SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2015/830

Carbond 940 FC

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

1.1. Product identifier

Product name : Carbond 940 FC
Registration number REACH : Not applicable (mixture)
Product type REACH : Mixture

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

1.2.1 Relevant identified uses

Construction: sealant

1.2.2 Uses advised against

No uses advised against known

1.3. Details of the supplier of the safety data sheet

Supplier of the safety data sheet

SOUDAL N.V.
Everdongenlaan 18-20
B-2300 Turnhout
☎ +32 14 42 42 31
🖷 +32 14 42 65 14
msds@soudal.com

Manufacturer of the product

SOUDAL N.V.
Everdongenlaan 18-20
B-2300 Turnhout
☎ +32 14 42 42 31
🖷 +32 14 42 65 14
msds@soudal.com

1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch):
+32 14 58 45 45 (BIG)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

Class	Category	Hazard statements
Resp. Sens.	category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2. Label elements

Contains: 4,4'-methylenediphenyl diisocyanate.

Signal word Danger

H-statements

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

P-statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P284 Wear respiratory protection.
P261 Avoid breathing vapours/mist.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P501 Dispose of contents/container in accordance with local/regional/national/international regulation.

Supplemental information

- 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.

2.3. Other hazards

No other hazards known

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name REACH Registration No	CAS No EC No	Conc. (C)	Classification according to CLP	Note	Remark
4,4'-methylenediphenyl diisocyanate 01-2119457014-47	101-68-8 202-966-0	0.1%<C<1%	Carc. 2; H351 Acute Tox. 4; H332 STOT RE 2; H373 Eye Irrit. 2; H319 STOT SE 3; H335 Skin Irrit. 2; H315 Resp. Sens. 1; H334 Skin Sens. 1; H317	(1)(2)(8)(10)	Constituent
xylene 01-2119488216-32	1330-20-7 215-535-7	1%<C<10%	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315	(1)(2)(10)	Constituent
ethylbenzene 01-2119489370-35	100-41-4 202-849-4	1%<C<5%	Flam. Liq. 2; H225 Acute Tox. 4; H332 Asp. Tox. 1; H304 STOT RE 2; H373 Aquatic Chronic 3; H412	(1)(2)(6)(10)	Constituent

(1) For H-statements in full: see heading 16
(2) Substance with a Community workplace exposure limit
(6) Enumerated in Annex VI of Regulation (EC) No. 1272/2008 but the classification has been adapted after evaluation of available test data
(8) Specific concentration limits, see heading 16
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006

SECTION 4: First aid measures

4.1. Description of first aid measures

General:

Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.

After inhalation:

Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

After skin contact:

Wash immediately with lots of water. Soap may be used. Take victim to a doctor if irritation persists.

After eye contact:

Rinse with water. Take victim to an ophthalmologist if irritation persists.

After ingestion:

Rinse mouth with water. Consult a doctor/medical service if you feel unwell.

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

4.2.1 Acute symptoms

After inhalation:

ON CONTINUOUS EXPOSURE/CONTACT: Headache. Nausea. Dizziness. Narcosis.

After skin contact:

No effects known.

After eye contact:

No effects known.

After ingestion:

AFTER INGESTION OF HIGH QUANTITIES: Symptoms similar to those listed under inhalation.

4.2.2 Delayed symptoms

No effects known.

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

If applicable and available it will be listed below.

SECTION 5: Firefighting measures

5.1. Extinguishing media

5.1.1 Suitable extinguishing media:

Adapt extinguishing media to the environment.

5.1.2 Unsuitable extinguishing media:

No unsuitable extinguishing media known.

5.2. Special hazards arising from the substance or mixture

On burning: release of toxic and corrosive gases/vapours (hydrogen chloride, sulphur oxides, carbon monoxide - carbon dioxide).

5.3. Advice for firefighters

5.3.1 Instructions:

Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.

5.3.2 Special protective equipment for fire-fighters:

Gloves. Safety glasses. Protective clothing. Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No naked flames.

6.1.1 Protective equipment for non-emergency personnel

See heading 8.2

6.1.2 Protective equipment for emergency responders

Gloves. Safety glasses. Protective clothing.

Suitable protective clothing

See heading 8.2

6.2. Environmental precautions

Contain released product. Use appropriate containment to avoid environmental contamination.

6.3. Methods and material for containment and cleaning up

Allow product to solidify and remove it by mechanical means. Clean (treat) contaminated surfaces with acetone. Wash clothing and equipment after handling.

6.4. Reference to other sections

See heading 13.

SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

7.1. Precautions for safe handling

Keep away from naked flames/heat. Gas/vapour heavier than air at 20°C. Observe very strict hygiene - avoid contact. Keep container tightly closed.

