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

1.1. Product identifier

Product form : Mixture
Trade name : Vaebond PU
Product group : Trade product

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

1.2.1. Relevant identified uses

Main use category : Industrial use
Use of the substance/mixture : Further information: see technical data sheet. TDS Vaebond PU

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Imperbel N.V./S.A
Guido Gezellestraat 123
1654 Beersel (Huizingen), Belgium
Tel.+32 2 334 87 00
Fax:+32 2 378 14 69
info@derbigum.com
www.derbigum.be

1.4. Emergency telephone number

Emergency number : + 32 3 575 55 55 (24h/24h)

Country	Official advisory body	Address	Emergency number
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)


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

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

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2.2. Label elements

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

Hazard pictograms (CLP)



Signal word

: Danger

Contains

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

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.

Precautionary statements (CLP)

: P201 - Obtain special instructions before use.
P261 - Avoid breathing fume, mist, vapours, spray.
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER, doctor.
P501 - Dispose of contents and container to an approved waste disposal plant.

Extra phrases

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

2.3. Other hazards

Other hazards

: Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII. Persons suffering from asthma or eczema and persons who have chronic lung diseases, skin or respiratory allergies to isocyanates should not work with the material.


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

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Substance name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	(CAS-No.) 101-68-8 (EC-No.) 202-966-0 (EC Index) 615-005-00-9 (REACH-no) 01-2119457014-47-xxxx	< 10	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate	(CAS-No.) 5873-54-1 (EC-No.) 227-534-9 (EC Index) 615-005-00-9	1 – 3	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373

Specific concentration limits:

Substance name	Product identifier	Specific concentration limits
4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate	(CAS-No.) 101-68-8 (EC-No.) 202-966-0 (EC Index) 615-005-00-9 (REACH-no) 01-2119457014-47-xxxx	(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
o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate	(CAS-No.) 5873-54-1 (EC-No.) 227-534-9 (EC Index) 615-005-00-9	(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

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


SECTION 4: First aid measures

4.1. Description of first aid measures

- Additional advice : First aider: Pay attention to self-protection!. See also section 8 . Never give anything by mouth to an unconscious person. Show this safety data sheet to the doctor in attendance. In case of doubt or persistent symptoms, consult always a physician.
- Inhalation : Remove person to fresh air and keep comfortable for breathing. Give oxygen or artificial respiration if necessary. Call a physician immediately.
- Skin contact : Take off immediately all contaminated clothing. Rinse immediately with plenty of water and seek medical advice. Wash contaminated clothing before reuse.
- Eyes contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- Ingestion : Rinse mouth thoroughly with water. Drink 1 or 2 glasses of water. Do NOT induce vomiting. Call a physician immediately.

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

- Inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause nose, throat, and lung irritation. The following symptoms may occur: Respiratory difficulties . Harmful: danger of serious damage to health by prolonged exposure through inhalation. Isocyanates may cause acute irritation and/or sensitisation of the respiratory system leading to tightness of the chest, wheeziness and an asthmatic condition.
- Skin contact : Causes skin irritation. May cause an allergic skin reaction. The following symptoms may occur: Skin rash/inflammation. erythema (redness) .
- Eyes contact : Causes serious eye irritation. The following symptoms may occur: Lachrymation . redness, itching, tears.

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Ingestion : Health injuries may be delayed. May cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Chronic symptoms : Suspected of causing cancer.

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

Treat symptomatically. Symptoms may be delayed. Keep under medical supervision for at least 48 hours.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Use powder, CO₂, water spray or alcohol resistant foam.

Unsuitable extinguishing media : Strong water jet .

5.2. Special hazards arising from the substance or mixture

Specific hazards : Fire or intense heat may cause violent rupture of the packages. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Reacts violently with water. (hot). Container can be pressurized by carbon dioxide due to reaction with humid air and/or water.

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO₂). Isocyanates.

5.3. Advice for firefighters

Firefighting instructions : Evacuate area. Use water spray or fog for cooling exposed containers. Contain the extinguishing fluids by bunding.

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

Other information : Do not allow run-off from fire-fighting to enter drains or water courses. Dispose of waste in accordance with environmental legislation.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

For non-emergency personnel : Provide adequate ventilation. Use personal protective equipment as required. Reference to other sections 8 . Do not breathe vapours. Avoid contact with skin, eyes and clothing. Stay upwind/keep distance from source. Evacuate personnel to a safe area. Spill area may be slippery.

