Express PU

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 29/11/2024 Revision date: 20/11/2025 Supersedes version of: 29/11/2024 Version: 1.1

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

1.1. Product identifier

Product form	:	Mixture
Trade name	:	Express PU
UFI	:	2270-P0CN-6006-2C6N
Article number	:	00059014

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

Relevant identified uses

Main use category	:	Consumer use,Professional use,Industrial use
Industrial/Professional use spec	:	As from 24 August 2023 adequate training is required before industrial or professional use
Use of the substance/mixture	:	adhesives

1.3. Details of the supplier of the safety data sheet

Manufacturer
fischerwerke GmbH & Co. KG
Klaus-Fischer-Straße 1
72178 Waldachtal
Germany
T +49(0)7443 12-0, F +49(0)7443 12-4222
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United Kingdom of Great Britain and Northern Ireland
T +44 14 91 82 79 00, F +44 14 91 82 79 53
info@fischer.co.uk, www.fischer.co.uk

1.4. Emergency telephone number

Emergency number	:	+49(0)6132-84463 (24h)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

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

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

Adverse physicochemical, human health and environmental effects

Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS07 GHS08

Signal word (CLP)	:	Danger
Contains	:	Isocyanic acid, polymethylenepolyphenylene ester; 4,4'-methylenediphenyl diisocyanate; Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate
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.
Precautionary statements (CLP)	:	P101 - If medical advice is needed, have product container or label at hand. P102 - Keep out of reach of children. P260 - Do not breathe spray, vapours, gas, mist, fume, dust. P280 - Wear protective gloves, protective clothing/eye protection/face protection. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P405 - Store locked up. P501 - Dispose of contents/container to Collection point.
EUH-statements	:	EUH204 - Contains isocyanates. May produce an allergic reaction.
Extra phrases	:	Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. 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. As from 24 August 2023 adequate training is required before industrial or professional use.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH 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 substance(s) are 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

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Isocyanic acid, polymethylenepolyphenylene ester substance with national workplace exposure limit(s) (GB); substance with a Community workplace exposure limit	CAS-No.: 9016-87-9 EC-No.: 618-498-9	≥ 10 – < 30	Acute Tox. 4 (Inhalation:vapour), 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 EUH204
4,4'-methylenediphenyl diisocyanate substance with a Community workplace exposure limit (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	≥ 1 – < 15	Acute Tox. 4 (Inhalation), H332 (ATE=0.49 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
2,2'-Dimorpholinodiethyl ether	CAS-No.: 6425-39-4 EC-No.: 229-194-7 REACH-no: 01-2119969278-20	≥ 1 – < 10	Eye Irrit. 2, H319
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	EC-No.: 905-806-4 REACH-no: 01-2119457015-45	≥ 1 – < 10	Acute Tox. 4 (Inhalation:dust,mist), H332 (ATE=0.49 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 EUH204

Specific concentration limits:		
Name	**Product identifier**	**Specific concentration limits (%)**
Isocyanic acid, polymethylenepolyphenylene ester	CAS-No.: 9016-87-9 EC-No.: 618-498-9	(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) Eye Irrit. 2; H319 (5 ≤ C ≤ 100) Skin Irrit. 2; H315 (5 ≤ C ≤ 100) STOT SE 3; H335

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 : 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 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 : Call a poison center or a doctor if you feel unwell.

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

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.

Symptoms/effects after eye contact : Eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide (CO2). Water spray. Dry powder. Foam.

Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Combustion products may include the following: carbon oxides (CO, CO2). Nitrogen oxides. Isocyanates. Hydrocyanic acid.

5.3. Advice for firefighters

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

Other information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Avoid contact with skin and eyes. Use appropriate ventilation.

For non-emergency personnel

Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

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 : Do not scatter spilled material with high-pressure water streams.
Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

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 dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.
Hygiene measures : Avoid contact with skin, eyes and clothing. Remove dirty clothes. 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 : 5 – 25 °C

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Methylisocyanate
IOEL STEL	0.02 ppm
Regulatory reference	COMMISSION DIRECTIVE 2009/161/EU
EU - Binding Occupational Exposure Limit (BOEL)	
Local name	Diisocyanates (measured as NCO)
BOEL TWA	10 µg/m³ (Limit value until 31 December 2028) 6 µg/m³
BOEL STEL	20 µg/m³ (Limit value until 31 December 2028) 12 µg/m³
Regulatory reference	DIRECTIVE (EU) 2024/869 (amending Directive 2004/37/EC)
United Kingdom - Occupational Exposure Limits	
Local name	Isocyanates
WEL TWA (OEL TWA)	0.02 mg/m³ all (as –NCO) Except methyl isocyanate
WEL STEL (OEL STEL)	0.07 mg/m³ all (as –NCO) Except methyl isocyanate

