Paracol PU D4 Construct

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Revision date: 17/02/2023 Supersedes version of: 13/12/2021 Version: 2.0

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

1.1. Product identifier

Product form : Mixture
Trade name : Paracol PU D4 Construct

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

1.2.1. Relevant identified uses

Main use category : Professional use

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

DL CHEMICALS N.V.
Roterijstraat 201-203
B-8793 Waregem
Belgium
T + 32 56 62 70 51 - F + 32 56 60 95 68
MSDS@dl-chem.com - www.dl-chem.com

1.4. Emergency telephone number

Emergency number : + 32 56 62 70 51
Only available during office hours.

Country	Official advisory body	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	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
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :

GHS07 GHS08 GHS09

CLP Signal word : Danger

Contains : 4,4'-methylenediphenyl diisocyanate, o-(p-isocyanatobenzyl)phenyl isocyanate, Prepolymer based on aromatic polyisocyanate, Prepolymer based on aromatic polyisocyanate

Hazard statements (CLP) : 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.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) : P260 - Do not breathe vapours.
P264 - Wash hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor.
P273 - Avoid release to the environment.

Extra phrases : As from 24 August 2023 adequate training is required before industrial or professional use.

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
4,4'-methylenediphenyl diisocyanate (101-68-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component	
diethylmethylbenzenediamine (68479-98-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Prepolymer based on aromatic polyisocyanate	CAS-No.: 99784-49-3	≥ 10 – < 25	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 STOT RE 2, H373
o-(p-isocyanatobenzyl)phenyl isocyanate (Note C)(Note 2)	CAS-No.: 5873-54-1 EC-No.: 227-534-9 EC Index-No.: 615-005-00-9 REACH-no: 01-2119480143-45	≥ 5 – < 10	Acute Tox. 4 (Inhalation), H332 (ATE=1,5 mg/l/4h) 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
4,4'-methylenediphenyl diisocyanate (Note C)(Note 2)	CAS-No.: 101-68-8 EC-No.: 202-966-0 EC Index-No.: 615-005-00-9 REACH-no: 01-2119457014-47	≥ 2,5 – < 5	Acute Tox. 4 (Inhalation), H332 (ATE=1,5 mg/l/4h) 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

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Prepolymer based on aromatic polyisocyanate	CAS-No.: 72088-97-2	≥ 5 – < 10	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 STOT RE 2, H373
diethylmethylbenzenediamine (Note C)	CAS-No.: 68479-98-1 EC-No.: 270-877-4 EC Index-No.: 612-130-00-0 REACH-no: 01-2119486805-25	≥ 0,1 – < 0,5	Acute Tox. 4 (Oral), H302 (ATE=472 mg/kg bodyweight) Acute Tox. 4 (Dermal), H312 (ATE=1100 mg/kg bodyweight) Eye Irrit. 2, H319 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Specific concentration limits:		
Name	**Product identifier**	**Specific concentration limits**
o-(p-isocyanatobenzyl)phenyl isocyanate	CAS-No.: 5873-54-1 EC-No.: 227-534-9 EC Index-No.: 615-005-00-9 REACH-no: 01-2119480143-45	(0,1 ≤C < 100) Resp. Sens. 1, H334 (5 ≤C < 100) STOT SE 3, H335 (5 ≤C < 100) Skin Irrit. 2, H315 (5 ≤C < 100) Eye Irrit. 2, H319
4,4'-methylenediphenyl diisocyanate	CAS-No.: 101-68-8 EC-No.: 202-966-0 EC Index-No.: 615-005-00-9 REACH-no: 01-2119457014-47	(0,1 ≤C < 100) Resp. Sens. 1, H334 (5 ≤C < 100) STOT SE 3, H335 (5 ≤C < 100) Skin Irrit. 2, H315 (5 ≤C < 100) Eye Irrit. 2, H319

Note 2 : The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture.
Note C : Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Suspected of causing cancer.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. Call a POISON CENTER/doctor if you feel unwell.

