DSI Inject PUR 1C versions: 100; 100-II; 100-II R

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 7/18/2016 Revision date: 7/16/2025 Supersedes version of: 8/14/2024 Version: 3.5

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

1.1. Product identifier

Product form : Mixture
Trade name : DSI Inject PUR 1C versions: 100; 100-II; 100-II R
Product group : Polyurethane

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

Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Moisture cure adhesive / sealant

1.3. Details of the supplier of the safety data sheet

DSI Schaum Chemie sp. z o.o.
Podleska 76
43-190 Mikołów
Poland
T +48 32 355 90 81, 252 88 89, 252 88 99
info-schaumchemie@sandvik.com
E-mail address of competent person responsible for the SDS : lab.resin@sandvik.com

1.4. Emergency telephone number

Emergency number : Emergency Contact (24-Hour-Number):GBK GmbH +49 (0)6132-84463
Emergency phone number 112 (EU)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (inhalation:dust,mist) Category 4	H332
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

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

Signal word (CLP) : Danger
Contains : Diphenylmethane diisocyanate; 4,4'-methylenediphenyl diisocyanate; diphenylmethane-2,4'-diisocyanate

Hazard statements (CLP)	:	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.
Precautionary statements (CLP)	:	P260 - Do not breathe dusts or mists. P308+P313 - IF exposed or concerned: Get medical advice/attention. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P284 - In case of inadequate ventilation wear respiratory protection. P280 - Wear protective gloves, protective clothing, eye protection, face protection.
EUH-statements	:	EUH204 - Contains isocyanates. May produce an allergic reaction.
Extra phrases	:	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

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Diphenylmethane diisocyanate (9016-87-9), 2,2'-dimorpholinyldiethyl ether (6425-39-4)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Diphenylmethane diisocyanate (9016-87-9), 2,2'-dimorpholinyldiethyl ether (6425-39-4)

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]
Diphenylmethane diisocyanate	CAS-No.: 9016-87-9 EC-No.: 248-740-5	60 – 80	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. 1B, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
2,2'-dimorpholinyldiethyl ether	CAS-No.: 6425-39-4 EC-No.: 229-194-7	0 – 5	Eye Irrit. 2, H319
2-(2-butoxyethoxy)ethanol substance with a Community workplace exposure limit	CAS-No.: 112-34-5 EC-No.: 203-961-6 EC Index-No.: 603-096-00-8	0 – 2	Eye Irrit. 2, H319

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 : Immediately remove contaminated clothing or footwear.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. Call a doctor.

First-aid measures after skin contact : Wash skin with plenty of water. Soap may be used. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing. Wash contaminated clothing before reuse.

First-aid measures after eye contact : Immediately rinse with water for a prolonged period while holding the eyelids wide open. Consult an ophthalmologist if irritation persists.

First-aid measures after ingestion : Rinse mouth out with water. Do not induce vomiting. Take medical advice.

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

Symptoms/effects : Headache. Vomiting. May cause shortness of breath, tightness of the chest, a sore throat and cough.

Symptoms/effects after inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Symptoms/effects after skin contact : Contact during a long period may cause light irritation.

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

If possible, show the doctor this safety data sheet. Failing this, show the doctor the packaging or label. Treat symptomatically. No specific antidote known. Effects of exposure (inhalation, ingestion, or skin contact) to substance might be delayed.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Dry chemical, CO2, or water spray or regular foam.

Unsuitable extinguishing media : Strong water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Upon combustion: CO and CO2 are formed. Nitrogen oxides. Hydrogen cyanide. Isocyanates.

5.3. Advice for firefighters

Firefighting instructions : Use water moderately and if possible collect or contain it. Do not allow water to enter the vessels, a violent reaction may occur. Prevent fire fighting water from entering the environment.

Protection during firefighting : Use self-contained breathing apparatus and chemically protective clothing.

Other information : High temperature decomposition products are harmful by inhalation. Use water spray or fog for cooling exposed containers. Containers could explode when heated. 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 : Evacuate area. Do not breathe vapours.

For non-emergency personnel

Protective equipment : Use self-contained breathing apparatus and chemically protective clothing.

