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

1.1. Product identifier

Product form : Substance

Substance name : PU100-B

REACH registration No : 01-2119486870-28

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

1.2.1. Relevant identified uses

No additional information available

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Sidec
Industrieweg 10
2490 Balen - BELGIE
T +32 14 81 50 01
safety@sidec.be - www.sidec.eu

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number
Belgium	Centre Anti-Poisons/Antigifcentrum c/o Hôpital Central de la Base - Reine Astrid	Rue Bruyn 1 1120 Bruxelles/Brussel	+32 70 245 245

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

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

Full text of H statements : see section 16

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS07 GHS08

Signal word (CLP) : Danger

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 dust, spray, vapours.
P284 - respiratory protection
P280 - Wear protective gloves, protective clothing, eye protection, face protection.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 - Call a doctor, a POISON CENTER if you feel unwell.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name : PU100-B

Name	Product identifier	%
4,4''-Methylenediphenyl diisocyanate, oligomeric reaction products with butane-1,3-diol, 2,4''-diisocyanatodiphenylmethane, 1,1''-methylenebis(4-isocyanatobenzene) homopolymer, [(methylethylene)bis(oxy)]dipropanol and propane-1,2-diol	(EC-No.) 500-313-7 (REACH-no) 01-2119486870-28	60 – 100
4,4'-Diphenylmethane diisocyanate	(CAS-No.) 101-68-8 (EC-No.) 202-966-0 (EC Index-No.) 615-005-00-9 (REACH-no) 01-2119457014-47	30 – 60

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
4,4''-Methylenediphenyl diisocyanate, oligomeric reaction products with butane-1,3-diol, 2,4''-diisocyanatodiphenylmethane, 1,1''-methylenebis(4-isocyanatobenzene) homopolymer, [(methylethylene)bis(oxy)]dipropanol and propane-1,2-diol	(EC-No.) 500-313-7 (REACH-no) 01-2119486870-28	60 – 100	Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:gas), H332 Acute Tox. 4 (Inhalation:vapour), 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
4,4'-Diphenylmethane diisocyanate	(CAS-No.) 101-68-8 (EC-No.) 202-966-0 (EC Index-No.) 615-005-00-9 (REACH-no) 01-2119457014-47	30 – 60	Carc. 2, H351 Resp. Sens. 1, H334 Skin Sens. 1, H317 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

Specific concentration limits:

Name	Product identifier	Specific concentration limits
4,4'-Diphenylmethane diisocyanate	(CAS-No.) 101-68-8 (EC-No.) 202-966-0 (EC Index-No.) 615-005-00-9 (REACH-no) 01-2119457014-47	(0,1 ≤C < 100) Resp. Sens. 1, H334 (5 ≤C < 100) STOT SE 3, H335 (5 ≤C < 100) Skin Irrit. 2, H315 (5 ≤C < 100) Eye Irrit. 2, H319

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

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

First-aid measures after skin contact : Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash clothing before re-using. Thoroughly clean shoes before re-using.

First-aid measures after eye contact : Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Get immediate medical advice/attention.

First-aid measures after ingestion : Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Rinse mouth out with water. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects after inhalation : Dust of the product, if present, may cause respiratory irritation after an excessive inhalation exposure. Irritation of the respiratory tract. symptoms may be delayed. Cough. Asthmatic complaints.

Symptoms/effects after skin contact : Irritation. Skin sensitisation. Redness.

Symptoms/effects after eye contact : Eye irritation. Pain. Redness. Lacrimation.

Symptoms/effects after ingestion : May cause irritation to the digestive tract.

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

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

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. carbonic acid. Dry powder.

Unsuitable extinguishing media : Water may be used if no other available and then in copious quantities. Reaction between water and hot isocyanate may be vigorous. Prevent washings from entering water courses, keep fire exposed containers cool by spraying with water.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : carbon dioxide (CO2). carbon monoxide. Nitrogen oxides.

5.3. Advice for firefighters

Precautionary measures fire : Evacuate and limit access.

Protection during firefighting : Positive pressure self-contained breathing apparatus (SCBA). Safety helmet. Boots made of PVC. Gloves.

Other information : Heating will cause a rise in pressure with a risk of bursting.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate area. Keep public away.

6.1.1. For non-emergency personnel

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene. Avoid contact with skin, eyes and clothing. Do not breathe vapours. In case of insufficient ventilation, wear suitable respiratory equipment. Wear suitable protective clothing.

6.1.2. For emergency responders

Protective equipment : For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Prevent liquid from entering sewers, watercourses, underground or low areas.

6.3. Methods and material for containment and cleaning up

For containment : Stop leak without risks if possible. Contain or absorb spilled liquid with non-combustible material.

Methods for cleaning up : Collect spillage. Remove to an authorized waste treatment plant.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. Do not handle until all safety precautions have been read and understood. Do not get in eyes, on skin, or on clothing. Do not breathe vapours. Ensure good ventilation of the work station.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take off contaminated clothing.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Store according to local legislation.

Storage conditions : Store in dry, cool, well-ventilated area. Protect from sunlight. Store in original container. Store locked up.

