

Safety Data Sheet
MAPEFLEX PU 45 FT

Safety Data Sheet dated: 10/11/2023 - version 8



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

1.1. Product identifier

Mixture identification:

Trade name: MAPEFLEX PU 45 FT

Trade code: 906PG9990

UFI: XKAA0-60EC-A00N-12Q5

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

Recommended use: Polyurethane-based adhesive

Uses advised against: Data not available.

1.3. Details of the supplier of the safety data sheet

Company: MAPEI U.K. Ltd - Mapei House Steel Park Road
Halesowen - West Midlands B62 8HD

phone: +44(0)121 508 6970 - fax: +44(0)121 5086 960 - www.mapei.co.uk (office hour 8:30-17:30)

Responsible: sicurezza@mapei.it

1.4. Emergency telephone number

call NHS 111 or a doctor/OHES Environmental Ltd +44(0)333 333 9962

SECTION 2: Hazards identification



2.1. Classification of the substance or mixture

Regulation (EC) n. 1272/2008 (CLP)

Resp. Sens. 1 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2 The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Regulation (EC) No 1272/2008 (CLP):

Hazard pictograms and Signal Word



Danger

Hazard statements

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

Precautionary statements

P261 Avoid breathing mist/vapours/spray.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER.

P501 Dispose of contents/container in accordance with applicable regulations.

Special Provisions:

EUH208 Contains 4-isocyanatesulphonyltoluene; tosyl isocyanate. May produce an allergic reaction.

EUH208 Contains diphenylmethane-4,4'-diisocyanate. May produce an allergic reaction.

EUH204 Contains isocyanates. May produce an allergic reaction.

EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.

Contains

diphenylmethanediisocyanate isomers and homologues

Special provisions according to Annex XVII of REACH and subsequent amendments:

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

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$

Other Hazards: No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Not Relevant

3.2. Mixtures

Mixture identification: MAPEFLEX PU 45 FT

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb.	Classification	Registration Number
$\geq 1 - < 2.5$ %	N,N-dibenzyliden polyoxypropylene diamine	CAS:136855-71- 5, 524730-13-0 EC:679-523-7	Skin Irrit. 2, H315	
$\geq 0.49 - < 1$ %	4-isocyanatesulphonyltoluene; tosyl isocyanate	CAS:4083-64-1 EC:223-810-8 Index:615-012- 00-7	Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334, EUH014 Specific Concentration Limits: C $\geq 5\%$: Skin Irrit. 2 H315 C $\geq 5\%$: Eye Irrit. 2 H319 C $\geq 5\%$: STOT SE 3 H335	01-2119980050-47-XXXX
$\geq 0.49 - < 1$ %	diphenylmethanediisocyanate isomers and homologues	CAS:9016-87-9 EC:618-498-9 Index:615-005- 00-9	Acute Tox. 4, H332 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT RE 2, H373 Carc. 2, H351 Specific Concentration Limits: 5% \leq C < 100%: Skin Irrit. 2 H315 5% \leq C < 100%: Eye Irrit. 2 H319 C $\geq 0.1\%$: Resp. Sens. 1,1A,1B H334 C $\geq 5\%$: STOT SE 3 H335	
$\geq 0.025 -$ < 0.05 %	diphenylmethane-4,4'-diisocyanate	CAS:101-68-8 EC:202-966-0 Index:615-005- 00-9	Acute Tox. 4, H332 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT RE 2, H373 Carc. 2, H351 Specific Concentration Limits: 0.1% \leq C < 100%: Resp. Sens. 1 H334 5% \leq C < 100%: Skin Irrit. 2 H315 5% \leq C < 100%: Eye Irrit. 2 H319 5% \leq C < 100%: STOT SE 3 H335	01-2119457014-47-XXXX
$\geq 0.01 -$ < 0.016 %	2-methoxy-1-methylethyl acetate	CAS:108-65-6 EC:203-603-9 Index:607-195- 00-7	Flam. Liq. 3, H226	01-2119475791-29-XXXX
$\geq 0.005 -$ < 0.01 %	phosphoric acid ... %	CAS:7664-38-2 EC:231-633-2 Index:015-011- 00-6	Met. Corr. 1, H290 Eye Dam. 1, H318 Acute Tox. 4, H302 Skin Corr. 1B, H314 Specific Concentration Limits: C $\geq 25\%$: Skin Corr. 1B H314 10% \leq C < 25%: Skin Irrit. 2 H315 10% \leq C < 25%: Eye Irrit. 2 H319	01-2119485924-24-XXXX

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose of safely.