6.1.2. For emergency responders

For emergency responders : Ensure procedures and training for emergency decontamination and disposal are in place. Reference to other sections 8.

6.2. Environmental precautions


Do not allow to enter into surface water or drains. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Provide for sufficient ventilation, particularly in closed rooms. Stop leak if safe to do so. Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite or powdered limestone. Collect in closed and suitable containers for disposal. Dispose of contaminated materials in accordance with current regulations.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8 . Concerning disposal elimination after cleaning, see section 13.

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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. Provide adequate ventilation. Use personal protective equipment as required. Concerning personal protective equipment to use, see section 8. Do not breathe vapours. Avoid contact with skin, eyes and clothing. Take any precaution to avoid mixing with Incompatible materials, Refer to Section 10 on Incompatible Materials. Ensure proper process control to avoid excess waste discharge (temperature, concentration, pH, time). Avoid release to the environment.
- Hygiene measures : Keep good industrial hygiene. Wash hands and face before breaks and immediately after handling of the product. When using do not eat, drink or smoke. Keep away from food, drink and animal feedingstuffs. Separate working clothes from town clothes. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep container tightly closed. Store in a dry, cool and well-ventilated place. Do not store near or with any of the incompatible materials listed in section 10. Container can be pressurised by carbon dioxide due to reaction with humid air and/or water. Protect from humidity and water.
- Storage temperature : 15 – 35 °C
- Heat and ignition sources : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep out of direct sunlight.
- Special rules on packaging : Keep in properly labelled containers.
- Packaging materials : Keep only in the original container.


7.3. Specific end use(s)

Reference to other sections : 1.2.


SECTION 8: Exposure controls/personal protection

8.1. Control parameters

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)		
Austria	MAK (OEL TWA)	0,05 mg/m ³ (Diphenylmethane-diisocyanate all isomers)
Austria	MAK (OEL TWA) [ppm]	0,005 ppm (Diphenylmethane-diisocyanate all isomers)
Austria	MAK (OEL STEL)	0,1 mg/m ³ (Diphenylmethane diisocyanate)
Austria	MAK (OEL STEL) [ppm]	0,01 ppm (Diphenylmethane diisocyanate)
Belgium	OEL TWA	0,052 mg/m ³
Belgium	OEL TWA [ppm]	0,005 ppm
Czech Republic	PEL (OEL TWA)	0,05 mg/m ³
Denmark	OEL TWA [1]	0,05 mg/m ³
Denmark	OEL TWA [2]	0,005 ppm
Estonia	OEL TWA	0,05 mg/m ³
Estonia	OEL TWA [ppm]	0,005 ppm
Estonia	OEL STEL	0,1 mg/m ³
Estonia	OEL STEL [ppm]	0,01 ppm
France	VME (OEL TWA)	0,1 mg/m ³
France	VME (OEL TWA) [ppm]	0,01 ppm
France	VLE (OEL C/STEL)	0,2 mg/m ³