Emergency procedures : Evacuate unnecessary personnel. Keep upwind. Notify fire brigade and environmental authorities.

For emergency responders

Protective equipment : Use self-contained breathing apparatus and chemically protective clothing.

6.2. Environmental precautions

Do not allow product to spread into the environment. Do not allow to enter drains or water courses.

6.3. Methods and material for containment and cleaning up

For containment	:	Contain large spillage with sand or earth.
Methods for cleaning up	:	Take up liquid spill into inert absorbent material.
Other information	:	Do not absorb with saw-dust or any other combustible absorbent material. Place in an appropriate container and dispose of the contaminated material at a licensed site. Wash non-recoverable remainder with large amounts of water.

6.4. Reference to other sections

For further information see section 1. For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Provide good ventilation in process area to prevent formation of vapour.
Hygiene measures	:	Do not eat, drink or smoke when using this product. Avoid contact with eyes. Avoid contact with skin. Avoid inhalation of vapours.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Keep only in the original container in a cool, well-ventilated place. Protect from sunlight.
Packaging materials	:	Stainless steel.

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

2-(2-butoxyethoxy)ethanol (112-34-5)

EU - Indicative Occupational Exposure Limit (IOEL)

Local name	2-(2-Butoxyethoxy)ethanol
IOEL TWA	67.5 mg/m³
	10 ppm
IOEL STEL	101.2 mg/m³
	15 ppm
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC

DNEL and PNEC

Diphenylmethane diisocyanate (9016-87-9)

DNEL/DMEL (Workers)	
Acute - local effects, inhalation	0.1 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

Diphenylmethane diisocyanate (9016-87-9)	
PNEC (Water)	
PNEC aqua (freshwater)	1 mg/l
PNEC aqua (marine water)	0.1 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	11.7 mg/kg dwt
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

1,2-Cyclohexane dicarboxylic acid, diisononyl ester (166412-78-8)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	42 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	235 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	2 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	70 mg/m³
Long-term - systemic effects, dermal	25 mg/kg bodyweight/day
PNEC (Soil)	
PNEC soil	44.7 mg/kg dwt

2,2'-dimorpholinyldiethyl ether (6425-39-4)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	1 mg/kg bw/day
Long-term - systemic effects, inhalation	7.28 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	0.5 mg/kg bw/day
Long-term - systemic effects, inhalation	1.8 mg/m³
Long-term - systemic effects, dermal	0.5 mg/kg bw/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

2,2'-dimorpholinyldiethyl ether (6425-39-4)	
PNEC (Oral)	
PNEC oral (secondary poisoning)	10 mg/kg food
PNEC (STP)	
PNEC sewage treatment plant	100 mg/l

4,4'-methylenediphenyl diisocyanate (101-68-8)	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	0.1 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)	3.7 µg/l
PNEC aqua (marine water)	0.37 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	11.7 mg/kg dwt
PNEC sediment (marine water)	1.17 mg/kg dwt
PNEC (Soil)	
PNEC soil	2.33 mg/kg dwt

diphenylmethane-2,4'-diisocyanate (5873-54-1)	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	0.1 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)	3.7 µg/l
PNEC aqua (marine water)	0.37 µg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	11.7 mg/kg dwt
PNEC sediment (marine water)	1.17 mg/kg dwt
PNEC (Soil)	
PNEC soil	2.33 mg/kg dwt

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:
Ensure adequate ventilation in confined areas. If ventilation is not sufficient, to keep vapour concentrations below the limit valuesuse the appropriate respiratory protection. Personal protection equipment should be selected on the basis of substance concentrations at individual work stations, exposure time, operator functions and recommendations indicated by the supplier of the equipment. In explosion-risk areas, wear clothes, gloves and boots with electrostatic discharge protection function. Procedures for monitoring concentrations of hazardous components in the air and procedures for air cleanliness in the workplace should be applied - as long as they are available and justified at the workplace.