In case of eyes contact:

Wash immediately with water.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and the hazard label.

In case of Inhalation:

Remove casualty to fresh air and keep warm and at rest.

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

Not available

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

(see paragraph 4.1)

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

For emergency responders:

Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Limit leakages with earth or sand.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

Retain contaminated washing water and dispose it.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

Recommendation(s)

None in particular

Industrial sector specific solutions:

None in particular

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Community Occupational Exposure Limits (OEL)

	OEL Type	Country	Occupational Exposure Limit
4-isocyanatesulphonyltoluene; tosyl isocyanate CAS: 4083-64-1	SUVA		Long Term: 0.02 mg/m ³ ; Short Term: 0.02 mg/m ³
	ACGIH		Long Term: 0.05 ppm
diphenylmethanediisocyanate isomers and homologues CAS: 9016-87-9	SUVA		Long Term: 0.02 mg/m ³ ; Short Term: 0.02 mg/m ³
	DFG	GERMANY	Short Term: Ceiling - 0.05 mg/m ³
	National	GERMANY	Long Term: 0.05 mg/m ³
	National	SLOVENIA	Long Term: 0.05 mg/m ³ ; Short Term: 0.05 mg/m ³
diphenylmethane-4,4'-diisocyanate CAS: 101-68-8	National	NORWAY	Long Term: 0.05 mg/m ³ - 0.005 ppm; Short Term: 0.01 ppm A 4
	SUVA		Long Term: 0.02 mg/m ³ ; Short Term: 0.02 mg/m ³
	National	SWEDEN	Long Term: 0.03 mg/m ³ - 0.002 ppm; Short Term: Ceiling - 0.05 mg/m ³ - 0.005 ppm SWEDEN, Ceiling limit value
	NDS		Long Term: 0.03 mg/m ³
	NDSP		Long Term: 0.09 mg/m ³
	ACGIH		Long Term: 0.005 ppm Resp sens
	National	POLAND	Long Term: 0.03 mg/m ³ ; Short Term: 0.09 mg/m ³
	National	AUSTRIA	Long Term: 0.05 mg/m ³ - 0.005 ppm; Short Term: 0.1 mg/m ³ - 0.01 ppm
	DFG	GERMANY	Short Term: Ceiling - 0.05 mg/m ³
	ACGIH		Long Term: 0.005 ppm respiratory sensitization (listed under Methylene bisphenyl isocyanate (MDI))
	National	SWEDEN	Long Term: 0.03 mg/m ³ - 0.002 ppm
	National	FRANCE	Long Term: 0.1 mg/m ³ - 0.01 ppm; Short Term: 0.2 mg/m ³ - 0.02 ppm
National	SPAIN	Long Term: 0.052 mg/m ³ - 0.005 ppm	
National	DENMARK	Long Term: 0.05 mg/m ³ - 0.005 ppm	
National	GERMANY	Long Term: 0.05 mg/m ³	
National	PORTUGAL	Long Term: 0.005 ppm	
National	BELGIUM	Long Term: 0.052 mg/m ³ - 0.005 ppm	
NDS	POLAND	Long Term: 0.03 mg/m ³	
NDSch	POLAND	Short Term: 0.09 mg/m ³	
National	CZECH	Long Term: 0.05 mg/m ³	