7.2. Conditions for safe storage, including any incompatibilities

7.2.1 Safe storage requirements:

Keep out of direct sunlight. Store in a dry area. Store at room temperature. Meet the legal requirements. Max. storage time: 1 year(s).

7.2.2 Keep away from:

Heat sources.

7.2.3 Suitable packaging material:

Aluminium.

7.2.4 Non suitable packaging material:

No data available

7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 Occupational exposure

a) Occupational exposure limit values

If limit values are applicable and available these will be listed below.

The Netherlands

Difenylmethaan-4,4'-diisocyanaat	Time-weighted average exposure limit 8 h (Private occupational exposure limit value)	0.0048 ppm
	Time-weighted average exposure limit 8 h (Private occupational exposure limit value)	0.05 mg/m³
	Short time value (Private occupational exposure limit value)	0.02 ppm
	Short time value (Private occupational exposure limit value)	0.21 mg/m³
Ethylbenzeen	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	49 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	215 mg/m³
	Short time value (Public occupational exposure limit value)	97 ppm
	Short time value (Public occupational exposure limit value)	430 mg/m³
Xyleen (o-,m- en p-isomeren)	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	48 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	210 mg/m³
	Short time value (Public occupational exposure limit value)	100 ppm
	Short time value (Public occupational exposure limit value)	442 mg/m³

EU

Ethylbenzene	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	100 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	442 mg/m³
	Short time value (Indicative occupational exposure limit value)	200 ppm
	Short time value (Indicative occupational exposure limit value)	884 mg/m³
Xylene, mixed isomers, pure	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	50 ppm
	Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value)	221 mg/m³
	Short time value (Indicative occupational exposure limit value)	100 ppm
	Short time value (Indicative occupational exposure limit value)	442 mg/m³

Belgium

4,4'-Diisocyanate de diphénylméthane (MDI)	Time-weighted average exposure limit 8 h	0.005 ppm
	Time-weighted average exposure limit 8 h	0.052 mg/m³
Ethylbenzène	Time-weighted average exposure limit 8 h	100 ppm
	Time-weighted average exposure limit 8 h	442 mg/m³
	Short time value	125 ppm
	Short time value	551 mg/m³
Xylène, isomères mixtes, purs	Time-weighted average exposure limit 8 h	50 ppm
	Time-weighted average exposure limit 8 h	221 mg/m³
	Short time value	100 ppm
	Short time value	442 mg/m³

USA (TLV-ACGIH)

Ethyl benzene	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	20 ppm
Methylene bisphenyl isocyanate (MDI)	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	0.005 ppm

Germany

4,4'-Methylendiphenyldiisocyanat	Time-weighted average exposure limit 8 h (TRGS 900)	0.05 mg/m³
Ethylbenzol	Time-weighted average exposure limit 8 h (TRGS 900)	20 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	88 mg/m³

France

4,4'-Diisocyanate de diphénylméthane	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	0.01 ppm
	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	0.1 mg/m³
	Short time value (VL: Valeur non réglementaire indicative)	0.02 ppm
	Short time value (VL: Valeur non réglementaire indicative)	0.2 mg/m³
Ethylbenzène	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	20 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	88.4 mg/m³
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	442 mg/m³
Xylènes, isomères mixtes, purs	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	50 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	221 mg/m³

Xylènes, isomères mixtes, purs	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	442 mg/m³

UK

Ethylbenzene	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	100 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	441 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	125 ppm
	Short time value (Workplace exposure limit (EH40/2005))	552 mg/m³
Isocyanates, all (as -NCO) Except methyl isocyanate	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	0.02 mg/m³
	Short time value (Workplace exposure limit (EH40/2005))	0.07 mg/m³

b) National biological limit values

If limit values are applicable and available these will be listed below.

Germany

Ethylbenzol (Mandelsäure + Phenylglyoxylsäure)	Urin: expositionsende, bzw. schichtende	300 mg/l	11/2012 Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe der DFG

USA (BEI-ACGIH)

Ethyl benzene (Sum of mandelic acid and phenylglyoxylic acid)	Urine: end of shift	0,15 g/g creatinine	Nonspecific - Intended changes
Ethyl benzene (Sum of mandelic acid and phenylglyoxylic acid)	Urine: end of shift	0,15 mg/g creatinine	

8.1.2 Sampling methods

If applicable and available it will be listed below.