First-aid measures after skin contact : Wash with plenty of water/…. Seek medical attention if ill effect or irritation develops. Wash with plenty of water/…. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label). If skin irritation or rash occurs:

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth. Seek medical attention immediately. Do NOT induce vomiting. Obtain emergency medical attention.

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

Symptoms/effects : Causes damage to organs.

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

Symptoms/effects after skin contact : Causes skin irritation.

Symptoms/effects after eye contact : Causes serious eye irritation.

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 : Water spray. Powder. Foam. Dry powder. Carbon dioxide. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes.

5.3. Advice for firefighters

Precautionary measures fire : Evacuate unnecessary personnel. Exercise caution when fighting any chemical fire. Do not breathe fumes from fires or vapours from decomposition.

Firefighting instructions : Cool down the containers exposed to heat with a water spray. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self contained breathing apparatus.

Other information : Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Respiratory protection equipment may be necessary. Equip cleanup crew with proper protection.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Sweep or shovel spills into appropriate container for disposal. Clean up any spills as soon as possible, using an absorbent material to collect it. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : No open flames. No smoking. Avoid all unnecessary exposure. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Avoid breathing dust/fume/gas/mist/vapours/spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area.
Handling temperature : 5 – 30 °C
Hygiene measures : Ensure prompt removal from eyes, skin and clothing. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle in accordance with good industrial hygiene and safety procedures. Wash hands, forearms and face thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in tightly closed, properly ventilated containers away from heat, sparks, open flame. Keep only in the original container in a cool, well ventilated place away from : Heat and ignition sources. Keep container tightly closed.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.
Storage temperature : 5 – 25 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

4,4'-methylenediphenyl diisocyanate (101-68-8)	
Ireland - Occupational Exposure Limits	
OEL TWA [1]	0,02 mg/m³
OEL STEL	0,07 mg/m³
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	0,02 mg/m³
WEL STEL (OEL STEL)	0,07 mg/m³

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station. Local exhaust and general ventilation must be adequate to meet exposure standards.

8.2.2. Personal protection equipment

Personal protective equipment:
Gloves. Safety glasses. Avoid all unnecessary exposure.

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Chemical goggles or safety glasses

Eye protection			
Type	**Field of application**	**Characteristics**	**Standard**
Safety glasses		With side shields	EN 166

8.2.2.2. Skin protection

Skin and body protection:
If skin contact or contamination of clothing is possible, protective clothing should be worn. Wear suitable protective clothing

Hand protection:
Time of penetration is to be checked with the glove producer. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear. Wear protective gloves.

Hand protection					
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**	**Standard**
Disposable gloves	Nitrile rubber (NBR), Chloroprene rubber (CR), Butyl rubber, Fluoroelastomer (FKM)	6 (> 480 minutes)	≥ 0.35		EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:
Air-fed respiratory protective equipment should be worn when this product is sprayed if the exposure of the sprayer or other people nearby cannot be controlled to below the occupational exposure limit. In case of inadequate ventilation wear respiratory protection.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Consumer exposure controls:
Avoid contact with skin and eyes. Wash hands and other exposed areas with soap and water before leaving work.

Other information:
Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Beige. Yellow-brown. Yellow. brown.
Appearance	:	Viscous.
Odour	:	characteristic.
Odour threshold	:	Not available
Melting point	:	Not applicable
Freezing point	:	Does not apply
Softening point	:	Not applicable.
Boiling point	:	Decomposes before boiling
Flammability	:	Non flammable.
Explosive properties	:	Product is not explosive.
Oxidising properties	:	Non oxidizing material according to EC criteria.
Explosive limits	:	Not available
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Flash point	:	> 100 °C (ISO 3679)
Auto-ignition temperature	:	≥ 209 °C (calculated value)
Decomposition temperature	:	Not available