REPUBLIC

National HUNGARY	Long Term: 0.05 mg/m3; Short Term: 0.05 mg/m3
Malaysia a OEL	Long Term: 0.051 mg/m3 - 0.005 ppm
National ESTONIA	Long Term: 0.05 mg/m3 - 0.005 ppm; Short Term: 0.1 mg/m3 - 0.01 ppm
National CZECH REPUBLIC	Short Term: Ceiling - 0.1 mg/m3
National SLOVAKIA	Long Term: 0.002 mg/m3
National SLOVAKIA	Long Term: 0.03 mg/m3
National SLOVENIA	Long Term: 0.05 mg/m3; Short Term: 0.05 mg/m3
National ROMANIA	Short Term: 0.15 mg/m3
National LITHUANIA	Long Term: 0.05 mg/m3 - 0.005 ppm
National LITHUANIA	Short Term: Ceiling - 0.1 mg/m3 - 0.01 ppm
ACGIH	Long Term: 0.005 ppm respiratory sensitization (listed under Methylene bisphenyl isocyanate (MDI))
National NORWAY	Long Term: 0.05 mg/m3 - 0.005 ppm; Short Term: 0.01 ppm
National SLOVENIA	Long Term: 0.05 mg/m3 - 0.005 ppm; Short Term: 0.05 mg/m3 - 0.005 ppm
2-methoxy-1-methylethyl acetate CAS: 108-65-6	DFG GERMANY Short Term: Ceiling - 270 mg/m3 - 50 ppm
National SWEDEN	Long Term: 275 mg/m3 - 50 ppm
National FRANCE	Long Term: 275 mg/m3 - 50 ppm; Short Term: 550 mg/m3 - 100 ppm
National SPAIN	Long Term: 275 mg/m3 - 50 ppm; Short Term: 550 mg/m3 - 100 ppm
National GREECE	Long Term: 275 mg/m3 - 50 ppm; Short Term: 550 mg/m3 - 100 ppm
National DENMARK	Long Term: 275 mg/m3 - 50 ppm
National FINLAND	Long Term: 270 mg/m3 - 50 ppm; Short Term: 550 mg/m3 - 100 ppm
National GERMANY	Long Term: 270 mg/m3 - 50 ppm
National PORTUGAL	Long Term: 275 mg/m3 - 50 ppm; Short Term: 550 mg/m3 - 100 ppm
National NORWAY	Long Term: 270 mg/m3 - 50 ppm; Short Term: 337.5 mg/m3 - 75 ppm
National BELGIUM	Long Term: 275 mg/m3 - 50 ppm; Short Term: 550 mg/m3 - 100 ppm
NDS POLAND	Long Term: 260 mg/m3
NDSch POLAND	Short Term: 520 mg/m3
CHE SWITZERLAN D	Short Term: 275 mg/m3 - 50 ppm
NDS NETHERLAND S	Long Term: 550 mg/m3
National CZECH REPUBLIC	Long Term: 270 mg/m3
National HUNGARY	Long Term: 275 mg/m3; Short Term: 550 mg/m3
National ESTONIA	Long Term: 275 mg/m3 - 50 ppm; Short Term: 550 mg/m3 - 100 ppm
National LATVIA	Long Term: 275 mg/m3 - 50 ppm; Short Term: 550 mg/m3 - 100 ppm
National CZECH REPUBLIC	Short Term: Ceiling - 550 mg/m3
National SLOVAKIA	Short Term: Ceiling - 550 mg/m3
National SLOVAKIA	Long Term: 275 mg/m3 - 50 ppm
National SLOVENIA	Long Term: 275 mg/m3 - 50 ppm; Short Term: 550 mg/m3 - 100 ppm
National UNITED KINGDOM	Long Term: 274 mg/m3 - 50 ppm; Short Term: 548 mg/m3 - 100 ppm
National BULGARIA	Long Term: 275 mg/m3 - 50 ppm; Short Term: 550 mg/m3 - 100 ppm
National ROMANIA	Long Term: 275 mg/m3 - 50 ppm; Short Term: 550 mg/m3 - 100 ppm
TUR TURKEY	Long Term: 275 mg/m3 - 50 ppm; Short Term: 550 mg/m3 - 100 ppm
National LITHUANIA	Long Term: 250 mg/m3 - 50 ppm; Short Term: 400 mg/m3 - 75 ppm
National CROATIA	Long Term: 275 mg/m3 - 50 ppm; Short Term: 550 mg/m3 - 100 ppm
EU	Long Term: 275 mg/m3 - 50 ppm; Short Term: 550 mg/m3 - 100 ppm