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4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)		
France	VLE (OEL C/STEL) [ppm]	0,02 ppm
Germany	Occupational exposure limit value (mg/m ³) (TRGS900)	0,05 mg/m ³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Hungary	AK (OEL TWA)	0,05 mg/m ³
Hungary	CK (OEL STEL)	0,05 mg/m ³
Ireland	OEL TWA [2]	0,005 ppm
Ireland	OEL STEL [ppm]	0,015 ppm (calculated)
Lithuania	IPRV (OEL TWA)	0,05 mg/m ³ (including pre-polymerized Isocyanates (adducts)-dust, aerosols (Methylene bisphenylisocyanate (MDI))
Lithuania	IPRV (OEL TWA) [ppm]	0,005 ppm (including pre-polymerized Isocyanates (adducts)-dust, aerosols (Methylene bisphenylisocyanate (MDI))
Lithuania	NRV (OEL C)	0,1 mg/m ³ (including pre-polymerized Isocyanates (adducts)-dust, aerosols (Methylene bisphenylisocyanate (MDI))
Lithuania	NRV (OEL C) [ppm]	0,01 ppm (including pre-polymerized Isocyanates (adducts)-dust, aerosols (Methylene bisphenylisocyanate (MDI))
Poland	NDS (OEL TWA)	0,03 mg/m ³
Poland	NDSch (OEL STEL)	0,09 mg/m ³
Portugal	OEL TWA [ppm]	0,005 ppm
Romania	OEL STEL	0,15 mg/m ³
Slovakia	NPHV (OEL TWA) [1]	0,002 mg/m ³ (Isocyanates) 0,03 mg/m ³ (Isopropylalcohol)
Slovenia	OEL TWA	0,05 mg/m ³ (inhalable fraction)
Slovenia	OEL TWA [ppm]	0,005 ppm
Slovenia	OEL STEL	0,05 mg/m ³ (inhalable fraction)
Slovenia	OEL STEL [ppm]	0,005 ppm
Spain	VLA-ED (OEL TWA) [1]	0,052 mg/m ³
Spain	VLA-ED (OEL TWA) [2]	0,005 ppm
Sweden	NGV (OEL TWA)	0,03 mg/m ³ (Diisocyanates)
Sweden	NGV (OEL TWA) [ppm]	0,002 ppm (Diisocyanates)
Sweden	KTV (OEL STEL)	0,05 mg/m ³ (Diisocyanates)
Sweden	KTV (OEL STEL) [ppm]	0,005 ppm (Diisocyanates)
Norway	Grenseverdi (OEL TWA) [1]	0,05 mg/m ³
Norway	Grenseverdi (OEL TWA) [2]	0,005 ppm
Norway	Korttidsverdi (OEL STEL) [ppm]	0,01 ppm (value from the regulation)
Switzerland	MAK (OEL TWA) [1]	0,02 mg/m ³ (B for Diphenylmethane-4,4'-diisocyanate)
Switzerland	KZGW (OEL STEL)	0,02 mg/m ³ (calculated as total NCO, B for Diphenylmethane-4,4'-diisocyanate (Isocyanate)
Australia	OES TWA [1]	0,02 mg/m ³ (Isocyanates, all)

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4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)		
Australia	OES STEL	0,07 mg/m ³ (Isocyanates, all)
Canada (Quebec)	VEMP (OEL TWA)	0,051 mg/m ³
Canada (Quebec)	VEMP (OEL TWA) [ppm]	0,005 ppm
USA - ACGIH	ACGIH OEL TWA [ppm]	0,005 ppm (Methylene bisphenyl isocyanate (MDI))
USA - IDLH	IDLH	75 mg/m ³
USA - NIOSH	NIOSH REL TWA	0,05 mg/m ³
USA - NIOSH	NIOSH REL TWA [ppm]	0,005 ppm (Methylene bisphenyl isocyanate)
USA - NIOSH	NIOSH REL C	0,2 mg/m ³
USA - NIOSH	NIOSH REL C [ppm]	0,02 ppm
USA - OSHA	OSHA PEL C	0,2 mg/m ³
USA - OSHA	OSHA PEL C [ppm]	0,02 ppm
o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate (5873-54-1)		
Austria	MAK (OEL TWA)	0,05 mg/m ³ (Diphenylmethane-diisocyanate all isomers)
Austria	MAK (OEL TWA) [ppm]	0,005 ppm (Diphenylmethane-diisocyanate all isomers)
Austria	MAK (OEL STEL)	0,1 mg/m ³ (Diphenylmethane diisocyanate)
Austria	MAK (OEL STEL) [ppm]	0,01 ppm (Diphenylmethane diisocyanate)
Germany	Occupational exposure limit value (mg/m ³) (TRGS900)	0,05 mg/m ³ (sum of vapor and aerosol)
Poland	NDS (OEL TWA)	0,03 mg/m ³
Poland	NDSch (OEL STEL)	0,09 mg/m ³
Slovenia	OEL TWA	0,05 mg/m ³
Slovenia	OEL STEL	0,05 mg/m ³

Additional information : Concentration measurement in air. Personal monitoring

8.2. Exposure controls

Engineering measure(s) : Provide adequate ventilation. Use only in area provided with appropriate exhaust ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Organisational measures to prevent/limit releases, dispersion and exposure : See also section 7 .

Personal protective equipment : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.


