

Soudaflex 40 FC

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

1.1 Product identifier:

Product name : Soudaflex 40 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

SODAL 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

SODAL 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:

2.1.1 Classification according to Regulation EC No 1272/2008

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

Class	Category	Hazard statements
STOT RE	category 2	H373: May cause damage to organs through prolonged or repeated exposure.
Eye Irrit.	category 2	H319: Causes serious eye irritation.
Skin Irrit.	category 2	H315: Causes skin irritation.
Resp. Sens.	category 1	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.1.2 Classification according to Directive 67/548/EEC-1999/45/EC

Classified as dangerous in accordance with the criteria of Directives 67/548/EEC and 1999/45/EC

R42 - May cause sensitisation by inhalation.

2.2 Label elements:

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



Contains: xylene; 4,4'-methylenediphenyl diisocyanate.

Signal word : Danger

H-statements

H373 : May cause damage to organs through prolonged or repeated exposure.
 H319 : Causes serious eye irritation.
 H315 : Causes skin irritation.

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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.

P280

Wear protective gloves, protective clothing and eye protection/face protection.

P284

Wear respiratory protection.

P260

Do not breathe vapours.

P304 + P340

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

P302 + P352

IF ON SKIN: Wash with plenty of water and soap.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

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.

Labelling according to Directive 67/548/EEC-1999/45/EC (DSD/DPD)

Labels



Harmful

Contains: xylene; 4,4'-methylenediphenyl diisocyanate.

R-phrases

42

May cause sensitisation by inhalation

S-phrases

(02)

(Keep out of the reach of children)

23

Do not breathe vapour

45

In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

(63)

(In case of accident by inhalation: remove casualty to fresh air and keep at rest)

Additional recommendations

Contains isocyanates. See information supplied by the manufacturer.

- 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:

CLP

Prolonged exposure: danger of damage to health
May produce an allergic reaction

DSD/DPD

Prolonged exposure: danger of damage to health
May produce an allergic reaction

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 DSD/DPD	Classification according to CLP	Note	Remark
xylene 01-2119488216-32	1330-20-7 215-535-7	10%<C<2 0%	Xn; R20/21 - 65 Xi; R36/37/38 R10	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Asp. Tox. 1; H304 STOT RE 2; H373 Eye Irrit. 2; H319 STOT SE 3; H335 Skin Irrit. 2; H315	(1)(2)(8)(10)	Constituent

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ethylbenzene 01-2119489370-35	100-41-4 202-849-4	1%<C<20 %	F; R11 Xn; R20 - 48/20 - 65	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
4,4'-methylenediphenyl diisocyanate 01-2119457014-47	101-68-8 202-966-0	0.1%<C<1 %	Carc. Cat. 3; R40 Xn; R20 - 48/20 Xi; R36/37/38 R42/43	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)	UVCB
toluene 01-2119471310-51	108-88-3 203-625-9	0.01%<C≤ 0.1% %	F; R11 Repr. Cat. 3; R63 Xn; R48/20 - 65 Xi; R38 R67	Flam. Liq. 2; H225 Repr. 2; H361d Asp. Tox. 1; H304 STOT RE 2; H373 Skin Irrit. 2; H315 STOT SE 3; H336	(1)(2)(10)	Constituent

(1) For R-phrases and 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 immediately with plenty of 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:

Tingling/irritation of the skin.

After eye contact:

Irritation of the eye tissue.

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:

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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 leaking substance. 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'-diisocyanat	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/m ³
	Short time value (Private occupational exposure limit value)	0.02 ppm
	Short time value (Private occupational exposure limit value)	0.21 mg/m ³
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/m ³
	Short time value (Public occupational exposure limit value)	97 ppm
	Short time value (Public occupational exposure limit value)	430 mg/m ³
Tolueen	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	39 ppm
	Time-weighted average exposure limit 8 h (Public occupational exposure limit value)	150 mg/m ³
	Short time value (Public occupational exposure limit value)	100 ppm

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Tolueen	Short time value (Public occupational exposure limit value)	384 mg/m ³
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/m ³
	Short time value (Public occupational exposure limit value)	100 ppm
	Short time value (Public occupational exposure limit value)	442 mg/m ³