			Behaviour Indicative Possibility of significant uptake through the skin;
	EU		Long Term: 275 mg/m ³ - 50 ppm; Short Term: 550 mg/m ³ - 100 ppm Behaviour Indicative Possibility of significant uptake through the skin
phosphoric acid ... % CAS: 7664-38-2	DFG	GERMANY	Short Term: Ceiling - 4 mg/m ³
	ACGIH		Long Term: 1 mg/m ³ ; Short Term: 3 mg/m ³ eye, skin and upper respiratory tract irritation
	National	SWEDEN	Long Term: 1 mg/m ³
	National	FRANCE	Long Term: 1 mg/m ³ - 0.2 ppm; Short Term: 2 mg/m ³ - 0.5 ppm
	National	SPAIN	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³
	National	GREECE	Long Term: 1 mg/m ³ ; Short Term: 3 mg/m ³
	National	DENMARK	Long Term: 1 mg/m ³
	National	FINLAND	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³
	National	GERMANY	Long Term: 2 mg/m ³
	National	PORTUGAL	Long Term: 1 mg/m ³ ; Short Term: 3 mg/m ³
	National	NORWAY	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³
	National	BELGIUM	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³
	NDS	POLAND	Long Term: 1 mg/m ³
	NDSCh	POLAND	Short Term: 2 mg/m ³
	CHE	SWITZERLAND	Short Term: 2 mg/m ³
	NDS	NETHERLANDS	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³
	National	CZECH REPUBLIC	Long Term: 1 mg/m ³
	National	HUNGARY	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³
	Malaysia a OEL	MALAYSIA	Long Term: 1 mg/m ³
	National	ESTONIA	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³
	National	LATVIA	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³
	National	CZECH REPUBLIC	Short Term: Ceiling - 2 mg/m ³
	National	SLOVAKIA	Short Term: Ceiling - 2 mg/m ³
	National	SLOVAKIA	Long Term: 1 mg/m ³
	National	SLOVENIA	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³
	National	UNITED KINGDOM	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³
	National	BULGARIA	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³
	National	ROMANIA	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³
	TUR	TURKEY	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³
	National	LITHUANIA	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³
	National	CROATIA	Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³
	EU		Long Term: 1 mg/m ³ ; Short Term: 2 mg/m ³ Behaviour Indicative
	CHE	SWITZERLAND	Short Term: 4 mg/m ³

Predicted No Effect Concentration (PNEC) values

diphenylmethane-4,4'-diisocyanate
CAS: 101-68-8 Exposure Route: Fresh Water; PNEC Limit: 1 mg/l

Exposure Route: Marine water; PNEC Limit: 0.1 mg/l

Exposure Route: Soil; PNEC Limit: 1 mg/kg

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 1 mg/l

Exposure Route: Intermittent release; PNEC Limit: 10 mg/l

2-methoxy-1-methylethyl acetate
CAS: 108-65-6

Exposure Route: Marine water; PNEC Limit: 0.0635 mg/l

Exposure Route: Freshwater sediments; PNEC Limit: 3.29 mg/kg

Exposure Route: Marine water sediments; PNEC Limit: 0.329 mg/kg

Exposure Route: Soil; PNEC Limit: 0.29 mg/kg

Exposure Route: Microorganisms in sewage treatments; PNEC Limit: 100 mg/l

Exposure Route: Intermittent release; PNEC Limit: 6.35 mg/l

Derived No Effect Level (DNEL) values

diphenylmethane-4,4'-diisocyanate
CAS: 101-68-8

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects
Worker Industry: 50 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Worker Industry: 0.1 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Industry: 0.1 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Industry: 0.05 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Industry: 0.05 mg/m³

Exposure Route: Human Dermal; Exposure Frequency: Short Term, systemic effects
Consumer: 25 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, systemic effects
Consumer: 0.05 mg/m³