pH	:	insoluble in water
Viscosity, kinematic	:	5759,355 mm²/s
Viscosity, dynamic	:	8927 mPa.s (Brookfield spindle 96, 1 rpm)
Non-Newtonian liquid	:	Thixotropic behaviour
Solubility	:	Water: Material insoluble in water
Partition coefficient n-octanol/water (Log Kow)	:	Not applicable for preparations
Partition coefficient n-octanol/water (Log Pow)	:	Not applicable for preparations
Vapour pressure	:	Not applicable
Vapour pressure at 50°C	:	Not applicable
Density	:	1,55 g/cm³
Relative density	:	1,55
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

4,4'-methylenediphenyl diisocyanate	
Vapour pressure	< 0,00001 hPa 20°C

o-(p-isocyanatobenzyl)phenyl isocyanate	
Boiling point	> 300 °C Decomposes before boiling
Flash point	208 °C (closed cup)
Auto-ignition temperature	> 601
Vapour pressure	0,0014 hPa at 20°C

diethylmethylbenzenediamine	
Boiling point	308,3 °C
Flash point	156 °C
Auto-ignition temperature	420 – 440 °C
Vapour pressure	32,4 Pa at 20 °C

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use. Not established.

10.3. Possibility of hazardous reactions

Reacts violently with. Strong acids, strong bases and strong oxidants. Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Decomposes on heating. Decomposition products may be a hazard to health. fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

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

4,4'-methylenediphenyl diisocyanate (101-68-8)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 9400 mg/kg (OECD 402 method)
LC50 Inhalation - Rat (Dust/Mist)	1,5 mg/l/4h (OECD 403 method)

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 9400 mg/kg (OECD 402 method)
LC50 Inhalation - Rat (Dust/Mist)	1,5 mg/l/4h

diethylmethylbenzenediamine (68479-98-1)	
LD50 oral rat	472 – 598 mg/kg
LD50 dermal	1100 mg/kg

Prepolymer based on aromatic polyisocyanate (99784-49-3)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 9400 mg/kg (OECD 402 method)
LC50 Inhalation - Rat (Dust/Mist)	1,5 mg/l/4h

Prepolymer based on aromatic polyisocyanate (72088-97-2)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 9400 mg/kg (OECD 402 method)

Skin corrosion/irritation : Causes skin irritation.
pH: insoluble in water

Serious eye damage/irritation : Causes serious eye irritation.
pH: insoluble in water

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
Additional information : Based on available data, the classification criteria are not met
Carcinogenicity : Suspected of causing cancer.
Reproductive toxicity : Not classified
Additional information : Based on available data, the classification criteria are not met
STOT-single exposure : May cause respiratory irritation.

4,4'-methylenediphenyl diisocyanate (101-68-8)	
STOT-single exposure	May cause respiratory irritation.

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)	
STOT-single exposure	May cause respiratory irritation.

Prepolymer based on aromatic polyisocyanate (99784-49-3)	
STOT-single exposure	May cause respiratory irritation.

Prepolymer based on aromatic polyisocyanate (72088-97-2)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

4,4'-methylenediphenyl diisocyanate (101-68-8)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

diethylmethylbenzenediamine (68479-98-1)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Prepolymer based on aromatic polyisocyanate (99784-49-3)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Prepolymer based on aromatic polyisocyanate (72088-97-2)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified
Additional information : Based on available data, the classification criteria are not met