Personal protection equipment

Personal protective equipment symbol(s):

Eye and face protection

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

Skin protection

Skin and body protection	
Type	**Standard**

Hand protection					
Type	**Material**	**Permeation**	**Thickness (mm)**	**Penetration**	**Standard**
Chemically resistant protective gloves	Neoprene rubber (HNBR)	6 (> 480 minutes)	≥ 0,5 mm		EN ISO 374
Chemically resistant protective gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	≥ 0,35 mm		EN ISO 374
Chemically resistant protective gloves	Butyl rubber	6 (> 480 minutes)	≥ 0,5 mm		EN ISO 374
Chemically resistant protective gloves	Fluoroelastomer (FKM)	6 (> 480 minutes)	≥ 0,4 mm		EN ISO 374

Respiratory protection

Respiratory protection			
Device	**Filter type**	**Condition**	**Standard**
Wear suitable respiratory equipment	Type A - High-boiling (>65 °C) organic compounds, Type P2		

Environmental exposure controls

Environmental exposure controls:
(in accordance with related regulations).

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	brown.
Odour	:	characteristic.
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Not available
Explosive properties	:	Not explosive.
Oxidising properties	:	No oxidising properties.
Lower explosion limit	:	Not applicable
Upper explosion limit	:	Not applicable
Flash point	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	Not applicable
Viscosity, kinematic	:	> 166.667 – < 1363.636 mm²/s
Viscosity, dynamic	:	> 200 – < 1500 mPa·s
Solubility	:	Water: Reacts with water Acetone: unlimited miscible
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	> 1.1 – < 1.2 g/cm³
Relative density	:	Not available
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

Diphenylmethane diisocyanate	
Boiling point	> 300 °C [CAS: 26447-40-5]
Flash point	> 200 °C
Auto-ignition temperature	> 601 °C (1013 hPa, EU Method A.15: Auto-ignition Temperature (liquids and gases), T1)

2-(2-butoxyethoxy)ethanol	
Flash point	> 100 °C DIN EN 22719 (DIN 51758)

2,2'-dimorpholinyldiethyl ether	
Boiling point	309 °C
Flash point	157 °C (1027 hPa, EU Method A.9: Flash-Point)
Auto-ignition temperature	209 °C (1016 hPa, EU Method A.15: Auto-ignition Temperature (liquids and gases), T3)

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts violently with water. May react violently with acids. Reacts with oxidising agents.

10.2. Chemical stability

Hydrolyses. May polymerise.

10.3. Possibility of hazardous reactions

Reacts violently with water.

10.4. Conditions to avoid

High temperature. Water, humidity. Direct sunlight.

10.5. Incompatible materials

Water, humidity. Alcohols. Amines. Acids. Oxidising agents.

10.6. Hazardous decomposition products

No hazardous decomposition products known.

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) : Inhalation:dust,mist: Harmful if inhaled.

DSI Inject PUR 1C versions: 100; 100-II; 100-II R	
ATE CLP (dust,mist)	1.794 mg/l/4h

Diphenylmethane diisocyanate (9016-87-9)	
LD50 oral rat	> 2000 mg/kg bodyweight (Other, Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	> 9400 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Read-across, Dermal, 14 day(s))
LC50 Inhalation - Rat (Vapours)	0.368 mg/l/4h (OECD 403 method);4,4' - MDI [CAS 101-68-8]

2,2'-dimorpholinyldiethyl ether (6425-39-4)	
LD50 oral rat	2025 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 dermal rabbit	3038 mg/kg bodyweight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))

Skin corrosion/irritation : Causes skin irritation.
pH: Not applicable

Diphenylmethane diisocyanate (9016-87-9)	
pH	No data available in the literature
Skin corrosion/irritation, rabbit	Irritating to rabbits on cutaneous application (OECD 404 method, [CAS: 26447-40-5])

2-(2-butoxyethoxy)ethanol (112-34-5)	
pH	7 – 9 20 °C; 40 g/l

2,2'-dimorpholinyldiethyl ether (6425-39-4)	
pH	10.3
Skin corrosion/irritation, rabbit	Not irritating to rabbits on cutaneous application (OECD 404 method)

Serious eye damage/irritation : Causes serious eye irritation.
pH: Not applicable

