

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

1.1. Product identifier

Product form : Mixtures
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
Roterijstraat 201-203
B-8793 Waregem - Belgium
T + 32 56 62 70 51 - F + 32 56 60 95 68
info@dl-chem.com - www.dl-chem.com

1.4. Emergency telephone number

Emergency number : + 32 70 245 245

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
Sensitisation — Respiratory, Category 1	H334
Sensitisation — Skin, 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 hazard classes and H-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

Hazardous ingredients : o-(p-isocyanatobenzyl)phenyl isocyanate; 4,4'-methylenediphenyl diisocyanate
Prepolymer based on aromatic polyisocyanate; 4,4'-(ethane-1,2-diyl)bismorpholine

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) : P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood

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P260 - Do not breathe vapours
 P264 - Wash hands thoroughly after handling
 P271 - Use only outdoors or in a well-ventilated area
 P272 - Contaminated work clothing should not be allowed out of the workplace

EUH-statements : EUH204 - Contains isocyanates. May produce an allergic reaction

2.3. Other hazards

No additional information available

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	< 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 Aquatic Chronic 2, H411
o-(p-isocyanatobenzyl)phenyl isocyanate, diphenylmethane-2,4'-diisocyanate (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	< 10	Carc. 2, H351 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317
4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-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	< 10	Carc. 2, H351 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317
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
Diethyltoluylendiamine	(CAS No) 68479-98-1 (EC No) 270-877-4 (EC Index No) 612-130-00-0	< 1	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 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, diphenylmethane-2,4'-diisocyanate	(CAS No) 5873-54-1 (EC No) 227-534-9 (EC Index No) 615-005-00-9 (REACH-no) 01-2119480143-45	(C >= 0,1) Resp. Sens. 1, H334 (C >= 5) STOT SE 3, H335 (C >= 5) Skin Irrit. 2, H315 (C >= 5) Eye Irrit. 2, H319
4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate	(CAS No) 101-68-8 (EC No) 202-966-0 (EC Index No) 615-005-00-9 (REACH-no) 01-2119457014-47	(C >= 0,1) Resp. Sens. 1, H334 (C >= 5) STOT SE 3, H335 (C >= 5) Skin Irrit. 2, H315 (C >= 5) 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

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case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
First-aid measures after skin contact	: Wash with plenty of soap and water. Seek medical attention if ill effect or irritation develops.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Seek medical attention immediately.

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

No additional information available

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

No additional information available

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Powder.
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.
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

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

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.

6.4. Reference to other sections

No additional information available

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : No open flames. No smoking. Avoid all unnecessary exposure.
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.

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 container closed when not in use. Keep only in the original container in a cool, well ventilated place away from : Heat and ignition sources.
Maximum storage period : 12 months
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

4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate (101-68-8)		
United Kingdom	WEL TWA (mg/m ³)	0,02 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	0,07 mg/m ³
silica (7631-86-9/112945-52-5)		
United Kingdom	WEL TWA (mg/m ³)	6 mg/m ³ inhalable dust 2,4 mg/m ³ respirable dust

8.2. Exposure controls

Appropriate engineering controls:

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

Personal protective equipment:

Gloves. Safety glasses.

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

Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber, Chloroprene rubber, Butyl rubber, Fluoroelastomer	6 (> 480 minutes)	>= 0.35		EN 374

Eye protection:

Type	Use	Characteristics	Standard
Safety glasses		With side shields	EN 166

Skin and body protection:

If skin contact or contamination of clothing is possible, protective clothing should be worn

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



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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
Appearance	: Viscous
Colour	: Beige
Odour	: characteristic
Density	: 1,55 g/cm ³

9.2. Other information

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.

10.3. Possibility of hazardous reactions

Reacts violently with. Strong acids, strong bases and strong oxidants.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Decomposes on heating. Decomposition products may be a hazard to health.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate (101-68-8)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 9400 mg/kg
LC50 inhalation rat (mg/l)	368 mg/l/4h Dust/Mist
o-(p-isocyanatobenzyl)phenyl isocyanate, diphenylmethane-2,4'-diisocyanate (5873-54-1)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	> 9400 mg/kg
LC50 inhalation rat (Dust/Mist - mg/l/4h)	0,387 mg/l/4h
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 - mg/l/4h)	1,5 mg/l/4h
Prepolymer based on aromatic polyisocyanate (72088-97-2)	
LD50 oral rat	5000 mg/kg

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.

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STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate (101-68-8)	
LC50 fish 1	96h 1000 mg/l Brachydanio rerio (zebra-fish)
EC50 Daphnia 1	24h 1000 mg/l Daphnia magna (Big water flea)
EC50 other aquatic organisms 1	72h 1640 mg/l Scenedesmus subspicatus
EC50 other aquatic organisms 2	3 h 100 mg/l Activated sludge
NOEC (acute)	14 d 1000 mg/kg Earthworm
NOEC (chronic)	21 d 10 mg/l Daphnia magna (Big water flea)
o-(p-isocyanatobenzyl)phenyl isocyanate, diphenylmethane-2,4'-diisocyanate (5873-54-1)	
LC50 fish 1	> 1000 mg/l (OECD 203 method)
EC50 Daphnia 1	> 1000 mg/l (OECD 202 method)
ErC50 (algae)	> 1640 mg/l (OECD 201 method)
NOEC (acute)	14 d 1000 mg/kg Earthworm
NOEC (chronic)	21 d 21 mg/l Daphnia magna (Big water flea)
NOEC chronic crustacea	14 d > 1000 mg/l
Prepolymer based on aromatic polyisocyanate (99784-49-3)	
EC50 Daphnia 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 Daphnia 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

4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate (101-68-8)	
Persistence and degradability	Hydrolysis in water.
Biodegradation	28d 0 %
o-(p-isocyanatobenzyl)phenyl isocyanate, diphenylmethane-2,4'-diisocyanate (5873-54-1)	
Persistence and degradability	Hydrolysis in water.
Biodegradation	28d 0 %
Prepolymer based on aromatic polyisocyanate (72088-97-2)	
Persistence and degradability	Not readily biodegradable.
Biodegradation	28d 0 % (OECD 301F method)

12.3. Bioaccumulative potential

4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate (101-68-8)	
Bioconcentration factor (BCF REACH)	28 d 200 0.00008 mg/L
o-(p-isocyanatobenzyl)phenyl isocyanate, diphenylmethane-2,4'-diisocyanate (5873-54-1)	
Bioconcentration factor (BCF REACH)	28 d 200 0.00008 mg/L
Log Pow	4,51 at 22°C

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component	
o-(p-isocyanatobenzyl)phenyl isocyanate, diphenylmethane-2,4'-diisocyanate (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, diphenylmethane-4,4'-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

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12.6. Other adverse effects

No additional information available

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.

SECTION 14: Transport information

In accordance with ADR

ADR

14.1. UN number

3082

14.2. UN proper shipping name

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III, (E)

14.3. Transport hazard class(es)

9



14.4. Packing group

III

14.5. Environmental hazards

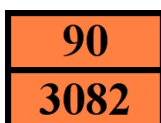
Dangerous for the environment : Yes

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) : 5I
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

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

Not applicable

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out

o-(p-isocyanatobenzyl)phenyl isocyanate, diphenylmethane-2,4'-diisocyanate
4,4'-methylenediphenyl diisocyanate, diphenylmethane-4,4'-diisocyanate

SECTION 16: Other information

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
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
Resp. Sens. 1	Sensitisation — Respiratory, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Sensitisation — Skin, 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
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
EUH204	Contains isocyanates. May produce an allergic reaction

MSDS Reach Annex II DL-Chem

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