Exposure Route: Human Oral; Exposure Frequency: Short Term, systemic effects
Consumer: 20 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Consumer: 0.05 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Consumer: 0.025 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Consumer: 0.025 mg/m³

Exposure Route: Human Dermal; Exposure Frequency: Short Term, local effects
Worker Industry: 28.7 mg/cm²; Consumer: 17.2 mg/cm²

2-methoxy-1-methylethyl acetate
CAS: 108-65-6

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Worker Industry: 153.5 mg/kg; Consumer: 54.8 mg/kg

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Industry: 275 mg/m³; Consumer: 33 mg/m³

Exposure Route: Human Oral; Exposure Frequency: Long Term, systemic effects
Consumer: 1.67 mg/kg

phosphoric acid ... %
CAS: 7664-38-2

Exposure Route: Human Inhalation; Exposure Frequency: Short Term, local effects
Worker Industry: 2 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, local effects
Worker Industry: 1 mg/m³; Consumer: 0.36 mg/m³

Exposure Route: Human Inhalation; Exposure Frequency: Long Term, systemic effects
Worker Industry: 10.7 mg/m³; Consumer: 4.57 mg/m³

Exposure Route: Human Dermal; Exposure Frequency: Long Term, systemic effects
Consumer: 0.1 mg/kg

8.2. Exposure controls

Eye protection:

Not needed for normal use. Anyway, operate according good working practices.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Suitable materials for safety gloves; EN ISO 374:

Polychloroprene - CR: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 480\text{min}$.

Nitrile rubber - NBR: thickness $\geq 0,35\text{mm}$; breakthrough time $\geq 480\text{min}$.

Butyl rubber - IIR: thickness $\geq 0,5\text{mm}$; breakthrough time $\geq 480\text{min}$.

Fluorinated rubber - FKM: thickness $\geq 0,4\text{mm}$; breakthrough time $\geq 480\text{min}$.

Neoprene gloves are suggested (0,5 mm) not recommended gloves: not waterproof gloves

Respiratory protection:

Personal Protective Equipment should comply with relevant CE standards (as EN ISO 374 for gloves and EN ISO 166 for goggles), correctly maintained and stored. Consult the supplier to check the suitability of equipment against specific chemicals and for user information.

Respiratory protection must be used where exposure levels exceed workplace exposure limits. Refer to appropriate EN standards, like EN 136, 140, 143, 149, 14387 for information on selection and use of appropriate respiratory protection equipment.

In case of insufficient ventilation use mask with ABEKP filters (EN 14387).

Use respiratory protection where ventilation is insufficient or exposure is prolonged.

Hygienic and Technical measures

Not available

Appropriate engineering controls:

Not available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Liquid

Appearance: paste

Color: various

Odour: Characteristic

Odour threshold: Not available

Melting point / freezing point: Not available

Initial boiling point and boiling range: Not available

Flammability: N.A.

Lower and upper explosion limit: Not available

Flash point: Not available

Auto-ignition temperature: Not available

Decomposition temperature: Not available

pH: Not Relevant

Viscosity: 1,300,000.00 cPs

Kinematic viscosity: Not available

Solubility in water: Insoluble

Solubility in oil: partly soluble

Partition coefficient (n-octanol/water): Not available

Vapour pressure: Not available

Relative density: 1.35 g/cm³

Vapour density: Not available

Particle characteristics:

Particle size: Not available

9.2. Other information

Miscibility: Not available

Conductivity: Not available

No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None.

10.4. Conditions to avoid

Stable under normal conditions.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

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

Toxicological Information of the Preparation

a) acute toxicity	Not classified
	Based on available data, the classification criteria are not met
b) skin corrosion/irritation	Not classified
	Based on available data, the classification criteria are not met
c) serious eye damage/irritation	Not classified
	Based on available data, the classification criteria are not met
d) respiratory or skin sensitisation	The product is classified: Resp. Sens. 1(H334)
e) germ cell mutagenicity	Not classified
	Based on available data, the classification criteria are not met
f) carcinogenicity	Not classified
	Based on available data, the classification criteria are not met
g) reproductive toxicity	Not classified
	Based on available data, the classification criteria are not met
h) STOT-single exposure	Not classified
	Based on available data, the classification criteria are not met
i) STOT-repeated exposure	Not classified
	Based on available data, the classification criteria are not met
j) aspiration hazard	Not classified
	Based on available data, the classification criteria are not met