Special rules on packaging : Containers which are opened should be properly resealed and kept upright to prevent leakage. correctly labelled.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

4,4'-Diphenylmethane diisocyanate (101-68-8)		
Belgium	Limit value (mg/m³)	0,052 mg/m³
Belgium	Limit value (ppm)	0,005 ppm
France	VME (mg/m³)	0,1 mg/m³
France	VME (ppm)	0,01 ppm
France	VLE (mg/m³)	0,2 mg/m³ ((5min))
France	VLE (ppm)	0,02 ppm ((5min))
United Kingdom	WEL TWA (mg/m³)	0,02 mg/m³
United Kingdom	WEL STEL (mg/m³)	0,07 mg/m³
USA - ACGIH	ACGIH TWA (ppm)	0,005 ppm

8.2. Exposure controls

Appropriate engineering controls : Wash hands before break and at end of works. Take off contaminated clothing. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

Hand protection : The protective gloves to be used must comply with the specifications of the regulation 2016/425 and the resultant standard EN 374. Material. Butyl rubber gloves. Polyethylene. eval. neoprene. nbr. Polyvinylchloride (PVC). Viton. Time of penetration is to be checked with the glove producer. By prolonged exposure : 5 (> 240 minutes). Short term exposure. 3 (> 60 minutes). Since the product consists of several substances, it is possible to estimate the durability of the glove material beforehand and it therefore needs to be tested before use. Gloves must be replaced after each use and whenever signs of wear or perforation appear

Eye protection : A risk assessment is required. Use suitable eye protection

Skin and body protection : Wear proper protective equipment. Impervious footwear must be worn

Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Colour : yellowish.
Odour : characteristic.
Odour threshold : No data available
pH : No data available
Relative evaporation rate (butylacetate=1) : No data available
Melting point : -16,5 – -12,3
Freezing point : No data available
Boiling point : No data available
Flash point : > 210
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : No data available
Vapour pressure : 0,0000024 kPa
Relative vapour density at 20 °C : No data available
Relative density : No data available
Density : 1,222 g/cm³
Solubility : No data available
Partition coefficient n-octanol/water (Log Pow) : No data available
Viscosity, kinematic : 370 mm²/s
Viscosity, dynamic : 850 – 1000 mPa·s
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Reaction with water (moisture) produces CO2-gas. Exothermic reaction with materials containing active hydrogen groups. The reaction becomes progressively more vigorous and can be violent at higher temperatures if the miscibility of the reaction partners is good or is supported by stirring or by the presence of solvents. MDI is insoluble with, and heavier than water and sinks to the bottom but reacts slowly at the interface. A solid water-insoluble layer of polyurea is formed at the interface by liberating carbon dioxide gas.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if inhaled.

4,4'-Diphenylmethane diisocyanate (101-68-8)	
LD50 oral rat	> 7616 mg/kg (Equivalent to or corresponding to OECD 401, Rat, Female, Read-across, Oral)
LD50 dermal rabbit	> 9400 mg/kg bodyweight (Equivalente o equivalente all'OCSE 402, 24 ore, coniglio, maschio / femmina, read-across, cutaneo)
LC50 inhalation rat (mg/l)	0,49 mg/l air (Equivalent to or corresponding to OECD 403, 4 h, Rat, Male / female, Read-across, Inhalation (aerosol))

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

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

Germ cell mutagenicity : Not classified

Carcinogenicity : Suspected of causing cancer.

Reproductive toxicity : Not classified

STOT-single exposure : May cause respiratory irritation.

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

Aspiration hazard : Not classified

PU100-B	
Viscosity, kinematic	370 mm²/s

SECTION 12: Ecological information

12.1. Toxicity

4,4'-Diphenylmethane diisocyanate (101-68-8)	
LC50 fish 1	> 1000 mg/l (OECD 203: Fish: acute toxicity study, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration)
EC50 Daphnia 1	129,7 mg/l (OECD 202: Acute Immobilization Study at Daphnia sp., 24h, Daphnia magna, Static System, Fresh Water, Read-across, Movement)

12.2. Persistence and degradability

4,4'-Diphenylmethane diisocyanate (101-68-8)	
Persistence and degradability	Water : Not biodegradable.

12.3. Bioaccumulative potential

4,4'-Diphenylmethane diisocyanate (101-68-8)	
BCF fish 1	92 – 200 (OECD 305: Bioconcentration: flow-through test with fish, 4 weeks, Cyprinus carpio, Flow-through system, Fresh water, Experimental value, GLP)
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 bioaccumulation potential.

12.4. Mobility in soil

4,4'-Diphenylmethane diisocyanate (101-68-8)	
Ecology - soil	No supplementary information available.

12.5. Results of PBT and vPvB assessment

Component	
4,4'-Diphenylmethane diisocyanate (101-68-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

Waste treatment methods : Dispose of in accordance with relevant local regulations. Dispose in a safe manner in accordance with local/national regulations. Do not allow into drains or water courses. Do not re-use empty containers without proper cleaning or reconditioning.

SECTION 14: Transport information

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

14.1. UN number

Not regulated for transport

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable

Proper Shipping Name (IMDG) : Not applicable

Proper Shipping Name (IATA) : Not applicable

Proper Shipping Name (ADN) : Not applicable

Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable

Packing group (IMDG) : Not applicable

Packing group (IATA) : Not applicable

Packing group (ADN) : Not applicable

Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

- Overland transport

No data available

- Transport by sea

No data available

- Air transport

No data available

- Inland waterway transport

Carriage prohibited (ADN) : No

Not subject to ADN : No

- Rail transport

Carriage prohibited (RID) : No

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

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

No REACH Annex XVII restrictions

PU100-B is not on the REACH Candidate List

PU100-B is not on the REACH Annex XIV List

15.1.2. National regulations

Germany

Regulatory reference : Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV)

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

Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not 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

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

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. 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.
H373	May cause damage to organs through prolonged or repeated exposure.

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.