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Hand protection	: Wear chemically resistant gloves (tested to EN374) . Short-term exposure (>30'). Penetration index 2 &. Long-term exposure (>480'). Penetration index 6 : NBR (Nitrile rubber) (>0,4 mm). The selection of specific gloves for a specific application and time of use in a working area, should also take into account other factors on the working space, such as (but not limited to): other chemicals that are possibly used, physical requirements (protection against cutting/drilling, skill, thermal protection), and the instructions/specification of the supplier of gloves.
Eye protection	: tightly fitting safety goggles (EN 166)
Body protection	: Overalls, apron and boots recommended.
Respiratory protection	: Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates. In case of insufficient ventilation, wear suitable respiratory equipment. full face mask (DIN EN 136). Half-face mask (DIN EN 140). Filter type: A (EN 14387). Self-contained open-circuit compressed air breathing apparatus (EN 137) .
Thermal hazard protection	: Not required for normal conditions of use. Use dedicated equipment.
Environmental exposure controls	: Do not allow to enter into surface water or drains. Comply with applicable Community environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: liquid.
Colour	: brown.
Odour	: Characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting / freezing point	: No data available
Freezing point	: No data available
Initial boiling point and boiling range	: No data available
Flash point	: 200 °C (DIN 51755)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability	: Not applicable,Liquid
Vapour pressure	: No data available
Vapour pressure at 50°C	: 0,012 bar
Vapour density	: No data available
Relative density	: No data available
Density	: 1,10 - 1,20 (20°C)
Solubility	: Water: (20°C) Immiscible
Partition coefficient n-octanol/water	: Not applicable
Kinematic viscosity	: No data available
Dynamic viscosity	: 5500 – 10500 mPa.s
Explosive properties	: Not applicable. The study does not need to be conducted because there are no chemical groups associated with explosive properties present in the molecule.

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Oxidising properties	: Not applicable. The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with oxidising properties.
Explosive limits	: No data available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

VOC content : 0 % (VOCV 814.018)(CH)

SECTION 10: Stability and reactivity

10.1. Reactivity

None under normal conditions. Reference to other sections 10.5.

10.2. Chemical stability

Stable under recommended storage conditions. Unstable on exposure to moisture.

10.3. Possibility of hazardous reactions

Container can be pressurized by carbon dioxide due to reaction with humid air and/or water. Amines and alcohols cause exothermic reactions. Reference to other sections 10.5.

10.4. Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep out of direct sunlight. Protect from humidity and water. See Section 7 for information on safe handling.

10.5. Incompatible materials

alcohols. Amines. humid air and water . See Section 7 for information on safe handling.

10.6. Hazardous decomposition products


Thermal decomposition can lead to the escape of irritating gases and vapours. Reference to other sections : 5.2.

SECTION 11: Toxicological information

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

Acute toxicity : Not classified (Based on available data, the classification criteria are not met)

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
LD50/oral/rat	31600 mg/kg
LD50 oral	31600 mg/kg
LC50/inhalation/4h/rat	369 mg/m ³ (Exposure time: 4 h)

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Skin corrosion/irritation	: Causes skin irritation. pH: No data available
Serious eye damage/irritation	: Causes serious eye irritation. pH: No data available
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 (Based on available data, the classification criteria are not met)
Carcinogenicity	: Suspected of causing cancer.
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Based on available data, the classification criteria are not met)

Vaebond PU	
Kinematic viscosity	5500 - 10500 mm ² /s (Brookfield, 20°C, Spindle n° 5, rot. freq. 20 min ⁻¹)

Other information : Symptoms related to the physical, chemical and toxicological characteristics. Reference to other sections 4.2.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects 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 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 %

11.2.2 Other information

Other information : Symptoms related to the physical, chemical and toxicological characteristics, Reference to other sections 4.2

SECTION 12: Ecological information


12.1. Toxicity

Environmental properties : Not classified (CLP).

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

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

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)	
LC50 - Fish [1]	LC0 > 3000 mg/l (96h)(Oryzias latipes)
EC50 - Crustacea [1]	129,7 mg/l (24h)(Daphnia magna)
EC50 - Other aquatic organisms [1]	> 1640 mg/l (72h)(Desmodesmus subspicatus)
NOEC chronic crustacea	> 10 mg/l (21days)(Daphnia magna)

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12.2. Persistence and degradability

Vaebond PU	
Persistence and degradability	No data available.

12.3. Bioaccumulative potential

Vaebond PU	
Partition coefficient n-octanol/water	Not applicable

4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate (101-68-8)

BCF - Fish [1]	92
Partition coefficient n-octanol/water	4,51 (at 22 °C (at pH 7))

12.4. Mobility in soil

Vaebond PU	
Ecology - soil	This information is not available.