Paracol PU D4 Construct	
Viscosity, kinematic	5759,355 mm²/s

diethylmethylbenzenediamine (68479-98-1)	
Viscosity, kinematic	280,722 mm²/s

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

11.2.2. Other information

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Mixture Raw material

4,4'-methylenediphenyl diisocyanate (101-68-8)	
LC50 - Fish [1]	> 1000 (≥ 1000) mg/l (OECD 203 method)
EC50 - Crustacea [1]	≥ 1000 mg/l (OECD 202 method)
EC50 - Other aquatic organisms [1]	≥ 1640 mg/l Scenedesmus subspicatus
EC50 - Other aquatic organisms [2]	≥ 100 mg/l Activated sludge
EC50 72h - Algae [1]	> 1640 mg/l (OECD 201 method)
NOEC (acute)	≥ 1000 mg/kg Earthworm
NOEC (chronic)	≥ 10 mg/l Daphnia magna (Big water flea)
NOEC chronic crustacea	> 10 mg/l (OECD 202 method)

o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)	
LC50 - Fish [1]	> 1000 mg/l (OECD 203 method)
EC50 - Crustacea [1]	> 1000 mg/l (OECD 202 method)
EC50 72h - Algae [1]	> 1640 mg/l (OECD 201 method)
ErC50 algae	> 1640 mg/l (OECD 201 method)
NOEC (acute)	≥ 1000 mg/kg Earthworm
NOEC (chronic)	≥ 21 mg/l Daphnia magna (Big water flea)
NOEC chronic crustacea	> 10 mg/l (OECD 202 method)

diethylmethylbenzenediamine (68479-98-1)	
LC50 - Fish [1]	200 mg/l
EC50 - Crustacea [1]	0,5 mg/l
EC50 72h - Algae [1]	104 mg/l (OECD 201 method)
NOEC chronic algae	32 mg/l (OECD 201 method)

Prepolymer based on aromatic polyisocyanate (99784-49-3)	
EC50 - Crustacea [1]	> 100 mg/l (OECD 209 method)
EC50 - Other aquatic organisms [2]	≥ 1000 mg/l Activated sludge

Prepolymer based on aromatic polyisocyanate (72088-97-2)	
LC50 - Fish [1]	> 1000 mg/l (OECD 203 method)
EC50 - Crustacea [1]	> 1000 mg/l (OECD 202 method)
EC50 72h - Algae [1]	> 1640 mg/l (OECD 201 method)
ErC50 other aquatic plants	> 100 mg/l
NOEC chronic crustacea	> 10 mg/l (OECD 202 method)

12.2. Persistence and degradability

Paracol PU D4 Construct	
Persistence and degradability	May cause long-term adverse effects in the environment.
4,4'-methylenediphenyl diisocyanate (101-68-8)	
Persistence and degradability	Hydrolysis in water.
Biodegradation	28d 0 % (OECD 302C method)
o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)	
Persistence and degradability	Hydrolysis in water.
Biodegradation	28d 0 % (OECD 302C method)
diethylmethylbenzenediamine (68479-98-1)	
Biodegradation	0 % (OECD 301D method)
Prepolymer based on aromatic polyisocyanate (72088-97-2)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	28d 0 % (OECD 302C method)

12.3. Bioaccumulative potential

Paracol PU D4 Construct	
Partition coefficient n-octanol/water (Log Pow)	Not applicable for preparations
Partition coefficient n-octanol/water (Log Kow)	Not applicable for preparations
Bioaccumulative potential	Not established.
4,4'-methylenediphenyl diisocyanate (101-68-8)	
Bioconcentration factor (BCF REACH)	28 d 200 0.00008 mg/L
o-(p-isocyanatobenzyl)phenyl isocyanate (5873-54-1)	
Bioconcentration factor (BCF REACH)	28 d 200 0.00008 mg/L
Partition coefficient n-octanol/water (Log Pow)	4,51 at 22°C
diethylmethylbenzenediamine (68479-98-1)	
Bioconcentration factor (BCF REACH)	13,82
Partition coefficient n-octanol/water (Log Pow)	1,38

12.4. Mobility in soil

diethylmethylbenzenediamine (68479-98-1)	
Surface tension	50 N/m

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Disposal must be done according to official regulations.

Product/Packaging disposal recommendations : Dispose of this material and its container at hazardous or special waste collection point. Neutralize collected waste before discharge. Reacts slowly with water, generate gases (CO2) and overpressure : rupture containers. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Ecology - waste materials : Avoid release to the environment.