Toxicological information on main components of the mixture:

4-isocyanatesulphonyltoluene; tosyl isocyanate	a) acute toxicity	LC50 Inhalation Rat > 640 ppm 1h	
		LD50 Oral Rat = 2234 mg/kg	
diphenylmethanediisocyanate isomers and homologues	a) acute toxicity	LD50 Oral Rat > 10000 mg/kg	
		LD50 Skin Rabbit > 9400 mg/kg	
		LC50 Inhalation Dust Rat = 0.31 mg/l 4h	
		LD50 Skin Rabbit > 9.4 g/kg	
		LC50 Inhalation Rat = 490 mg/m ³ 4h	
		LD50 Oral Rat = 49 g/kg	
	g) reproductive toxicity	NOAEL Inhalation Rat = 12 mg/m ³	
diphenylmethane-4,4'-diisocyanate	a) acute toxicity	LD50 Oral Rat > 2000 mg/kg	
		LD50 Skin Rabbit > 9400 mg/kg	
	b) skin corrosion/irritation	Skin Irritant Skin Rabbit Positive	
	d) respiratory or skin sensitisation	Skin Sensitization Skin Mouse Positive	
		Respiratory Sensitization Inhalation Positive	
	f) carcinogenicity	Carcinogenicity Inhalation Rat = 6 mg/m ³	2 y
	g) reproductive toxicity	NOAEL Inhalation Rat = 12 mg/m ³	20 d
2-methoxy-1-methylethyl acetate	a) acute toxicity	LD50 Oral Rat > 5000 mg/kg	
		LD50 Skin Rabbit > 5 g/kg	

LD50 Oral Rat = 8532 mg/kg

phosphoric acid ... % a) acute toxicity

LD50 Skin Rabbit > 2000 mg/kg

LC50 Inhalation Rat > 3800 mg/m³ 1h

LD50 Oral Rat = 2600 mg/kg

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration \geq 0.1%

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of Eco-Toxicological properties of the product

Not classified for environmental hazards.

Based on available data, the classification criteria are not met

List of Eco-Toxicological properties of the components

Component	Ident. Numb.	Ecotox Data
diphenylmethanediisocyanate isomers and homologues	CAS: 9016-87-9 - EINECS: 618-498-9 - INDEX: 615-005-00-9	a) Aquatic acute toxicity : LC50 Fish > 1000 mg/L 96 a) Aquatic acute toxicity : EC50 Daphnia > 1000 mg/L 24 b) Aquatic chronic toxicity : NOEC Daphnia > 10 mg/L - 21 d a) Aquatic acute toxicity : EC50 Algae > 1640 mg/L 72 c) Bacteria toxicity : EC50 > 100 mg/L 3 d) Terrestrial toxicity : NOEC > 1000 mg/kg - 14 d e) Plant toxicity : NOEC > 1000 mg/kg - 14 d
diphenylmethane-4,4'-diisocyanate	CAS: 101-68-8 - EINECS: 202-966-0 - INDEX: 615-005-00-9	a) Aquatic acute toxicity : LC50 Fish > 1000 mg/L 96 a) Aquatic acute toxicity : EC50 Daphnia > 1000 mg/L 24 b) Aquatic chronic toxicity : NOEC Daphnia > 10 mg/L - 21 d a) Aquatic acute toxicity : EC50 Algae > 1640 mg/L 72 c) Bacteria toxicity : EC50 > 100 mg/L 3 d) Terrestrial toxicity : NOEC > 1000 mg/kg - 14 d e) Plant toxicity : NOEC > 1000 mg/kg - 14 d
2-methoxy-1-methylethyl acetate	CAS: 108-65-6 - EINECS: 203-603-9 - INDEX: 607-195-00-7	a) Aquatic acute toxicity : EC50 Daphnia = 408 mg/L 48h a) Aquatic acute toxicity : LC50 Fish = 130 mg/L 96h b) Aquatic chronic toxicity : NOEC Fish = 47.5 mg/L 14d b) Aquatic chronic toxicity : NOEC Daphnia \geq 100 mg/L 21d b) Aquatic chronic toxicity : NOEC Algae \geq 1000 mg/L
phosphoric acid ... %	CAS: 7664-38-2 - EINECS: 231-633-2 - INDEX: 015-011-00-6	a) Aquatic acute toxicity : EC50 Daphnia > 100 mg/L 48h