4,4-Methylene Bisphenyl Isocyanate (MDI) (Isocyanates)	NIOSH	5521
4,4'-Methylenebis(phenylisocyanate)	NIOSH	5525
Ethyl Benzene (Hydrocarbons, Aromatic)	NIOSH	1501
Ethyl Benzene	OSHA	1002
Ethyl Benzene	OSHA	7
Methylene Bisphenyl Isocyanate - (MDI)	OSHA	18
Methylene Bisphenyl Isocyanate (MDI)	OSHA	47
Methylene Bisphenyl Isocyanate	OSHA	33
Xylene (Volatile Organic compounds)	NIOSH	2549

8.1.3 Applicable limit values when using the substance or mixture as intended

If limit values are applicable and available these will be listed below.

8.1.4 DNEL/PNEC values

DNEL/DMEL - Workers

4,4'-methylenediphenyl diisocyanate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	0.05 mg/m³	
	Acute local effects inhalation	0.1 mg/m³	

xylene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	77 mg/m³	
	Acute systemic effects inhalation	289 mg/m³	
	Acute local effects inhalation	289 mg/m³	
	Long-term systemic effects dermal	180 mg/kg bw/day	

ethylbenzene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	77 mg/m³	
	Acute local effects inhalation	293 mg/m³	
	Long-term systemic effects dermal	180 mg/kg bw/day	

DNEL/DMEL - General population

4,4'-methylenediphenyl diisocyanate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	0.025 mg/m³	
	Acute systemic effects inhalation	0.05 mg/m³	

xylene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	14.8 mg/m³	
	Acute systemic effects inhalation	174 mg/m³	
	Acute local effects inhalation	174 mg/m³	
	Long-term systemic effects dermal	108 mg/kg bw/day	
	Long-term systemic effects oral	1.6 mg/kg bw/day	

ethylbenzene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	15 mg/m³	
	Long-term systemic effects oral	1.6 mg/kg bw/day	

PNEC

4,4'-methylenediphenyl diisocyanate

Compartments	Value	Remark
Fresh water	1 mg/l	
Marine water	0.1 mg/l	
Aqua (intermittent releases)	10 mg/l	
STP	1 mg/l	
Soil	1 mg/kg soil dw	

xylene

Compartments	Value	Remark
Fresh water	0.327 mg/l	
Marine water	0.327 mg/l	
Aqua (intermittent releases)	0.327 mg/l	
STP	6.58 mg/l	
Fresh water sediment	12.46 mg/kg sediment dw	
Marine water sediment	12.46 mg/kg sediment dw	
Soil	2.31 mg/kg soil dw	

ethylbenzene

Compartments	Value	Remark
Fresh water	0.1 mg/l	
Marine water	0.01 mg/l	
Aqua (intermittent releases)	0.1 mg/l	
STP	9.6 mg/l	
Fresh water sediment	13.7 mg/kg sediment dw	
Marine water sediment	1.37 mg/kg sediment dw	
Soil	2.68 mg/kg soil dw	
Oral	0.02 g/kg food	

8.1.5 Control banding

If applicable and available it will be listed below.

8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

8.2.1 Appropriate engineering controls

Keep away from naked flames/heat. Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.

8.2.2 Individual protection measures, such as personal protective equipment

Observe very strict hygiene - avoid contact. Keep container tightly closed. Do not eat, drink or smoke during work.

a) Respiratory protection:

Wear gas mask with filter type A if conc. in air > exposure limit.

b) Hand protection:

Gloves.

c) Eye protection:

Safety glasses.

d) Skin protection:

Protective clothing.

8.2.3 Environmental exposure controls:

See headings 6.2, 6.3 and 13

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical form	Viscous
Odour	Solvent-like odour
Odour threshold	No data available
Colour	Variable in colour, depending on the composition
Particle size	No data available
Explosion limits	Not applicable
Flammability	Non combustible
Log Kow	Not applicable (mixture)
Dynamic viscosity	No data available
Kinematic viscosity	No data available
Melting point	No data available
Boiling point	No data available

Flash point	Not applicable
Evaporation rate	No data available
Relative vapour density	> 1
Vapour pressure	No data available
Solubility	water ; insoluble
	organic solvents ; soluble
Relative density	1.3 ; 20 °C
Decomposition temperature	No data available
Auto-ignition temperature	Not applicable
Explosive properties	No chemical group associated with explosive properties
Oxidising properties	No chemical group associated with oxidising properties
pH	No data available

9.2. Other information

Absolute density	1300 kg/m³ ; 20 °C

SECTION 10: Stability and reactivity

10.1. Reactivity
No data available.

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No data available.

10.4. Conditions to avoid
Keep away from naked flames/heat.

10.5. Incompatible materials
No data available.

10.6. Hazardous decomposition products
On burning: release of toxic and corrosive gases/vapours (hydrogen chloride, sulphur oxides, carbon monoxide - carbon dioxide).