HP Code : HP5 - "Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:" waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.
HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.
HP7 - "Carcinogenic:" waste which induces cancer or increases its incidence
HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.
HP13 - "Sensitising:" waste which contains one or more substances known to cause sensitising effects to the skin or the respiratory organs.
HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	Environmentally hazardous substance, liquid, n.o.s.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, (E)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s., 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III

ADR	IMDG	IATA	ADN	RID
14.3. Transport hazard class(es)				
9	9	9	9	9
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR) : M6
Special provisions (ADR) : 274, 335, 601, 375
Limited quantities (ADR) : 5l
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P001, IBC03, LP01, R001
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1, TP29
Tank code (ADR) : LGBV
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13
Hazard identification number (Kemler No.) : 90
Orange plates :

Tunnel restriction code (ADR) : E

Transport by sea

Transport regulations (IMDG) : Not applicable
Special provisions (IMDG) : 274, 335, 969
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P001, LP01
Special packing provisions (IMDG) : PP1
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP2, TP29
EmS-No. (Fire) : F-A

EmS-No. (Spillage)	:	S-F
Stowage category (IMDG)	:	A

Air transport

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y964
PCA limited quantity max net quantity (IATA)	:	30kgG
PCA packing instructions (IATA)	:	964
PCA max net quantity (IATA)	:	450L
CAO packing instructions (IATA)	:	964
CAO max net quantity (IATA)	:	450L
Special provisions (IATA)	:	A97, A158, A197
ERG code (IATA)	:	9L

Inland waterway transport

Transport regulations (ADN)	:	Not applicable
Classification code (ADN)	:	M6
Special provisions (ADN)	:	274, 335, 375, 601
Limited quantities (ADN)	:	5 L
Excepted quantities (ADN)	:	E1
Carriage permitted (ADN)	:	T
Equipment required (ADN)	:	PP
Number of blue cones/lights (ADN)	:	0

Rail transport

Transport regulations (RID)	:	Not regulated.
Classification code (RID)	:	M6
Special provisions (RID)	:	274, 335, 375, 601
Limited quantities (RID)	:	5L
Excepted quantities (RID)	:	E1
Packing instructions (RID)	:	P001, IBC03, LP01, R001
Special packing provisions (RID)	:	PP1
Mixed packing provisions (RID)	:	MP19
Portable tank and bulk container instructions (RID)	:	T4
Portable tank and bulk container special provisions (RID)	:	TP1, TP29
Tank codes for RID tanks (RID)	:	LGBV
Transport category (RID)	:	3
Special provisions for carriage – Packages (RID)	:	W12
Special provisions for carriage - Loading, unloading and handling (RID)	:	CW13, CW31
Colis express (express parcels) (RID)	:	CE8
Hazard identification number (RID)	:	90

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
74.	o-(p-isocyanatobenzyl)phenyl isocyanate ; 4,4'-methylenediphenyl diisocyanate	Diisocyanates, O = C=N-R-N = C=O, with R an aliphatic or aromatic hydrocarbon unit of unspecified length

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

For the following substances of this mixture a chemical safety assessment has been carried out:
o-(p-isocyanatobenzyl)phenyl isocyanate

SECTION 16: Other information

Indication of changes:
Physical and chemical properties. Regulatory information.

Abbreviations and acronyms:	
CAS-No.	Chemical Abstract Service number

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
IOELV	Indicative Occupational Exposure Limit Value
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
NOAEL	No-Observed Adverse Effect Level
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative

Data sources : 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.

Other information : None.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
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.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
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

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
Resp. Sens. 1	H334	Calculation method
Skin Sens. 1	H317	Calculation method
Carc. 2	H351	Calculation method
STOT SE 3	H335	Calculation method
STOT RE 2	H373	Calculation method
Aquatic Chronic 2	H411	Expert judgment

SDS EU DL Chemicals

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.