Diphenylmethane diisocyanate (9016-87-9)	
pH	No data available in the literature
Serious eye damage/irritation, rabbit	No eye irritation (OECD 405 method, [CAS: 26447-40-5])
2-(2-butoxyethoxy)ethanol (112-34-5)	
pH	7 – 9 20 °C; 40 g/l
2,2'-dimorpholinyldiethyl ether (6425-39-4)	
pH	10.3
Serious eye damage/irritation, rabbit	Eye irritation (OECD 405 method)

Respiratory or skin sensitisation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

Diphenylmethane diisocyanate (9016-87-9)	
Respiratory sensitization, mouse, male	Respiratory sensitization (OECD-GD 39, 4,4' - MDI [CAS: 101-68-8])
Diphenylmethane diisocyanate (9016-87-9)	
Skin sensitization, mouse	Sensitisation (OECD 429 method, 4,4' - MDI [CAS: 101-68-8])
2,2'-dimorpholinyldiethyl ether (6425-39-4)	
Skin sensitization, Guinea pig	Does not cause cutaneous sensitisation for guinea-pigs (OECD 406 method)

Germ cell mutagenicity : Not classified

Diphenylmethane diisocyanate (9016-87-9)	
Germ cell mutagenicity, Salmonella typhimurium	Negative (Test method EU B.13, 4,4' - MDI [CAS: 101-68-8])
Chromosomal aberration testIn vivo, rat, male	Negative (OECD 474 method, 4,4' - MDI [CAS: 101-68-8])
2,2'-dimorpholinyldiethyl ether (6425-39-4)	
Genotoxicity, In vitro	Negative (OECD 476 method)
GenotoxicityIn vitro	0 - 5000 ug/plate Negative (OECD 471 method)
GenotoxicityIn vivo, oral, mouse, female, male, 2000 mg/kg	Negative (OECD 474 method)

Carcinogenicity : Suspected of causing cancer.

Diphenylmethane diisocyanate (9016-87-9)	
NOAEC, inhalable, Aerosol, Air, rat, male, female	1 mg/m³ (OECD 453 method)
LOAEC, inhalable, Aerosol, Air, rat, male, female	6 mg/cm² (OECD 453 method)
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified

Diphenylmethane diisocyanate (9016-87-9)	
NOAECDevelopmental toxicity, inhalable, Aerosol, Air, rat, female	4 mg/m³ ((OECD 414 method))
2,2'-dimorpholinyldiethyl ether (6425-39-4)	
NOAEL (animal/male, F1)	300 mg/kg (OECD 422 method)
NOAEL (animal/female, F1)	300 mg/kg (OECD 422 method)

STOT-single exposure : May cause respiratory irritation.

Diphenylmethane diisocyanate (9016-87-9)	
STOT-single exposure	May cause respiratory irritation.

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

Diphenylmethane diisocyanate (9016-87-9)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
NOAEC, inhalable, Aerosol, lung/respiratory system, rat, male, female	0.2 mg/m³ (OECD 453 method)

2,2'-dimorpholinyldiethyl ether (6425-39-4)	
NOAEL (oral, rat, 90 days)	150 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)

Aspiration hazard : Not classified

DSI Inject PUR 1C versions: 100; 100-II; 100-II R	
Viscosity, kinematic	> 166.667 – < 1363.636 mm²/s

Diphenylmethane diisocyanate (9016-87-9)	
Viscosity, kinematic	No data available in the literature

2-(2-butoxyethoxy)ethanol (112-34-5)	
Viscosity, kinematic	2115.385 – 3039.216 mm²/s

2,2'-dimorpholinyldiethyl ether (6425-39-4)	
Viscosity, kinematic	216.6 mm²/s (20 °C)

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

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

Hazardous to the aquatic environment, long–term (chronic) : Not classified

Diphenylmethane diisocyanate (9016-87-9)	
LC50 - Fish [1]	> 1000 mg/l Brachydanio rerio (zebra-fish);(OECD 203 method)
LC50 - Other aquatic organisms [1]	> 1000 mg/l (96 h, Literature study)
EC50 - Crustacea [1]	> 1000 mg/l Daphnia magna (Water flea);(OECD 202 method)
EC50 - Other aquatic organisms [1]	> 100 mg/l microorganisms;(OECD 209 method)
EC50 72h - Algae [1]	> 1640 mg/l Desmodesmus subspicatus;(OECD 201 method)
NOEC chronic crustacea	≥ 10 mg/l Daphnia magna (Water flea);(OECD 211 method)
Terrestrial toxicity, oats, EC50	> 1000 mg/kg dry weight (days, OECD 208 method)
Terrestrial toxicity, lettuce, EC50	> 1000 mg/kg dry weight (OECD 208 method)
Terrestrial toxicity, microorganisms, Earthworm, LC50	> 1000 mg/kg dry weight (14 days, OECD 207 method)