12.2. Persistence and degradability

N.A.

12.3. Bioaccumulative potential

N.A.

12.4. Mobility in soil

N.A.

12.5. Results of PBT and vPvB assessment

No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$

12.6. Endocrine disrupting properties

No endocrine disruptor substances present in concentration $\geq 0.1\%$

12.7. Other adverse effects

Not available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Recover if possible.

A waste code (EWC) according to European List of Waste (LoW) cannot be specified, due to dependence on the usage. Contact and send to an authorized waste disposal service.

Methods of disposal:

Disposal of this product, solutions, packaging and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Dispose of surplus and nonrecyclable products via a licensed waste disposal contractor.

Do not dispose of waste into sewers.

Hazardous waste: Yes

Disposal considerations:

Do not allow to enter drains or watercourses.

Dispose of product according to all federal, state and local applicable regulations.

If this product is mixed with other wastes, the original waste product code may no longer apply and the appropriate code should be assigned.

Dispose of containers contaminated by the product in accordance with local or national legal provisions. For further information, contact your local waste authority.

Special precautions:

This material and its container must be disposed of in a safe way. Care should be taken when handling untreated empty containers.

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Empty containers or liners may retain some product residues. Do not re-use empty containers.

SECTION 14: Transport information

Not classified as dangerous in the meaning of transport regulations.

14.1. UN number or ID number

Not Applicable

14.2. UN proper shipping name

Not Applicable

14.3. Transport hazard class(es)

Not Applicable

14.4. Packing group

Not Applicable

14.5. Environmental hazards

Not Applicable

14.6. Special precautions for user

Not Applicable

Road and Rail (ADR-RID):

ADR-Hazard identification number: NA

Not Applicable

Air (IATA):

Not Applicable

Sea (IMDG):

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

VOC (2004/42/EC) : N.A. g/l

Dir. 98/24/EC (Risks related to chemical agents at work)

Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)
 Regulation (EU) n. 2020/878
 Regulation (EC) n. 1272/2008 (CLP)
 Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
 Regulation (EU) n. 286/2011 (ATP 2 CLP)
 Regulation (EU) n. 618/2012 (ATP 3 CLP)
 Regulation (EU) n. 487/2013 (ATP 4 CLP)
 Regulation (EU) n. 944/2013 (ATP 5 CLP)
 Regulation (EU) n. 605/2014 (ATP 6 CLP)
 Regulation (EU) n. 2015/1221 (ATP 7 CLP)
 Regulation (EU) n. 2016/918 (ATP 8 CLP)
 Regulation (EU) n. 2016/1179 (ATP 9 CLP)
 Regulation (EU) n. 2017/776 (ATP 10 CLP)
 Regulation (EU) n. 2018/669 (ATP 11 CLP)
 Regulation (EU) n. 2019/521 (ATP 12 CLP)
 Regulation (EU) n. 2018/1480 (ATP 13 CLP)
 Regulation (EU) n. 2020/217 (ATP 14 CLP)
 Regulation (EU) n. 2020/1182 (ATP 15 CLP)
 Regulation (EU) n. 2021/643 (ATP 16 CLP)
 Regulation (EU) n. 2021/849 (ATP 17 CLP)
 Regulation (EU) n. 2022/692 (ATP 18 CLP)

Provisions related to directive EU 2012/18 (Seveso III):

None

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product: 3

Restrictions related to the substances contained: 30, 40, 74, 75

SVHC Substances:

SVHC substances not present in a concentration $\geq 0.1\%$ (w/w)

National regulations

Lagerklasse (TRGS-510): 12 - Non-combustible liquids, that cannot be assigned to any of the aforementioned LGK

German Water Hazard Class.