12.5. Results of PBT and vPvB assessment

Vaebond PU	
Results of PBT assessment	Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

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 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 %

12.7. Other adverse effects

Additional information : No information available


SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Handle with care. Reference to other sections 7: Handling and storage . Do not allow to enter into surface water or drains. Dispose of contaminated materials in accordance with current regulations. Refer to manufacturer/supplier for information on recovery/recycling. Collect and dispose of waste product at an authorised disposal facility. Beware of residues or vapours which remain in the drums.

Additional information : Delivery to an approved waste disposal company.

European waste catalogue (2001/573/EC, 75/442/EEC, 91/689/EEC) : Classified as hazardous waste according to European Union regulations. The following Waste Codes are only suggestions:
080409 - waste adhesives and sealants containing organic solvents or other dangerous substances
(080501 - waste isocyanates).
Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities

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SECTION 14: Transport information

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

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
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
Not applicable				

14.6. Special precautions for user

Special precautions for user : Not applicable

- Overland transport

Not applicable

- Transport by sea

No data available

- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

No data available

14.7. Maritime transport in bulk according to IMO instruments

Code: IBC : 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

Listed on REACH Annex XVII (Restriction Conditions). The following restrictions are applicable:

3(b) 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	Vaebond PU
56. Methylenediphenyl diisocyanate (MDI)	4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate ; o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate
56(a) Methylenediphenyl diisocyanate (MDI) isomers: 4,4'-Methylenediphenyl diisocyanate	4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate

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56(b) Methylenediphenyl diisocyanate (MDI) isomers: 2,4'-Methylenediphenyl diisocyanate	o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate
74. Diisocyanates, O = C=N-R-N = C=O, with R an aliphatic or aromatic hydrocarbon unit of unspecified length	4,4'-methylenediphenyl diisocyanate; diphenylmethane-4,4'-diisocyanate ; o-(p-isocyanatobenzyl)phenyl isocyanate; diphenylmethane-2,4'-diisocyanate

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

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

VOC content : 0 % (VOCV 814.018)(CH)

15.1.2. National regulations

France

No ICPE	Installations classées Désignation de la rubrique	Code Régime	Rayon
na	Not Applicable	na	na

Germany

Regulatory reference : WGK 1, Slightly hazardous to water (Classification according to AwSV, Annex 1)

German storage class (LGK) : LGK 12 - Non-combustible liquids

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

TA Luft : Organic Substances

Netherlands

Waterbezwaarlijkheid : B (5) - Weinig schadelijk voor in het water levende organismen

Saneringsinspanningen : B - Lozing minimaliseren; toepassen van best uitvoerbare technieken

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed


Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

The requirements from the Danish Working Environment Authorities regarding work with epoxy resins and isocyanates must be observed during use and disposal

The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

15.2. Chemical safety assessment

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Not required

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

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

SECTION 16: Other information

Indication of changes:

2.2	Label elements	Modified	
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Abbreviations and acronyms:

	ADN = Accord Européen relatif au Transport International des Marchandises Dangereuses par voie de Navigation du Rhin ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route CLP = Classification, Labelling and Packaging Regulation according to 1272/2008/EC IATA = International Air Transport Association IMDG = International Maritime Dangerous Goods Code LEL = Lower Explosive Limit/Lower Explosion Limit UEL = Upper Explosion Limit/Upper Explosive Limit REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
	EC50 = Median Effective Concentration
	CSR = CSR = Chemical Safety Report
	LD50 = Median lethal dose
	LC50 = Median lethal concentration
	NA = Not applicable
	TLV = Threshold limits
	TWA = time weighted average
	STEL = Short term exposure limit
	persistent, bioaccumulating and toxic (PBT).
	vPvB = very persistent and very bioaccumulating
	WGK = Wassergefährdungsklasse (Water Hazard Class under German Federal Water Management Act)


Sources of key data used to compile the datasheet : ECHA (European Chemicals Agency). LOLI. Supplier SDS.

Training advice : Training staff on good practice. Manipulations are to be done only by qualified and authorised persons.

Other information : Classification - Assessment method: CLP Calculation method (Article 9). Physicochemical hazard assessment: Information given is based on tests on the mixture itself.

Full text of H- and EUH-statements:

	As from 24 August 2023 adequate training is required before industrial or professional use
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Carc. 2	Carcinogenicity, Category 2
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
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.
Resp. Sens. 1	Respiratory sensitisation, Category 1

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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

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Classification according to Regulation (EC) No. 1272/2008 [CLP]
Labelling according to Regulation (EC) No. 1272/2008 [CLP]

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