposure Limit

Ingredient comments WEL = Workplace Exposure Limits

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES) (CAS: 9016-87-9)

Ingredient comments WEL = Workplace Exposure Limits

DNEL

Workers - Dermal; Short term systemic effects: 50 mg/kg
Workers - Inhalation; Short term systemic effects: 0.1 mg/m³
Workers - Dermal; Short term local effects: 28.7 mg/cm²
Workers - Inhalation; Short term local effects: 0.1 mg/m³
Workers - Inhalation; Long term systemic effects: 0.05 mg/m³
Workers - Inhalation; Long term local effects: 0.05 mg/m³
General population - Dermal; Short term systemic effects: 25 mg/kg
General population - Inhalation; Short term systemic effects: 0.05 mg/m³
General population - Oral; Short term systemic effects: 20 mg/kg
General population - Dermal; Short term local effects: 17.2 mg/cm²
General population - Inhalation; Short term local effects: 0.05 mg/m³
General population - Inhalation; Long term systemic effects: 0.025 mg/m³
General population - Inhalation; Long term local effects: 0.025 mg/m³

PNEC

- Fresh water; 1 mg/l
- Marine water; 0.1 mg/l
- Soil; 1 mg/kg dry weight
- STP; 1 mg/l

METHYLENEDIPHENYL DIISOCYANATE (CAS: 26447-40-5)

Ingredient comments

WEL = Workplace Exposure Limits

DNEL

Workers - Dermal; Short term systemic effects: 50 mg/kg
Workers - Inhalation; Short term systemic effects: 0.1 mg/m³
Workers - Dermal; Short term local effects: 28.7 mg/cm²
Workers - Inhalation; Short term local effects: 0.1 mg/m³
Workers - Inhalation; Long term systemic effects: 0.05 mg/m³
Workers - Inhalation; Long term local effects: 0.05 mg/m³
General population - Dermal; Short term systemic effects: 25 mg/kg
General population - Inhalation; Short term systemic effects: 0.05 mg/m³
General population - Oral; Short term systemic effects: 20 mg/kg
General population - Dermal; Short term local effects: 17.2 mg/cm²
General population - Inhalation; Short term local effects: 0.05 mg/m³
General population - Inhalation; Long term systemic effects: 0.025 mg/m³
General population - Inhalation; Long term local effects: 0.025 mg/m³

PNEC

- Fresh water; 1 mg/l
- Marine water; 0.1 mg/l
- Soil; 1 mg/kg dry weight
- STP; 1 mg/l

2,2'DIMORPHOLINYLDIETHYL ETHER (CAS: 6425-39-4)

DNEL

Workers - Inhalation; Long term systemic effects: 7.28 mg/m³
Workers - Dermal; Long term systemic effects: 1 mg/kg bw/day
Consumer - Inhalation; Long term systemic effects: 1.8 mg/m³
Consumer - Dermal; Long term systemic effects: 0.5 mg/kg bw/day
Consumer - Oral; Long term systemic effects: 0.5 mg/kg bw/day

PNEC	- Fresh water; 0.1 mg/l - Marine water; 0.01 mg/l - Intermittent release; 1 mg/l - Sediment (Freshwater); 8.2 mg/kg - Sediment (Marinewater); 0.82 mg/kg - STP; 100 mg/l - Soil; 1.58 mg/kg

8.2. Exposure controls

Protective equipment

Appropriate engineering controls	Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.
Eye/face protection	Wear chemical splash goggles.
Hand protection	It is recommended that gloves are made of the following material: Nitrile rubber. It should be noted that liquid may penetrate the gloves. Frequent changes are recommended. For exposure up to 8 hours, wear gloves made of the following material: Nitrile rubber.
Other skin and body protection	Wear suitable protective clothing as protection against splashing or contamination. Wear apron or protective clothing in case of contact.
Hygiene measures	Use engineering controls to reduce air contamination to permissible exposure level. Wash hands after handling. When using do not eat, drink or smoke.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Wear a respirator fitted with the following cartridge: ABEK2-P3 Particulate filter, type P3. When spraying, wear a suitable supplied-air respirator.
Environmental exposure controls	Keep container tightly sealed when not in use.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Coloured liquid.
Colour	Various colours.
Odour	Musty (mouldy).
Odour threshold	Not available.
pH	Not available.
Melting point	<10°C
Initial boiling point and range	330°C @ mbar
Flash point	>200°C CC (Closed cup).
Evaporation rate	slow
Evaporation factor	Not available.
Flammability (solid, gas)	Not available.