SECTION 11: Toxicological information

11.1. Information on toxicological effects
11.1.1 Test results

Acute toxicity

Carbond 940 FC

No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	> 7616 mg/kg		Rat (female)	Read-across	
Dermal	LD50	Equivalent to OECD 402	> 9400 mg/kg bw	24 h	Rabbit (male/female)	Read-across	
Dermal	Percutaneous absorption rate	EPA OPPTS 870.7600	0.9 %	8 h	Rat (male)	Experimental value	
Inhalation (aerosol)	LC50	Equivalent to OECD 403	0.49 mg/l air	4 h	Rat (male/female)	Read-across	
			category 4			Annex VI	

xylene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 401	3523 mg/kg bw		Rat (male)	Experimental value	
Oral	LD50	OECD 401	> 4000 mg/kg bw		Rat (female)	Experimental value	
Dermal	LD50		> 4200 mg/kg bw	4 h	Rabbit (male)	Weight of evidence	
Dermal			category 4			Annex VI	
Inhalation (vapours)	LC50		29.09 mg/l	4 h	Rat (male)	Experimental value	
Inhalation			category 4			Annex VI	

ethylbenzene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50		3500 mg/kg		Rat (male/female)	Experimental value	
Dermal	LD50		15432 mg/kg	24 h	Rabbit (male)	Experimental value	
Inhalation	LC50		1432 ppm	4 h	Mouse (male)	Experimental value	

Judgement is based on the relevant ingredients

Conclusion

Not classified for acute toxicity

Corrosion/irritation

Carbond 940 FC

No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Slightly irritating				Rabbit	Experimental value	
Eye	Irritating				Human	Weight of evidence	
Skin	Irritating	OECD 404	4 h	24; 48; 72 hours	Rabbit	Read-across	
Skin	Irritating				Human	Weight of evidence	
Inhalation	Irritating				Human	Weight of evidence	

xylene

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Moderately irritating	OECD 405		24; 48; 72 hours	Rabbit	Experimental value	
Skin	Moderately irritating		4 h	24; 72 hours	Rabbit	Experimental value	
Inhalation (vapours)	Irritating		4 h		Human		

ethylbenzene

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Slightly irritating			7 days	Rabbit	Experimental value	
Skin	Moderately irritating		24 h		Rabbit	Experimental value	

Judgement is based on the relevant ingredients

Conclusion

Not classified as irritating to the skin

Not classified as irritating to the eyes

Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

Carbond 940 FC

No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Sensitizing	OECD 429			Mouse	Experimental value	
Inhalation	Sensitizing				Rat (male)	Experimental value	
Inhalation	Sensitizing				Guinea pig (female)	Experimental value	

xylene

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	OECD 429			Mouse	Experimental value	

ethylbenzene

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Other			Human	Inconclusive, insufficient data	

Classification is based on the relevant ingredients

Conclusion

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

Not classified as sensitizing for skin

Specific target organ toxicity

Carbond 940 FC

No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Inhalation (aerosol)	LOAEC	Other	0.23 mg/m³ air	Lungs	Lung tissue affection/degeneration	≤ 104 weeks (17h/day, 5 days/week)	Rat (female)	Experimental value

xylene

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	LOAEL	Equivalent to OECD 408	150 mg/kg bw/day	Liver	Weight gain	90 day(s)	Rat (male/female)	Experimental value
Inhalation (vapours)	NOAEC	Subchronic toxicity test	≥ 3515 mg/m³		No effect	13 weeks (6h/day, 5 days/week)	Rat (male)	Experimental value

ethylbenzene

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	NOAEL	OECD 407	75 mg/kg bw/day	Liver	Enlargement/affection of the liver	28 day(s)	Rat (male/female)	Experimental value
Oral	NOAEL	OECD 408	75 mg/kg bw/day	Liver	Enlargement/affection of the liver	13 week(s)	Rat (male/female)	Experimental value
Oral	LOAEL	OECD 408	250 mg/kg bw/day	Liver	Enlargement/affection of the liver	13 week(s)	Rat (male/female)	Experimental value
Oral	NOAEL	Equivalent to OECD 424	500 mg/kg bw/day		No effect	90 day(s)	Rat (male/female)	Experimental value
Inhalation (vapours)	LOAEC	Equivalent to OECD 453	75 ppm		No effect	104 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation	NOAEL	Equivalent to OECD 413	1000 ppm		No effect	13 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation	NOAEC	OECD 412	800 ppm	Liver		4 weeks (6h/day, 5 days/week)	Mouse (male/female)	Experimental value
Inhalation	NOAEC	OECD 412	800 ppm	Liver	Enlargement/affection of the liver	4 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value

