

SAFETY DATA SHEET

Polyurethane Crystal Clear
1200 Part B

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Compilation date: 03/08/2017

Revision date: 03/08/2017

Revision No: 1

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

1.1. Product identifier

Product name: Polyurethane Crystal Clear 1200 Part B

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

Use of substance / mixture: PC1: Adhesives, sealants. PC9b: Fillers, putties, plasters, modelling clay. PC9a: Coatings and paints, thinners, paint removers. PC32: Polymer preparations and compounds. PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC19: Hand-mixing with intimate contact and only PPE available ERC2: Formulation of preparations* ERC3: Formulation in materials ERC5: Industrial use resulting in inclusion into or onto a matrix ERC6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

1.3. Details of the supplier of the safety data sheet

Company name: Nedform BV
Hofdwarweg 20
6161DD Geleen
The Netherlands

Tel: +31 (0) 46 4106260

Email: info@nedform.com

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1.4. Emergency telephone number

Emergency tel: +31 (0) 46 4106260
(office hours only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Acute Tox. 3: H331; Eye Irrit. 2: H319; Resp. Sens. 1: H334; Skin Irrit. 2: H315; Skin Sens. 1: H317; STOT SE 3: H335; -: EUH208

Most important adverse effects: Contains hexamethylene-di-isocyanate. May produce an allergic reaction. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Toxic if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation.

2.2. Label elements

Label elements:

Hazard statements: EUH208: Contains hexamethylene-di-isocyanate. May produce an allergic reaction.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H331: Toxic if inhaled.
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335: May cause respiratory irritation.

Hazard pictograms: GHS06: Skull and crossbones
GHS08: Health hazard



Signal words: Danger

Precautionary statements: P260: Do not breathe dust/fumes/gas/mist/vapours/spray.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+352: IF ON SKIN: Wash with plenty of water/.
P304+340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P304+341: IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

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Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE) - REACH registered number(s): 01-2119457437-31

EINECS	CAS	PBT / WEL	CLP Classification	Percent
225-863-2	5124-30-1	-	Acute Tox. 3: H331; Eye Irrit. 2: H319; STOT SE 3: H335; Skin Irrit. 2: H315; Resp. Sens. 1: H334; Skin Sens. 1: H317	25-50%

HEXAMETHYLENE-1,6-DIISOCYANATE HOMOPOLYMER - REACH registered number(s): 01-2119485796-17

500-060-2	28182-81-2	-	STOT SE 3: H335; Acute Tox. 4: H332; Skin Sens. 1: H317	25-50%
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HEXAMETHYLENE-DI-ISOCYANATE

212-485-8	822-06-0	-	Acute Tox. 3: H331; Eye Irrit. 2: H319; STOT SE 3: H335; Skin Irrit. 2: H315; Resp. Sens. 1: H334; Skin Sens. 1: H317	0.05-1%
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Section 4: First aid measures

4.1. Description of first aid measures

- Skin contact:** Remove all contaminated clothes and footwear immediately unless stuck to skin.
Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Consult a doctor.
- Eye contact:** Bathe the eye with running water for 15 minutes. Consult a doctor.
- Ingestion:** Do not induce vomiting. Consult a doctor.
- Inhalation:** Remove casualty from exposure ensuring one's own safety whilst doing so. If unconscious, check for breathing and apply artificial respiration if necessary. Consult a doctor.

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

- Skin contact:** There may be irritation and redness at the site of contact.
- Eye contact:** There may be irritation and redness.
- Ingestion:** Nausea and stomach pain may occur.
- Inhalation:** There may be a feeling of tightness in the chest with shortness of breath. Exposure may cause coughing or wheezing.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

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

Immediate / special treatment: Show this safety data sheet to the doctor in attendance.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Carbon dioxide. Alcohol or polymer foam. Dry chemical powder. Water spray. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes of carbon dioxide / carbon monoxide. In combustion emits toxic fumes of nitrogen oxides. In combustion emits toxic fumes of hydrogen cyanide.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear protective clothing to prevent contact with skin and eyes. Wear self-contained breathing apparatus.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Mix with sand or vermiculite. Clean-up should be dealt with only by qualified personnel familiar with the specific substance. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS. Refer to section 13 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Keep container tightly closed. Avoid contact with water or humidity. >20°C

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): No data available.