Upper/lower flammability or explosive limits	Not applicable.
Other flammability	Not available.
Vapour pressure	0.01 Pa @ °C
Vapour density	8.5
Relative density	1.12 @ 20°C
Bulk density	Not relevant.
Solubility(ies)	Insoluble in water. Hardens in contact with water.
Partition coefficient	Not available.
Auto-ignition temperature	>600°C
Decomposition Temperature	Not available.
Viscosity	Kinematic viscosity > 20.5 mm²/s.
Explosive properties	Not available.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	Not available.
Comments	Information given is applicable to the product as supplied.

9.2. Other information

Other information	No information required.
Refractive index	Not available.
Particle size	Not available.
Molecular weight	Not available.
Volatility	Not available.
Saturation concentration	Not available.
Critical temperature	Not available.
Volatile organic compound	Not relevant.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	The product will harden into a solid mass in contact with water and moisture.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not applicable. May polymerise.

10.4. Conditions to avoid

Conditions to avoid	Avoid contact with water.

10.5. Incompatible materials

Materials to avoid	Strong acids. Strong alkalis.

10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of carbon. Oxides of nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	10,000.0
Species	Rat

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	10,000.0
Species	Rabbit

Acute toxicity - inhalation

Species	Rat
ATE inhalation (gases ppm)	22,341.38
ATE inhalation (vapours mg/l)	24.58
ATE inhalation (dusts/mists mg/l)	7.45

Skin corrosion/irritation

Animal data	Irritating.

Serious eye damage/irritation

Serious eye damage/irritation	Moderately irritating.

Respiratory sensitisation

Respiratory sensitisation	Sensitising.

Carcinogenicity

Carcinogenicity	Suspected carcinogen based on limited evidence.
Target organ for carcinogenicity	No specific target organs known.

Reproductive toxicity

Reproductive toxicity - development	This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction.

Aspiration hazard

Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.

Inhalation	Irritating to respiratory system. May cause sensitisation by inhalation.

Ingestion	May cause stomach pain or vomiting.
Skin contact	Irritating to skin. May cause sensitisation by skin contact.
Eye contact	Irritation of eyes and mucous membranes.
Acute and chronic health hazards	May cause sensitisation by skin contact. The product contains small quantities of isocyanate. May cause respiratory allergy. May cause respiratory system irritation. Frequent inhalation of vapours may cause respiratory allergy.
Route of entry	Inhalation Skin and/or eye contact
Medical symptoms	Irritation of eyes and mucous membranes. Coughing, chest tightness, feeling of chest pressure.
Medical considerations	Chronic respiratory and obstructive airway diseases.

Toxicological information on ingredients.

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	10,000.0
Species	Rat
ATE oral (mg/kg)	10,000.0
Acute toxicity - dermal	
Acute toxicity dermal (LD_{50} mg/kg)	9,400.0
Species	Rabbit
ATE dermal (mg/kg)	9,400.0
Acute toxicity - inhalation	
Acute toxicity inhalation (LC_{50} vapours mg/l)	0.493
Species	Rat
ATE inhalation (vapours mg/l)	11.0
Skin corrosion/irritation	
Animal data	Irritating.
Serious eye damage/irritation	
Serious eye damage/irritation	Moderately irritating.
Respiratory sensitisation	
Respiratory sensitisation	Sensitising.
Carcinogenicity	
Carcinogenicity	Suspected carcinogen based on limited evidence.
Target organ for carcinogenicity	No specific target organs known.

IARC carcinogenicity	IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity

Reproductive toxicity - development	This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure	Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction.

Aspiration hazard

Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.