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/m ³
	Short time value (Indicative occupational exposure limit value)	200 ppm
	Short time value (Indicative occupational exposure limit value)	884 mg/m ³
Toluene	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)	192 mg/m ³
	Short time value (Indicative occupational exposure limit value)	100 ppm
	Short time value (Indicative occupational exposure limit value)	384 mg/m ³
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/m ³
	Short time value (Indicative occupational exposure limit value)	100 ppm
	Short time value (Indicative occupational exposure limit value)	442 mg/m ³

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/m ³
Ethylbenzène	Time-weighted average exposure limit 8 h	100 ppm
	Time-weighted average exposure limit 8 h	442 mg/m ³
	Short time value	125 ppm
	Short time value	551 mg/m ³
Toluène	Time-weighted average exposure limit 8 h	20 ppm
	Time-weighted average exposure limit 8 h	77 mg/m ³
	Short time value	100 ppm
	Short time value	384 mg/m ³
Xylène, isomères mixtes, purs	Time-weighted average exposure limit 8 h	50 ppm
	Time-weighted average exposure limit 8 h	221 mg/m ³
	Short time value	100 ppm
	Short time value	442 mg/m ³

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
Toluene	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	20 ppm
Xylene (all isomers)	Time-weighted average exposure limit 8 h (TLV - Adopted Value)	100 ppm
	Short time value (TLV - Adopted Value)	150 ppm

Germany

4,4'-Methylendiphenyldiisocyanat	Time-weighted average exposure limit 8 h (TRGS 900)	0.05 mg/m ³
Ethylbenzol	Time-weighted average exposure limit 8 h (TRGS 900)	20 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	88 mg/m ³
Toluol	Time-weighted average exposure limit 8 h (TRGS 900)	50 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	190 mg/m ³
Xylol (alle Isomeren)	Time-weighted average exposure limit 8 h (TRGS 900)	100 ppm
	Time-weighted average exposure limit 8 h (TRGS 900)	440 mg/m ³

France

4,4'-Diisocyanate de diphénylméthane	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	0.01 ppm
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4,4'-Diisocyanate de diphenylméthane	Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative)	0.1 mg/m ³
	Short time value (VL: Valeur non réglementaire indicative)	0.02 ppm
	Short time value (VL: Valeur non réglementaire indicative)	0.2 mg/m ³
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/m ³
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	442 mg/m ³
Toluène	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	20 ppm
	Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante)	76.8 mg/m ³
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	384 mg/m ³
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/m ³
	Short time value (VRC: Valeur réglementaire contraignante)	100 ppm
	Short time value (VRC: Valeur réglementaire contraignante)	442 mg/m ³

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/m ³
	Short time value (Workplace exposure limit (EH40/2005))	125 ppm
	Short time value (Workplace exposure limit (EH40/2005))	552 mg/m ³
Isocyanates, all (as -NCO) Except methyl isocyanate	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	0.02 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	0.07 mg/m ³
Toluene	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	50 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	191 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	100 ppm
	Short time value (Workplace exposure limit (EH40/2005))	384 mg/m ³
Xylene, o-,m-,p- or mixed isomers	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	50 ppm
	Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005))	220 mg/m ³
	Short time value (Workplace exposure limit (EH40/2005))	100 ppm
	Short time value (Workplace exposure limit (EH40/2005))	441 mg/m ³

b) National biological limit values

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

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
Toluene (Hydrocarbons, aromatic)	NIOSH	1501
Toluene (organic and inorganic gases by Extractive FTIR)	NIOSH	3800
Toluene (Volatile Organic compounds)	NIOSH	2549
Toluene in blood	NIOSH	8007
Toluene	NIOSH	4000
toluene	NIOSH	8002
Toluene	NIOSH	95-117
Toluene	OSHA	111
Xylene (Hydrocarbons, aromatic)	NIOSH	1501
Xylene (Volatile Organic compounds)	NIOSH	2549