Judgement is based on the relevant ingredients

Conclusion

Not classified for subchronic toxicity

Mutagenicity (in vitro)

Carbond 940 FC

No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

xylene

Result	Method	Test substrate	Effect	Value determination
Negative	Other	Chinese hamster ovary (CHO)	No effect	Experimental value

ethylbenzene

Result	Method	Test substrate	Effect	Value determination
Negative with metabolic activation, negative without metabolic activation	OECD 476	Mouse (lymphoma L5178Y cells)	No effect	Experimental value
Negative with metabolic activation, negative without metabolic activation	Equivalent to OECD 473	Chinese hamster ovary (CHO)	No effect	Experimental value

Mutagenicity (in vivo)

Carbond 940 FC

No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	OECD 474	3 weeks (1h/day, 1 day/week)	Rat (male)		Experimental value

xylene

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Equivalent to OECD 478		Mouse (male/female)		Experimental value

ethylbenzene

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	OECD 486	6 h	Mouse (male/female)		Experimental value
Negative	OECD 474	48 h	Mouse (male)		Experimental value

Carcinogenicity

Carbond 940 FC

No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (aerosol)	NOAEC	Other	0.7 mg/m³ air	104 weeks (17h/day, 5 days/week)	Rat (female)	No carcinogenic effect		Experimental value

xylene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Oral	NOAEC	Other	≥ 500 mg/kg bw/day	103 weeks (5 days/week)	Rat (male/female)	No effect		Experimental value

ethylbenzene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Inhalation (vapours)	NOAEC	Equivalent to OECD 453	250 ppm	104 weeks (6h/day, 5 days/week)	Rat (male/female)	No effect		Experimental value

Reproductive toxicity

Carbond 940 FC

No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEL	OECD 414	3 mg/m³ air	10 days (6h/day)	Rat (female)	No effect		Experimental value
	LOAEL	OECD 414	9 mg/m³ air	10 days (6h/day)	Rat (female)	Embryotoxicity		Experimental value
Maternal toxicity	NOAEL	OECD 414	4 mg/kg bw/day	10 day(s)	Rat (female)	No effect		Read-across
Effects on fertility								Data waiving

xylene

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	Equivalent to OECD 414	100 ppm	21 days (6h/day)	Rat (male/female)	No effect		Experimental value
Maternal toxicity	NOAEC	OECD 414	500 ppm		Rat	No effect		Experimental value
Effects on fertility	NOAEC (P)	EPA OPPTS 870.3800	≥ 500 ppm	70 days (6h/day)	Rat (male/female)	No effect		Experimental value
	NOAEC (F1)	EPA OPPTS 870.3800	≥ 500 ppm	70 days (6h/day)	Rat (male/female)	No effect		Experimental value

ethylbenzene

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	OECD 414	500 ppm	15 days (gestation, daily)	Rat (female)	No effect		Experimental value
	NOAEC	OECD 426	500 ppm	70 days (6h/day)	Rat (male/female)	No effect		Experimental value
Effects on fertility	NOAEC (P/F1/F2)	OECD 416	500 ppm	70 days (6h/day)	Rat (male/female)	No effect		Experimental value
	NOAEC (P)	Equivalent to OECD 415	1000 ppm	2 week(s)	Rat (male/female)	No effect		Experimental value
	NOEC (F1)	Equivalent to OECD 415	100 ppm		Rat (male/female)	No effect		Experimental value
	NOAEL	Other	750 ppm	104 weeks (6h/day, 5 days/week)	Mouse (male/female)	No effect		Experimental value
	NOEC	OECD 408	750 ppm	13 week(s)	Rat (male/female)	No effect		Experimental value

Judgement is based on the relevant ingredients

Conclusion CMR

Not classified for carcinogenicity

Not classified for mutagenic or genotoxic toxicity

Not classified for reprotoxic or developmental toxicity

Toxicity other effects

Carbond 940 FC

No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
LD50		100 mg/kg bw				Mouse (male)	Experimental value

Chronic effects from short and long-term exposure

Carbond 940 FC

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Respiratory difficulties. Skin rash/inflammation.

