

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

1.1. Product identifier

Product form : Mixture
Trade name : 245 2C PU (Component B)

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : For professional use only
Use of the substance/mixture : Adhesives, binding agents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Rectavit N.V. N.V.
Ambachtenlaan 4
9080 Lochristi
Belgium
T +32 9 216 85 20 - F +32 9 216 85 30
msds@rectavit.be - www.Rectavit.be

1.4. Emergency telephone number

No additional information available

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 :

polymethylene polyphenyl isocyanate

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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)	: P261 - Avoid breathing vapours, mist. P280 - Wear protective gloves, eye protection. P302+P352 - IF ON SKIN: Wash with plenty of water. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. P102 - Keep out of reach of children.
Extra phrases	: Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used. As from 24 August 2023 adequate training is required before industrial or professional use.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
polymethylene polyphenyl isocyanate (9016-87-9)	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

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

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
polymethylene polyphenyl isocyanate	CAS-No.: 9016-87-9	≥ 75	Carc. 2, H351 Resp. Sens. 1, H334 Skin Sens. 1, H317 Acute Tox. 4 (Inhalation), H332 (ATE=1,5 mg/l/4h) STOT RE 2, H373 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

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

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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact	: After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth out with water. Drink plenty of water. Obtain emergency medical attention. Do NOT induce vomiting unless directed to do so by medical personnel.

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

Symptoms/effects after inhalation	: Inhalation may cause irritation (cough, short breathing, difficulty in breathing).
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4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: dry chemical powder, alcohol-resistant foam, carbon dioxide (CO ₂). For large fire: Water spray.
Unsuitable extinguishing media	: Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Decomposes on exposure to temperature rise: formation of small quantities of hydrogen cyanide.
Hazardous decomposition products in case of fire	: Carbon dioxide. Carbon monoxide. formation of small quantities of hydrogen cyanide.

5.3. Advice for firefighters

Firefighting instructions	: Do not enter fire area without proper protective equipment, including respiratory protection. Exercise caution when fighting any chemical fire. Fight fire from safe distance and protected location.
Other information	: Prevent fire fighting water from entering the environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	: Avoid contact with skin, eyes and clothing. Do not breathe vapours. Evacuate unnecessary personnel.
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6.1.2. For emergency responders

No additional information available

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	: Cover spill with non combustible material, e.g.: sand, earth, vermiculite. For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal.
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Methods for cleaning up : Collect leaking and spilled liquid in sealable containers as far as possible. Cover spill with non combustible material, e.g.: sand/earth. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.

6.4. Reference to other sections

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 : Avoid contact with skin, eyes and clothing. Do not eat, drink or smoke when using this product. Ensure good ventilation of the work station.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.

Storage conditions : Do not store at temperatures over: 35°C. Keep cool. Protect from sunlight. Keep container tightly closed.

Incompatible products : Reacts with water.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Safety glasses. Gloves.

Personal protective equipment symbol(s):



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8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Hand protection:

protective gloves

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR), Viton® II				

8.2.2.3. Respiratory protection

Respiratory protection:

In case of inadequate ventilation wear respiratory protection.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: brown.
Odour	: Not available
Odour threshold	: Not available
Melting point	: < 0 °C
Freezing point	: Not available
Boiling point	: 200 – 208 °C
Flammability	: Not available
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 200 °C
Auto-ignition temperature	: > 600 °C
Decomposition temperature	: 329 °C
pH	: Not available
Viscosity, kinematic	: Not available
Viscosity, dynamic	: 150 – 220 cP
Solubility	: Reacts with water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 1,23
Relative vapour density at 20°C	: Not available
Particle characteristics	: 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 %

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SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts slowly with water, generate gases (CO₂) and overpressure : rupture containers.

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

Reacts with water. Reacts violently with : acid. alcohol. Aluminium. Amines. Oxidation agents.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Do not allow water (or moist air) contact with this material. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide. Hydrogen cyanide. Nitric oxide/nitrogen dioxide.

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) : Harmful if inhaled.

245 2C PU (Component B)	
ATE CLP (dust,mist)	1,5 mg/l/4h

polymethylene polyphenyl isocyanate (9016-87-9)	
LD50 oral rat	> 10000 mg/kg (Rat, Literature study, Oral)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Literature study, Dermal)

Skin corrosion/irritation : Causes skin irritation.

polymethylene polyphenyl isocyanate (9016-87-9)	
pH	No data available in the literature

Serious eye damage/irritation : Causes serious eye irritation.

polymethylene polyphenyl isocyanate (9016-87-9)	
pH	No data available in the literature

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.

polymethylene polyphenyl isocyanate (9016-87-9)	
STOT-single exposure	May cause respiratory irritation.

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

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polymethylene polyphenyl isocyanate (9016-87-9)

STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure (if inhaled).
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Aspiration hazard : Not classified

polymethylene polyphenyl isocyanate (9016-87-9)

Viscosity, kinematic	No data available in the literature
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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

Not rapidly degradable

polymethylene polyphenyl isocyanate (9016-87-9)

LC50 - Fish [1]	> 1000 ml/l
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LC50 - Other aquatic organisms [1]	> 1000 mg/l (96 h, Literature study)
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12.2. Persistence and degradability

polymethylene polyphenyl isocyanate (9016-87-9)

Persistence and degradability	Not readily biodegradable in water.
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12.3. Bioaccumulative potential

polymethylene polyphenyl isocyanate (9016-87-9)

BCF - Fish [1]	268,1 l/kg (BCFBAF v3.01, Estimated value, Fresh weight)
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Partition coefficient n-octanol/water (Log Pow)	10,46 (Calculated, KOWWIN)
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Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
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12.4. Mobility in soil

polymethylene polyphenyl isocyanate (9016-87-9)

Surface tension	No data available in the literature
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Organic Carbon Normalized Adsorption Coefficient (Log Koc)	9,078 – 10,597 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
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Ecology - soil	Adsorbs into the soil.
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12.5. Results of PBT and vPvB assessment

Component

polymethylene polyphenyl isocyanate (9016-87-9)	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
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12.6. Endocrine disrupting properties

No additional information available

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Collect all waste in suitable and labelled containers and dispose according to local legislation.

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
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

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	245 2C PU (Component B) ; polymethylene polyphenyl isocyanate	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
56.	polymethylene polyphenyl isocyanate	Methylenediphenyl diisocyanate (MDI)
56(a)	polymethylene polyphenyl isocyanate	Methylenediphenyl diisocyanate (MDI) isomers: 4,4'-Methylenediphenyl diisocyanate
56(b)	polymethylene polyphenyl isocyanate	Methylenediphenyl diisocyanate (MDI) isomers: 2,4'-Methylenediphenyl diisocyanate
56(c)	polymethylene polyphenyl isocyanate	Methylenediphenyl diisocyanate (MDI) isomers: 2,2'-Methylenediphenyl diisocyanate
74.	polymethylene polyphenyl isocyanate	Diisocyanates, $O = C=N-R-N = C=O$, with R an aliphatic or aromatic hydrocarbon unit of unspecified length

REACH Annex XIV (Authorisation List)

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

REACH Candidate List (SVHC)

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

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

VOC Directive (2004/42)

VOC content : 0 %

Explosives Precursors Regulation (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 (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 16: Other information

Indication of changes:

Identification of the substance/mixture and of the company/undertaking.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
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
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

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
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

Safety Data Sheet (SDS), EU-2022-2

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.