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Section 8: Exposure controls/personal protection

8.1. Control parameters

Hazardous ingredients:

4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE)

Workplace exposure limits:

Respirable dust

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	0.02 mg/m ³	0.07 mg/m ³	-	-

HEXAMETHYLENE-1,6-DIISOCYANATE HOMOPOLYMER

UK	0.02 mg/m ³ (as NCO)	0.07 mg/ms (as NCO)	-	-
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HEXAMETHYLENE-DI-ISOCYANATE

UK	0.02 mg/m ³	0.07 mg/m ³	-	-
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DNEL/PNEC Values

Hazardous ingredients:

4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE)

Type	Exposure	Value	Population	Effect
DNEL	Dermal	0.6 mg/m ³	Workers	Local
PNEC	Fresh water	> 0.005 mg/l	-	-
PNEC	Marine water	> 0.0005 mg/l	-	-
PNEC	Soil (agricultural)	> 4.3 mg/kg	-	-
DNEL	Inhalation	0.3 mg/m ³	Workers	Local
PNEC	Microorganisms in sewage treatment	1.91 mg/l	-	-
PNEC	Fresh water sediments	> 21.75 mg/kg dry we	-	-
PNEC	Marine sediments	> 2.175 mg/kg dry we	-	-

HEXAMETHYLENE-1,6-DIISOCYANATE HOMOPOLYMER

Type	Exposure	Value	Population	Effect
DNEL	Inhalation	0.5 mg/m ³	Workers	Systemic
PNEC	Fresh water	0.127 mg/l	-	-
PNEC	Marine water	0.0127 mg/l	-	-
PNEC	Fresh water sediments	266700 mg/kg	-	-
PNEC	Marine sediments	26670 mg/kg	-	-
PNEC	Soil (agricultural)	53182 mg/kg	-	-

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PNEC	Microorganisms in sewage treatment	38.3 mg/l	-	-
DNEL	Inhalation	0.5 mg/m3	Workers	Local

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Gas/vapour filter, type A: organic vapours (EN141). Self-contained breathing apparatus must be available in case of emergency.

Hand protection: Impermeable gloves.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Impermeable protective clothing.

Environmental: Ensure all engineering measures mentioned in section 7 of SDS are in place.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Colourless

Odour: Barely perceptible odour

Evaporation rate: No data available.

Oxidising: No data available.

Solubility in water: Reacts with water.

Viscosity: 130 mPas (25°C)

Boiling point/range°C: No data available.

Melting point/range°C: No data available.

Flammability limits %: lower: No data available.

upper: No data available.

Flash point°C: No data available.

Part.coeff. n-octanol/water: No data available.

Autoflammability°C: No data available.

Vapour pressure: No data available.

Relative density: 1.08 - 1.13

pH: No data available.

VOC g/l: No data available.

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions. Decomposition may occur on exposure to conditions or materials listed below.

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10.4. Conditions to avoid

Conditions to avoid: < 20°C. Heat. Moist air. Humidity.

10.5. Incompatible materials

Materials to avoid: Water. Acids. Alcohols. Amines.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE)

DERMAL	RAT	LD50	> 7000	mg/kg
DUST/MIST	RAT	4H LC50	0.33	mg/l
ORL	RAT	LD50	18200	mg/kg

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DERMAL	RAT	LD50	>2001	mg/kg
DERMAL	RBT	LD50	>2001	mg/kg
ORAL	RAT	LD50	>5000	mg/kg

HEXAMETHYLENE-DI-ISOCYANATE

IVN	MUS	LD50	5600	µg/kg
ORL	MUS	LD50	350	mg/kg
ORL	RAT	LD50	710	µl/kg

Relevant hazards for product:

Hazard	Route	Basis
Acute toxicity (ac. tox. 3)	INH	Hazardous: calculated
Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated
Respiratory/skin sensitisation	INH DRM	Hazardous: calculated
STOT-single exposure	INH	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: Nausea and stomach pain may occur.

Inhalation: There may be a feeling of tightness in the chest with shortness of breath. Exposure may cause coughing or wheezing.

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Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

Section 12: Ecological information

12.1. Toxicity

Hazardous ingredients:

4,4'-METHYLENEDI(CYCLOHEXYL ISOCYANATE)

Daphnia magna	EC0 (48h)	>= 8.3	mg/l
Scenedesmus Subspicatus	EC10 (72h)	1.2	mg/l
Scenedesmus Subspicatus	ErC50 (72h)	> 5	mg/l
ZEBRAFISH (Brachydanio rerio)	LC0 (96h)	>= 8.1	mg/l

HEXAMETHYLENE-1,6-DIISOCYANATE HOMOPOLYMER

Daphnia magna	48H EC50	>100	mg/l
Scenedesmus Subspicatus	72H ErC50	>1000	mg/l
ZEBRAFISH (Brachydanio rerio)	96H LC50	>100	mg/l

12.2. Persistence and degradability

Persistence and degradability: No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available.

12.4. Mobility in soil

Mobility: No data available.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: No data available.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Waste code number: 08 05 01

Disposal of packaging: Arrange for collection by specialised disposal company.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

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14.1. UN number

UN number: UN2206

14.2. UN proper shipping name

Shipping name: ISOCYANATES, TOXIC, N.O.S.
(Aliphatic Isocyanates)

14.3. Transport hazard class(es)

Transport class: 6.1

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: No

Marine pollutant: No

14.6. Special precautions for user

Tunnel code: E

Transport category: 2

Section 15: Regulatory information

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

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and s.3: EUH208: Contains <name of sensitising substance>. May produce an allergic reaction.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H331: Toxic if inhaled.

H332: Harmful if inhaled.

H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335: May cause respiratory irritation.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