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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 - Workers

xylene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Acute systemic effects inhalation	289 mg/m ³	
	Acute local effects inhalation	289 mg/m ³	
	Long-term systemic effects dermal	180 mg/kg bw/day	
	Long-term systemic effects inhalation	77 mg/m ³	

ethylbenzene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	77 mg/m ³	
	Acute local effects inhalation	293 mg/m ³	
	Long-term systemic effects dermal	180 mg/kg bw/day	

4,4'-methylenediphenyl diisocyanate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	0.05 mg/m ³	
	Acute local effects inhalation	0.1 mg/m ³	

toluene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	192 mg/m ³	
	Acute systemic effects inhalation	384 mg/m ³	
	Long-term local effects inhalation	192 mg/m ³	
	Acute local effects inhalation	384 mg/m ³	
	Long-term systemic effects dermal	384 mg/kg bw/day	

DNEL - General population

xylene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Acute systemic effects inhalation	174 mg/m ³	
	Acute local effects inhalation	174 mg/m ³	
	Long-term systemic effects dermal	108 mg/kg bw/day	
	Long-term systemic effects inhalation	14.8 mg/m ³	
	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/m ³	
	Long-term systemic effects oral	1.6 mg/kg bw/day	

4,4'-methylenediphenyl diisocyanate

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term local effects inhalation	0.025 mg/m ³	
	Acute systemic effects inhalation	0.05 mg/m ³	

toluene

Effect level (DNEL/DMEL)	Type	Value	Remark
DNEL	Long-term systemic effects inhalation	56.5 mg/m ³	
	Acute systemic effects inhalation	226 mg/m ³	
	Long-term local effects inhalation	56.5 mg/m ³	
	Acute local effects inhalation	226 mg/m ³	
	Long-term systemic effects dermal	226 mg/kg bw/day	
	Long-term systemic effects oral	8.13 mg/kg bw/day	

PNEC

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	

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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	
Soil	2.68 mg/kg soil dw	
Oral	0.02 g/kg food	

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	

toluene

Compartments	Value	Remark
Fresh water	0.68 mg/l	
Marine water	0.68 mg/l	
Aqua (intermittent releases)	0.68 mg/l	
STP	13.61 mg/l	
Fresh water sediment	16.39 mg/kg sediment dw	
Marine water sediment	16.39 mg/kg sediment dw	
Soil	2.89 mg/kg soil dw	

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	No data available
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

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Relative density	1.3
Decomposition temperature	No data available
Auto-ignition temperature	No data available
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	1300kg/m ³
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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

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No (test) data on the mixture available

xylene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	OECD 401	3523mg/kg bw		Rat (male)	Experimental value	
Oral	LD50	OECD 401	> 4000mg/kg bw		Rat (female)	Experimental value	
Dermal	LD50	OECD 402	> 4200mg/kg bw	4 h	Rabbit (male)	Experimental value	
Inhalation	LC50	OECD 403	27.57mg/l	4 h	Rat (male)	Experimental value	

ethylbenzene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral (one dose)	LD50		3500mg/kg		Rat (male/female)	Experimental value	
Dermal	LD50	Other	15432mg/kg	24 h	Rabbit (male)	Experimental value	
Inhalation	LC50	Other	4000ppm	4 h	Rat (male)	Literature study	

4,4'-methylenediphenyl diisocyanate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral	LD50	Equivalent to OECD 401	> 7616mg/kg		Rat (female)	Read-across	
Dermal	LD50	Equivalent to OECD 402	> 9400mg/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	OECD 403	> 2.24mg/l	1 h	Rat (male/female)	Experimental value	
Inhalation (aerosol)	LC50	Equivalent to OECD 403	0.49mg/l air	4 h	Rat (male/female)	Read-across	

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Soudaflex 40 FC

toluene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Remark
Oral (one dose)	LD50	Equivalent to OECD 401	5580mg/kg bw		Rat (male)	Experimental value	
Dermal	LD50	Other	> 5000mg/kg bw	24 h	Rabbit (male)	Experimental value	
Inhalation (vapours)	LC50	Equivalent to OECD 403	25.7mg/l air	4 h	Rat (male)	Experimental value	