SECTION 12: Ecological information

12.1. Toxicity

Carbond 940 FC

No (test)data on the mixture available

4,4'-methylenediphenyl diisocyanate

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	> 1000 mg/l	96 h	Danio rerio	Static system	Fresh water	Read-across; Nominal concentration
Acute toxicity invertebrates	EC50	OECD 202	129.7 mg/l	24 h	Daphnia magna	Static system	Fresh water	Read-across; Locomotor effect
Toxicity algae and other aquatic plants	EC50	OECD 201	> 1640 mg/l	72 h	Desmodesmus subspicatus	Static system	Fresh water	Read-across; Growth rate
Long-term toxicity aquatic invertebrates	NOEC	OECD 211	≥ 10 mg/l	21 day(s)	Daphnia magna	Semi-static system	Fresh water	Read-across; Reproduction
Toxicity aquatic micro-organisms	EC50	OECD 209	> 100 mg/l	3 h	Activated sludge	Static system	Fresh water	Read-across; Nominal concentration

xylene

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	2.6 mg/l	96 h	Oncorhynchus mykiss	Static system	Fresh water	Read-across; Lethal
Acute toxicity invertebrates	EC50		3.82 mg/l	48 h	Daphnia magna	Flow-through system	Fresh water	Read-across
Toxicity algae and other aquatic plants	EC50	OECD 201	4.36 mg/l	73 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Long-term toxicity fish	NOEC		> 1.3 mg/l	56 day(s)	Oncorhynchus mykiss	Flow-through system	Fresh water	Experimental value; Lethal
Long-term toxicity aquatic invertebrates	NOEC	US EPA	1.17 mg/l	7 day(s)	Ceriodaphnia dubia		Fresh water	Read-across; Reproduction

ethylbenzene

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	4.2 mg/l	96 h	Salmo gairdneri	Semi-static system	Fresh water	Experimental value
Acute toxicity invertebrates	EC50	US EPA	1.8 mg/l - 2.4 mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value
Toxicity algae and other aquatic plants	EC50	OECD 201	4.6 mg/l	72 h	Selenastrum capricornutum			Experimental value; Growth rate
Long-term toxicity fish	ChV	ECOSAR v1.00	1.13 mg/l	30 day(s)	Pisces			QSAR
Long-term toxicity aquatic invertebrates	NOEC	US EPA	1 mg/l	7 day(s)	Ceriodaphnia dubia	Semi-static system	Fresh water	Experimental value; Reproduction
Toxicity aquatic micro-organisms	EC50		96 mg/l	24 h	Nitrosomonas			Experimental value

	Parameter	Method	Value	Duration	Species	Value determination
Toxicity soil macro-organisms	LC50	OECD 207	0.042 mg/cm² - 0.053 mg/cm²	48 h	Eisenia fetida	Experimental value

Judgement of the mixture is based on the relevant ingredients

Conclusion

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

12.2. Persistence and degradability

4,4'-methylenediphenyl diisocyanate

Biodegradation water

Method	Value	Duration	Value determination
OECD 302C: Inherent Biodegradability: Modified MITI Test (II)	0 %	28 day(s)	Read-across

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
AOPWIN v1.92	0.92 day(s)		QSAR

Half-life water (t1/2 water)

Method	Value	Primary degradation/mineralisation	Value determination
	20 h		Read-across

xylene

Biodegradation water

Method	Value	Duration	Value determination
OECD 301: Ready Biodegradability	100 %	12 day(s)	Experimental value
OECD 301F: Manometric Respirometry Test	87.8 %; GLP	28 day(s)	Read-across

ethylbenzene

Biodegradation water

Method	Value	Duration	Value determination
ISO 14593	70 % - 80 %; GLP	28 day(s)	Experimental value

Phototransformation air (DT50 air)

Method	Value	Conc. OH-radicals	Value determination
		500000 /cm³	

Half-life soil (t1/2 soil)

Method	Value	Primary degradation/mineralisation	Value determination
	3 day(s) - 10 day(s)		Literature study

Half-life air (t1/2 air)

Method	Value	Primary degradation/mineralisation	Value determination
	2.3 day(s)		

Conclusion

Contains non readily biodegradable component(s)

12.3. Bioaccumulative potential

Carbond 940 FC

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

4,4'-methylenediphenyl diisocyanate

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	OECD 305	92 - 200	4 week(s)	Cyprinus carpio	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
		5.22		Estimated value
OECD 117		4.51	22 °C	Experimental value

xylene

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		7 - 26	8 week(s)	Oncorhynchus mykiss	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
		3.2	20 °C	Conclusion by analogy

ethylbenzene

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF	Other	1	6 week(s)	Oncorhynchus kisutch	Literature study
		15 - 79		Carassius auratus	Literature study

BCF other aquatic organisms

Parameter	Method	Value	Duration	Species	Value determination
BCF		4.68		Lamellibranchiata	Literature study

Log Kow

Method	Remark	Value	Temperature	Value determination
EU Method A.8		3.6	20 °C	Experimental value

Conclusion

Does not contain bioaccumulative component(s)