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
Remark	Sen (Capable of causing occupational asthma)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
United Kingdom - Biological limit values	
Local name	Isocyanates (applies to HDI, IPDI, TDI and MDI)
BMGV	1 µmol/mol creatinine Parameter: isocyanate-derived diamine - Medium: urine - Sampling time: At the end of the period of exposure
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

4,4'-methylenediphenyl diisocyanate (101-68-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	0.001 mg/m³
IOEL STEL	0.002 mg/m³

DNEL and PNEC

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	0.1 mg/m³
Long-term - systemic effects, inhalation	0.05 mg/m³
DNEL/DMEL (General population)	
Acute - systemic effects, inhalation	0.05 mg/m³
Long-term - systemic effects, inhalation	0.025 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	1 mg/l
PNEC aqua (marine water)	0.1 mg/l
PNEC aqua (intermittent, freshwater)	10 mg/l
PNEC (STP)	
PNEC sewage treatment plant	1 mg/l

4,4'-methylenediphenyl diisocyanate (101-68-8)	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	50 mg/kg bodyweight/day
Acute - systemic effects, inhalation	0.1 mg/m³
Acute - local effects, dermal	28.7 mg/cm²
Acute - local effects, inhalation	0.1 mg/m³
Long-term - systemic effects, dermal	0.1 mg/m³
Long-term - systemic effects, inhalation	0.05 mg/m³
Long-term - local effects, inhalation	0.05 mg/m³
DNEL/DMEL (General population)	
Acute - local effects, inhalation	0.05 mg/m³
Long-term - local effects, inhalation	0.025 mg/m³
PNEC (Water)	
PNEC aqua (freshwater)	1 mg/l
PNEC aqua (marine water)	0.1 mg/l
PNEC aqua (intermittent, freshwater)	10 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	11.7 mg/kg dwt

4,4'-methylenediphenyl diisocyanate (101-68-8)	
PNEC sediment (marine water)	1.17 mg/kg dwt
PNEC (Soil)	
PNEC soil	1 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	1 mg/l

2,2'-Dimorpholinodiethyl ether (6425-39-4)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	1 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	7.28 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	0.5 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	1.8 mg/m³
Long-term - systemic effects, dermal	0.5 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	0.1 mg/l
PNEC aqua (marine water)	0.01 mg/l
PNEC aqua (intermittent, freshwater)	1 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	8.2 mg/kg dwt
PNEC sediment (marine water)	0.82 mg/kg dwt
PNEC (Soil)	
PNEC soil	1.58 mg/kg dwt
PNEC (Oral)	
PNEC oral (secondary poisoning)	10 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	100 mg/l

8.2. Exposure controls

Appropriate engineering controls

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

Personal protection equipment

Personal protective equipment symbol(s):

Eye and face protection

Eye protection:
Safety glasses

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

Skin protection

Skin and body protection:
Wear suitable protective clothing. Long sleeved protective clothing

Hand protection:
Protective gloves

Hand protection					
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**	**Standard**
Disposable gloves	Nitrile rubber (NBR), Chloroprene rubber (CR), Butyl rubber	3 (> 60 minutes)	> 0,4		EN ISO 374

Respiratory protection

Respiratory protection:
No respiratory protection needed under normal use conditions. In case of insufficient ventilation, wear suitable respiratory equipment

Respiratory protection			
Device	**Filter type**	**Condition**	**Standard**
Full face respirator	Type P2		EN 14387

Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Colour	:	light brown.
Appearance	:	Paste.
Odour	:	characteristic.
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not applicable
Boiling point	:	Not available
Flammability	:	Combustible
Explosive properties	:	Not explosive.
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Flash point	:	111 °C
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	Not available
pH	:	Not available
pH solution	:	Not available
Viscosity, kinematic	:	Not applicable
Solubility	:	Insoluble.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	1.5 g/cm³ (20 °C)
Relative density	:	Not available
Relative vapour density at 20°C	:	Not applicable
Particle size	:	Not available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with water.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Exothermic reaction on contact with : alcohol. Amines. Water. acids and bases.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

alcohols. Amines. Acids. Water. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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

Express PU	
ATE CLP (vapours)	20 mg/l/4h

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
LD50 oral rat	> 10000 mg/kg (OECD 401 method)
LD50 dermal rabbit	> 9400 mg/kg (OECD 402 method)
LC50 Inhalation - Rat	1.5 mg/l
LC50 Inhalation - Rat (Vapours)	(OECD 403 method)

4,4'-methylenediphenyl diisocyanate (101-68-8)	
LD50 oral rat	> 2000 mg/kg bodyweight
LD50 dermal rabbit	> 9400 mg/kg bodyweight
LC50 Inhalation - Rat (Dust/Mist)	0.49 mg/l

2,2'-Dimorpholinodiethyl ether (6425-39-4)	
LD50 oral rat	> 2000 mg/kg bodyweight (OECD 423 method)
LD50 dermal rabbit	3038 mg/kg bodyweight (OECD 402 method)

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
LD50 oral rat	> 10000 mg/kg
LD50 dermal rabbit	> 9400 mg/kg bodyweight
LC50 Inhalation - Rat	0.49 mg/l

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.