Inhalation	Irritating to respiratory system. May cause sensitisation by inhalation.
Ingestion	May cause stomach pain or vomiting.
Skin contact	Irritating to skin. May cause sensitisation by skin contact.
Eye contact	Irritation of eyes and mucous membranes.
Acute and chronic health hazards	May cause sensitisation by skin contact. The product contains small quantities of isocyanate. May cause respiratory allergy. May cause respiratory system irritation. May cause respiratory system irritation. Frequent inhalation of vapours may cause respiratory allergy.
Route of entry	Inhalation Skin and/or eye contact
Medical symptoms	Irritation of eyes and mucous membranes. Coughing, chest tightness, feeling of chest pressure.
Medical considerations	Chronic respiratory and obstructive airway diseases.

METHYLENEDIPHENYL DIISOCYANATE

Acute toxicity - oral

Acute toxicity oral (LD_{50} mg/kg)	10,000.0
Species	Rat
ATE oral (mg/kg)	10,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD_{50} mg/kg)	9,400.0
Species	Rabbit

Skin corrosion/irritation

Skin corrosion/irritation	Skin irritation.
Animal data	Irritating.

Serious eye damage/irritation

Serious eye damage/irritation	Moderately irritating.

Respiratory sensitisation

Respiratory sensitisation	Sensitising.
Skin sensitisation	
Skin sensitisation	Sensitising.
Carcinogenicity	
Carcinogenicity	Suspected carcinogen based on limited evidence.
Target organ for carcinogenicity	No specific target organs known.
Reproductive toxicity	
Reproductive toxicity - development	This substance has no evidence of toxicity to reproduction.
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	Morphological changes that are potentially reversible but provide clear evidence of marked organ dysfunction.
Aspiration hazard	
Aspiration hazard	Not anticipated to present an aspiration hazard, based on chemical structure.

Inhalation	Irritating to respiratory system. May cause sensitisation by inhalation.
Ingestion	May cause stomach pain or vomiting.
Skin contact	Irritating to skin. May cause sensitisation by skin contact.
Eye contact	Irritation of eyes and mucous membranes.
Acute and chronic health hazards	May cause sensitisation by skin contact. The product contains small quantities of isocyanate. May cause respiratory allergy. May cause respiratory system irritation. May cause respiratory system irritation. Frequent inhalation of vapours may cause respiratory allergy.
Route of entry	Inhalation Skin and/or eye contact
Medical symptoms	Irritation of eyes and mucous membranes. Coughing, chest tightness, feeling of chest pressure.
Medical considerations	Chronic respiratory and obstructive airway diseases.

2,2'DIMORPHOLINYLDIETHYL ETHER

Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	2,025.0
Species	Rat
Notes (oral LD_{50})	No information available.
Acute toxicity - dermal	
Acute toxicity dermal (LD_{50} mg/kg)	3,038.0
Species	Rabbit

Notes (dermal LD_{50})	No information available.
Acute toxicity - inhalation	
Notes (inhalation LC_{50})	No information available.
Skin corrosion/irritation	
Skin corrosion/irritation	No information available.
Serious eye damage/irritation	
Serious eye damage/irritation	No information available.
Respiratory sensitisation	
Respiratory sensitisation	No information available.
Skin sensitisation	
Skin sensitisation	No information available.
Carcinogenicity	
IARC carcinogenicity	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Inhalation	May be harmful if inhaled. Spray/mists may cause respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin contact	May be absorbed through the skin. May be harmful in contact with skin. May cause skin irritation.
Eye contact	May cause eye irritation.

BENZOYL CHLORIDE

Acute toxicity - oral	
ATE oral (mg/kg)	500.0
Acute toxicity - dermal	
ATE dermal (mg/kg)	1,100.0
Acute toxicity - inhalation	
Acute toxicity inhalation (LC_{50} vapours mg/l)	3.7
Species	Rat
ATE inhalation (vapours mg/l)	3.7
Carcinogenicity	
IARC carcinogenicity	IARC Group 2A Probably carcinogenic to humans.

PHOSPHORIC ACID ...%

Acute toxicity - oral	
ATE oral (mg/kg)	500.0

SECTION 12: Ecological Information

Ecotoxicity The product is not expected to be hazardous to the environment.

Ecological information on ingredients.

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Ecotoxicity The product is not expected to be hazardous to the environment.

METHYLENEDIPHENYL DIISOCYANATE

Ecotoxicity The product is not expected to be hazardous to the environment.