12.4. Mobility in soil

4,4'-methylenediphenyl diisocyanate

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
8.95E-7 atm m³/mol		25 °C		Estimated value

ethylbenzene

(log) Koc

Parameter	Method	Value	Value determination
log Koc	PCKOCWIN v1.66	2.71	Calculated value

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
0.00843 atm m³/mol		25 °C		Experimental value

Percent distribution

Method	Fraction air	Fraction biota	Fraction sediment	Fraction soil	Fraction water	Value determination
Mackay level I	99.45 %		0.05 %	0.05 %	0.45 %	QSAR

Conclusion

Contains component(s) with potential for mobility in the soil

12.5. Results of PBT and vPvB assessment

Due to insufficient data no statement can be made whether the component(s) fulfil(s) the criteria of PBT and vPvB according to Annex XIII of Regulation (EC) No 1907/2006.

12.6. Other adverse effects

Carbond 940 FC

fluorinated greenhouse gases (Regulation (EU) No 517/2014)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014)

Ozone-depleting potential (ODP)

Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009)

xylene

Ground water

Ground water pollutant

SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

13.1. Waste treatment methods

13.1.1 Provisions relating to waste

Hazardous waste according to Regulation (EU) No 1357/2014.
Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).
08 04 09* (wastes from MFSU of adhesives and sealants (including waterproofing products): waste adhesives and sealants containing organic solvents or other hazardous substances). Depending on branch of industry and production process, also other waste codes may be applicable.

13.1.2 Disposal methods

In authorized incinerator equipped with flue gas scrubber with energy recovery. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Do not discharge into drains or the environment.

13.1.3 Packaging/Container

Waste material code packaging (Directive 2008/98/EC).
15 01 10* (packaging containing residues of or contaminated by dangerous substances).

SECTION 14: Transport information

Road (ADR)

14.1. UN number

Transport	Not subject

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Hazard identification number	
Class	
Classification code	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	

Rail (RID)

14.1. UN number

Transport	Not subject

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Hazard identification number	
Class	
Classification code	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	

Inland waterways (ADN)

14.1. UN number

Transport	Not subject

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Class	
Classification code	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	

Sea (IMDG/IMSBC)

14.1. UN number

Transport	Not subject

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Class	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Marine pollutant	-
Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Limited quantities	

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Annex II of MARPOL 73/78	

Air (ICAO-TI/IATA-DGR)

14.1. UN number

Transport	Not subject

14.2. UN proper shipping name

14.3. Transport hazard class(es)

Class	

14.4. Packing group

Packing group	
Labels	

14.5. Environmental hazards

Environmentally hazardous substance mark	no

14.6. Special precautions for user

Special provisions	
Passenger and cargo transport: limited quantities: maximum net quantity per packaging	

SECTION 15: Regulatory information

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

European legislation:

VOC content Directive 2010/75/EU

VOC content	Remark
13 %	
167 g/l	

Indicative occupational exposure limit values (Directive 98/24/EC, 2000/39/EC and 2009/161/EU)

Product name	Skin resorption
Ethylbenzene	Skin
Xylene, mixed isomers, pure	Skin

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

· ethylbenzene	Liquid substances or mixtures which are regarded as dangerous in accordance with Directive 1999/45/EC or are fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: (a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F; (b) hazard classes 3.1 to 3.6, 3.7 adverse	1. Shall not be used in: — ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays, — tricks and jokes, — games for one or more participants, or any article intended to be used as such, even with ornamental aspects,2. Articles not complying with paragraph 1 shall not be placed on the market.3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they: — can be used as fuel in decorative oil lamps for supply to the general public, and, — present an aspiration hazard and are labelled with R65 or H304,4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to

	effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10; (c) hazard class 4.1; (d) hazard class 5.1.	the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met: a) lamp oils, labelled with R65 or H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: "Keep lamps filled with this liquid out of the reach of children"; and, by 1 December 2010, "Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life- threatening lung damage"; b) grill lighter fluids, labelled with R65 or H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: "Just a sip of grill lighter may lead to life threatening lung damage"; c) lamp oils and grill lighters, labelled with R65 or H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010.6. No later than 1 June 2014, the Commission shall request the European Chemicals Agency to prepare a dossier, in accordance with Article 69 of the present Regulation with a view to ban, if appropriate, grill lighter fluids and fuel for decorative lamps, labelled R65 or H304, intended for supply to the general public.7. Natural or legal persons placing on the market for the first time lamp oils and grill lighter fluids, labelled with R65 or H304, shall by 1 December 2011, and annually thereafter, provide data on alternatives to lamp oils and grill lighter fluids labelled R65 or H304 to the competent authority in the Member State concerned. Member States shall make those data available to the Commission.'
· xylene · ethylbenzene	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to that Regulation or not.	1. Shall not be used, as substance or as mixtures in aerosol dispensers where these aerosol dispensers are intended for supply to the general public for entertainment and decorative purposes such as the following: — metallic glitter intended mainly for decoration, — artificial snow and frost, — "whoopee" cushions, — silly string aerosols, — imitation excrement, — horns for parties, — decorative flakes and foams, — artificial cobwebs, — stink bombs.2. Without prejudice to the application of other Community provisions on the classification, packaging and labelling of substances, suppliers shall ensure before the placing on the market that the packaging of aerosol dispensers referred to above is marked visibly, legibly and indelibly with: "For professional users only".3. By way of derogation, paragraphs 1 and 2 shall not apply to the aerosol dispensers referred to Article 8 (1a) of Council Directive 75/ 324/EEC.4. The aerosol dispensers referred to in paragraphs 1 and 2 shall not be placed on the market unless they conform to the requirements indicated.
· 4,4'-methylenediphenyl diisocyanate	Methylenediphenyl diisocyanate (MDI) including the following specific isomers: 4,4'-Methylenediphenyl diisocyanate; 2,4'-Methylenediphenyl diisocyanate; 2,2'-Methylenediphenyl diisocyanate	1. Shall not be placed on the market after 27 December 2010, as a constituent of mixtures in concentrations equal to or greater than 0,1 % by weight of MDI for supply to the general public, unless suppliers shall ensure before the placing on the market that the packaging: (a) contains protective gloves which comply with the requirements of Council Directive 89/686/EEC; (b) is marked visibly, legibly and indelibly as follows, and without prejudice to other Community legislation concerning the classification, packaging and labelling of substances and mixtures: "— 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.2. By way of derogation, paragraph 1(a) shall not apply to hot melt adhesives.

National legislation The Netherlands

Carbond 940 FC

Waste identification (the Netherlands)	LWCA (the Netherlands): KGA category 04
Waterbezwaarlijkheid	1

xylene

SZW - List of reprotoxic substances (development)	Suspected of damaging the unborn child.

National legislation Germany

Carbond 940 FC

WGK	2; Classification water polluting based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 4)

4,4'-methylenediphenyl diisocyanate

MAK - Krebserzeugend Kategorie	4
Schwangerschaft Gruppe	C
MAK 8-Stunden-Mittelwert mg/m³	Diphenylmethan-4,4'-diisocyanat (MDI) (einatembare Fraktion); 0.05 mg/m³; gemessen als einatembare Fraktion (vgl. Abschn. Vd) S. 191)
TA-Luft	5.2.5; I
	5.2.5

xylene

TA-Luft	5.2.5; I

ethylbenzene

MAK - Krebserzeugend Kategorie	4
Schwangerschaft Gruppe	C
MAK 8-Stunden-Mittelwert ppm	Ethylbenzol; 20 ppm
MAK 8-Stunden-Mittelwert mg/m³	Ethylbenzol; 88 mg/m³
TA-Luft	5.2.5; I

National legislation France

Carbond 940 FC

No data available

4,4'-methylenediphenyl diisocyanate

Catégorie cancérogène	C2

National legislation Belgium

Carbond 940 FC

No data available

Other relevant data

Carbond 940 FC

No data available

4,4'-methylenediphenyl diisocyanate

IARC - classification	3; 4,4'-methylenediphenyl diisocyanate and polymeric 4,4'-methylenediphenyl diisocyanate

xylene

IARC - classification	3; Xylenes

ethylbenzene

IARC - classification	2B; Ethylbenzene
TLV - Carcinogen	Ethyl benzene; A3

15.2. Chemical safety assessment

No chemical safety assessment is required.

SECTION 16: Other information

Full text of any H-statements referred to under headings 2 and 3:

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
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 (ears (hearing damage)) through prolonged or repeated exposure.
H373 May cause damage to organs (lungs) through prolonged or repeated exposure if inhaled.
H412 Harmful to aquatic life with long lasting effects.
(*) = INTERNAL CLASSIFICATION BY BIG
PBT-substances = persistent, bioaccumulative and toxic substances
CLP (EU-GHS) Classification, labelling and packaging (Globally Harmonised System in Europe)

Specific concentration limits CLP

4,4'-methylenediphenyl diisocyanate	C ≥ 5 %	Eye Irrit. 2; H319	CLP Annex VI (ATP 1)
	C ≥ 5 %	Skin Irrit. 2; H315	CLP Annex VI (ATP 1)
	C ≥ 0.1 %	Resp. Sens. 1; H334	CLP Annex VI (ATP 1)
	C ≥ 5 %	STOT SE 3; H335	CLP Annex VI (ATP 1)

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