4,4'-methylenediphenyl diisocyanate (101-68-8)	
Additional information	Practical experience / human evidence

4,4'-methylenediphenyl diisocyanate (101-68-8)	
Additional information	mouse
Germ cell mutagenicity :	Not classified

4,4'-methylenediphenyl diisocyanate (101-68-8)	
Additional information	In vitro
Carcinogenicity :	Suspected of causing cancer.

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
IARC group	3 - Not classifiable

4,4'-methylenediphenyl diisocyanate (101-68-8)	
IARC group	3 - Not classifiable
Reproductive toxicity :	Not classified
STOT-single exposure :	May cause respiratory irritation.

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
STOT-single exposure	May cause respiratory irritation.

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

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure :	May cause damage to organs through prolonged or repeated exposure.

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
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.

2,2'-Dimorpholinodiethyl ether (6425-39-4)	
NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard :	Not classified

Express PU	
Viscosity, kinematic	Not applicable

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
Viscosity, kinematic	> 161.551 mm²/s

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
Viscosity, kinematic	9.09 mm²/s

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : Not classified

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
LC50 - Fish [1]	> 1000 mg/l Brachydanio rerio (zebra-fish)

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
EC50 - Crustacea [1]	> 1000 mg/l Daphnia magna (Water flea)
ErC50 algae	> 1640 mg/l Scenedesmus subspicatus
NOEC chronic crustacea	> 10 mg/l Daphnia magna (Water flea)
4,4'-methylenediphenyl diisocyanate (101-68-8)	
LC50 - Fish [1]	> 1000 mg/l Brachydanio rerio (zebra-fish)
EC50 - Crustacea [1]	> 1000
EC50 72h - Algae [1]	> 1640 mg/l
NOEC (chronic)	≥ 10 mg/l
NOEC chronic crustacea	10 mg/l 21 d
NOEC chronic algae	1640 mg/l Green algae
2,2'-Dimorpholinodiethyl ether (6425-39-4)	
LC50 - Fish [1]	> 2337.5 mg/l Brachydanio rerio (zebra-fish)
EC50 - Crustacea [1]	> 100 mg/l Daphnia magna (Water flea)
EC50 72h - Algae [1]	> 100 mg/l Pseudokirchneriella subcapitata
EC50 96h - Algae [1]	31.416 mg/l
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
LC50 - Fish [1]	> 1000 mg/l (OECD 203 method)
NOEC chronic crustacea	> 10 mg/l Daphnia magna (Water flea)

12.2. Persistence and degradability

Express PU	
Persistence and degradability	Not rapidly degradable
Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
Persistence and degradability	Not rapidly degradable
4,4'-methylenediphenyl diisocyanate (101-68-8)	
Persistence and degradability	Not rapidly degradable
2,2'-Dimorpholinodiethyl ether (6425-39-4)	
Persistence and degradability	Rapidly degradable
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
Bioconcentration factor (BCF REACH)	200 Cyprinus carpio (Common carp)
Partition coefficient n-octanol/water (Log Pow)	10.46
4,4'-methylenediphenyl diisocyanate (101-68-8)	
Bioconcentration factor (BCF REACH)	200 OECD 305
Partition coefficient n-octanol/water (Log Pow)	4.51
2,2'-Dimorpholinodiethyl ether (6425-39-4)	
Partition coefficient n-octanol/water (Log Pow)	-1.31

12.4. Mobility in soil

4,4'-methylenediphenyl diisocyanate (101-68-8)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	34000

2,2'-Dimorpholinodiethyl ether (6425-39-4)	
Mobility in soil	12.98

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : 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 substance(s) are 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 %.

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Avoid release to the environment.
European List of Waste (LoW, EC 2000/532) : 08 04 09* - waste adhesives and sealants containing organic solvents or other dangerous substances
08 05 01* - waste isocyanates

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
14.1. UN number or ID number		
Not regulated for transport		
14.2. UN proper shipping name		
Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)		
Not regulated	Not regulated	Not regulated
14.4. Packing group		
Not regulated	Not regulated	Not regulated
14.5. Environmental hazards		
Not regulated	Not regulated	Not regulated

No supplementary information available

14.6. Special precautions for user

Overland transport
Not regulated

Transport by sea
Not regulated

Air transport
Not regulated

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

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
56(a)	4,4'-methylenediphenyl diisocyanate	Methylenediphenyl diisocyanate (MDI) isomers: 4,4'-Methylenediphenyl diisocyanate
74.	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 (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (EU 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 (EC 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)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

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
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard

Abbreviations and acronyms:	
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstracts Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) Category 4
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
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.

Full text of H- and EUH-statements:	
H373	May cause damage to organs through prolonged or repeated exposure.
EUH204	Contains isocyanates. May produce an allergic reaction.

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

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.