Class 1: slightly hazardous for water.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

SECTION 16: Other information

Code	Description
EUH014	Reacts violently with water.
H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
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.

Code	Hazard class and hazard category	Description
2.16/1	Met. Corr. 1	Substance or mixture corrosive to metals, Category 1
2.6/3	Flam. Liq. 3	Flammable liquid, Category 3
3.1/4/Inhal	Acute Tox. 4	Acute toxicity (inhalation), Category 4

3.1/4/Oral	Acute Tox. 4	Acute toxicity (oral), Category 4
3.2/1B	Skin Corr. 1B	Skin corrosion, Category 1B
3.2/2	Skin Irrit. 2	Skin irritation, Category 2
3.3/1	Eye Dam. 1	Serious eye damage, Category 1
3.3/2	Eye Irrit. 2	Eye irritation, Category 2
3.4.1/1	Resp. Sens. 1	Respiratory Sensitisation, Category 1
3.4.1/1-1A-1B	Resp. Sens. 1,1A,1B	Respiratory Sensitisation, Category 1,1A,1B
3.4.2/1	Skin Sens. 1	Skin Sensitisation, Category 1
3.6/2	Carc. 2	Carcinogenicity, Category 2
3.8/3	STOT SE 3	Specific target organ toxicity – single exposure, Category 3
3.9/2	STOT RE 2	Specific target organ toxicity – repeated exposure, Category 2

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

Classification according to Regulation (EC) Nr. 1272/2008 Classification procedure

Resp. Sens. 1, H334 Calculation method

If appropriate, specific provisions in relation to possible training for workers are mentioned in section 2. Any training related to safety in the workplace must in any case refer to a risk assessment that must be carried out by a company safety officer taking into account the specific operating and environmental conditions in which the products are used.

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities

SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AND: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

BCF: Biological Concentration Factor

BEI: Biological Exposure Index

BOD: Biochemical Oxygen Demand

CAS: Chemical Abstracts Service (division of the American Chemical Society).

CAV: Poison Center

CE: European Community

CLP: Classification, Labeling, Packaging.

CMR: Carcinogenic, Mutagenic and Reprotoxic

COD: Chemical Oxygen Demand

COV: Volatile Organic Compound

CSA: Chemical Safety Assessment

CSR: Chemical Safety Report

DMEL: Derived Minimal Effect Level

DNEL: Derived No Effect Level.

DPD: Dangerous Preparations Directive

DSD: Dangerous Substances Directive

EC50: Half Maximal Effective Concentration

ECHA: European Chemicals Agency

EINECS: European Inventory of Existing Commercial Chemical Substances.

ES: Exposure Scenario

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

IARC: International Agency for Research on Cancer

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

IC50: half maximal inhibitory concentration

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.
IRCCS: Scientific Institute for Research, Hospitalization and Health Care
KAFH: KAFH
KSt: Explosion coefficient.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
LDLo: Leathal Dose Low
N.A.: Not Applicable
N/A: Not Applicable
N/D: Not defined/ Not available
NA: Not available
NIOSH: National Institute for Occupational Safety and Health
NOAEL: No Observed Adverse Effect Level
OSHA: Occupational Safety and Health Administration
PBT: Persistent, Bioaccumulative and Toxic
PGK: Packaging Instruction
PNEC: Predicted No Effect Concentration.
PSG: Passengers
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
vPvB: Very Persistent, Very Bioaccumulative.
WGK: German Water Hazard Class.

Paragraphs modified from the previous revision:

- SECTION 2: Hazards identification
- SECTION 3: Composition/information on ingredients
- SECTION 5: Firefighting measures
- SECTION 6: Accidental release measures
- SECTION 7: Handling and storage
- SECTION 8: Exposure controls/personal protection
- SECTION 9: Physical and chemical properties
- SECTION 11: Toxicological information
- SECTION 12: Ecological information
- SECTION 15: Regulatory information
- SECTION 16: Other information