2,2'-dimorpholinyldiethyl ether (6425-39-4)	
LC50 - Fish [1]	> 2150 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	> 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration)

2,2'-dimorpholinyldiethyl ether (6425-39-4)	
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

12.2. Persistence and degradability

DSI Inject PUR 1C versions: 100; 100-II; 100-II R	
Persistence and degradability	Not rapidly degradable

Diphenylmethane diisocyanate (9016-87-9)	
Persistence and degradability	Not readily biodegradable in water.
Biodegradation	0 % (OECD 302C method)
Photolysisatmospheric half life	0.92 days (AOPWIN (TM) v1.92, 4,4' - MDI [CAS: 101-68-8])
HydrolysisHalf life	20 h (25 °C, Other guidelines, [CAS 32055-14-4])

2-(2-butoxyethoxy)ethanol (112-34-5)	
Persistence and degradability	Not rapidly degradable

2,2'-dimorpholinyldiethyl ether (6425-39-4)	
Persistence and degradability	Not readily biodegradable in water.
Biodegradation	4 % 28 d; OECD 301 C
Half lifepH: 7	1 yr (55 °C) Freshwater

12.3. Bioaccumulative potential

Diphenylmethane diisocyanate (9016-87-9)	
BCF - Fish [1]	200 Cyprinus carpio (Common carp);4,4' - MDI [CAS 101-68-8]
Partition coefficient n-octanol/water (Log Pow)	4.51 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

2,2'-dimorpholinyldiethyl ether (6425-39-4)	
BCF - Fish [1]	2.9 – 3.1 l/kg (Equivalent or similar to OECD 305, 8 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, GLP)
Partition coefficient n-octanol/water (Log Pow)	0.5 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

Diphenylmethane diisocyanate (9016-87-9)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	9.078 – 10.597 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Adsorbs into the soil.
Additional information	Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process 4,4' - MDI [CAS: 101-68-8]

2,2'-dimorpholinyldiethyl ether (6425-39-4)	
Surface tension	67.7 mN/m (20 °C, 1 g/l, EU Method A.5: Surface tension)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.89 (log Koc, Calculated value, pH = 7)
Ecology - soil	Low potential for adsorption in soil.

12.5. Results of PBT and vPvB assessment

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Diphenylmethane diisocyanate (9016-87-9), 2,2'-dimorpholinyldiethyl ether (6425-39-4)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Diphenylmethane diisocyanate (9016-87-9), 2,2'-dimorpholinyldiethyl ether (6425-39-4)

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Diphenylmethane diisocyanate (9016-87-9)	
Other information	No other effects known

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : This material and its container must be disposed of as hazardous waste.

Product/Packaging disposal recommendations : Only pass on empty containers/packaging for recycling.

Additional information : Reprocess or burn in an approved incinerator.

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.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

ADR	IMDG	IATA	ADN	RID
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport
Not applicable

Transport by sea
Not applicable

Air transport
Not applicable

Inland waterway transport
Not applicable

Rail transport
Not applicable

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
3(b)	DSI Inject PUR 1C versions: 100; 100-II; 100-II R ; Diphenylmethane diisocyanate ; 2-(2-butoxyethoxy)ethanol ; 2,2'-dimorpholinyldiethyl ether	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10

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)

National regulations

France

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Indication of changes

Section	Changed item	Comments
1.1	Name	**Modified**
15.1	REACH Annex XVII	**Modified**

Full text of H- and EUH-statements:

Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), 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. 1B	Skin sensitisation, category 1B
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
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]:

Acute Tox. 4 (Inhalation:dust,mist)	H332	Calculation method
Skin Irrit. 2	H315	Calculation method

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
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

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

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.