12.1. Toxicity

Acute toxicity - fish LC50, 96 hours: > 1000 mg/l, Freshwater fish

Acute toxicity - aquatic invertebrates EC_{50}, 48 hours: >500 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC_{50}, 72 hours: ~ 1640 mg/l, Scenedesmus subspicatus

Ecological information on ingredients.

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Acute toxicity - fish LC50, 96 hours: > 1000 mg/l, Freshwater fish

Acute toxicity - aquatic invertebrates EC_{50}, 48 hours: >500 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC_{50}, 72 hours: ~ 1640 mg/l, Scenedesmus subspicatus

Acute toxicity - microorganisms EC_{50}, 3 hours: 100 mg/l, Activated sludge

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 10 mg/l, Daphnia magna

METHYLENEDIPHENYL DIISOCYANATE

Acute toxicity - fish LC_0, 96 hours: 1000 mg/l, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic invertebrates EC_{50}, 24 hours: 1000 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC_0, 72 hours: 1640 mg/l, Scenedesmus subspicatus

Acute toxicity - microorganisms EC_{50}, 3 hours: 100 mg/l, Activated sludge

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 10 mg/l, Daphnia magna

2,2'DIMORPHOLINYLDIETHYL ETHER

Acute toxicity - fish LC_{50}, 96 hours: 2150 mg/l,

Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: >100 mg/l, Daphnia magna
Acute toxicity - microorganisms	EC_{50}, 3 hours: >1000 mg/l, Bacteria

12.2. Persistence and degradability

Persistence and degradability The product is not readily biodegradable.

Stability (hydrolysis) Reacts with water.

Biological oxygen demand < 10 g O_2/g substance

Ecological information on ingredients.

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Persistence and degradability	The product is not readily biodegradable.
Stability (hydrolysis)	Reacts with water.
Biological oxygen demand	< 10 g O_2/g substance

METHYLENEDIPHENYL DIISOCYANATE

Persistence and degradability	The product is not readily biodegradable.
Stability (hydrolysis)	Reacts with water.
Biological oxygen demand	< 10 g O_2/g substance

12.3. Bioaccumulative potential

Bioaccumulative potential The product does not contain any substances expected to be bioaccumulating.

Partition coefficient Not available.

Ecological information on ingredients.

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Bioaccumulative potential	The product does not contain any substances expected to be bioaccumulating.
Partition coefficient	Not available.

METHYLENEDIPHENYL DIISOCYANATE

Bioaccumulative potential	The product does not contain any substances expected to be bioaccumulating.
Partition coefficient	Not available.

12.4. Mobility in soil

Mobility The product is non-volatile.

Ecological information on ingredients.

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Mobility	The product is non-volatile.

METHYLENEDIPHENYL DIISOCYANATE

Mobility The product is non-volatile.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

DIPHENYLMETHANEDIISOCYANATE (MIXTURE OF ISOMERS AND HOMOLOGUES)

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

METHYLENEDIPHENYL DIISOCYANATE

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Not determined.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General Wear protective clothing as described in Section 8 of this safety data sheet.

14.1. UN number

Not applicable.

14.2. UN proper shipping name

14.3. Transport hazard class(es)

14.4. Packing group

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

SECTION 15: Regulatory information

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

National regulations The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
Health and Safety at Work etc. Act 1974 (as amended).
Control of Substances Hazardous to Health Regulations 2002 (as amended).

EU legislation	Dangerous Preparations Directive 1999/45/EC. Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Guidance	Isocyanates: Health hazards and precautionary measures EH16. Introduction to Local Exhaust Ventilation HS(G)37. CHIP for everyone HSG228.
Authorisations (Title VII Regulation 1907/2006)	No specific authorisations are known for this product.
Restrictions (Title VIII Regulation 1907/2006)	No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

General information	Only trained personnel should use this material.
Hazard statements in full	H290 May be corrosive to metals. H302 Harmful if swallowed. H312 Harmful 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. H331 Toxic if inhaled. 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. H371 May cause damage to organs . H373 May cause damage to organs through prolonged or repeated exposure. H412 Harmful to aquatic life with long lasting effects.
Store Between	Store Between 5'c - 25'c
Contains SVHC	NO

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

Head Office: TIMCO House, Green Lane, Wardle, Nantwich, CW5 6BJ | Tel: +44 (0)1829 261111 | Fax: +44 (0)1829 261102 | Web: timco.co.uk