Judgement is based on the relevant ingredients

Conclusion

Not classified for acute toxicity

Corrosion/irritation

Soudaflex 40 FC

No (test)data on the mixture available

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		
	Irritating; STOT SE cat.3					Literature study	

ethylbenzene

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

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	

toluene

Route of exposure	Result	Method	Exposure time	Time point	Species	Value determination	Remark
Eye	Not irritating	Equivalent to OECD 405		24; 48; 72 hours	Rabbit	Experimental value	Single treatment
Skin	Irritating	Equivalent to OECD 404	4 h	24; 48; 72 hours	Rabbit	Experimental value	

Classification is based on the relevant ingredients

Conclusion

Causes skin irritation.

Causes serious eye irritation.

Not classified as irritating to the respiratory system

Respiratory or skin sensitisation

Soudaflex 40 FC

No (test)data on the mixture available

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	

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Soudaflex 40 FC

4,4'-methylenediphenyl diisocyanate

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

toluene

Route of exposure	Result	Method	Exposure time	Observation time point	Species	Value determination	Remark
Skin	Not sensitizing	Equivalent to OECD 406	72 h	24; 48 hours	Guinea pig (female)	Experimental value	

Classification is based on the relevant ingredients

Conclusion

Not classified as sensitizing for skin

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

Specific target organ toxicity

Soudaflex 40 FC

No (test) data on the mixture available

xylene

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	LOAEL	Equivalent to OECD 408	150mg/kg bw/day	Liver	Weight gain	90 day(s)	Rat (male/female)	Experimental value
Oral	NOAEL	Other	250mg/kg bw/day		No effect	13 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation (vapours)	NOAEC	Subchronic toxicity test	≥ 3515mg/m ³		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	75mg/kg bw/day	Liver	Enlargement/affection of the liver	28 day(s)	Rat (male/female)	Experimental value
Oral	NOAEL	OECD 408	75mg/kg bw/day	Liver	Enlargement/affection of the liver	13 week(s)	Rat (male/female)	Experimental value
Oral	LOAEL	OECD 408	250mg/kg bw/day	Liver	Enlargement/affection of the liver	13 week(s)	Rat (male/female)	Experimental value
Oral	NOAEL	Equivalent to OECD 424	500mg/kg bw/day		No effect	90 day(s)	Rat (male/female)	Experimental value
Inhalation (vapours)	LOAEC	Equivalent to OECD 453	75ppm		No effect	104 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation	NOAEL	Equivalent to OECD 413	1000ppm		No effect	13 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation	NOAEC	OECD 412	800ppm	Liver		4 weeks (6h/day, 5 days/week)	Mouse (male/female)	Experimental value
Inhalation	NOAEC	OECD 412	800ppm	Liver	Enlargement/affection of the liver	4 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value

4,4'-methylenediphenyl diisocyanate

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Inhalation (aerosol)	LOAEC	Other	0.23mg/m ³ air	Lungs	Lung tissue affection/degeneration	≤ 104 weeks (17h/day, 5 days/week)	Rat (female)	Experimental value

toluene

Route of exposure	Parameter	Method	Value	Organ	Effect	Exposure time	Species	Value determination
Oral	NOAEL	Equivalent to OECD 408	625mg/kg bw/day		No effect	13 weeks (daily, 5 days/week)	Mouse (male/female)	Experimental value
Dermal								Data waiving
Inhalation (vapours)	LOAEC	Equivalent to OECD 453	600ppm	Respiratory tract	Erosion/degeneration nasal epithelia	103 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value
Inhalation	NOAEC	Human observation	50ppm	Central nervous system	No effect	4.5 h	Human (male)	Experimental value

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Soudaflex 40 FC

Classification of the mixture is based on the relevant ingredients

Conclusion

May cause damage to organs through prolonged or repeated exposure.

Mutagenicity (in vitro)

Soudaflex 40 FC

No (test) data on the mixture available

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

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

toluene

Result	Method	Test substrate	Effect	Value determination
Negative	Equivalent to OECD 476	Mouse (lymphoma L5178Y cells)	No effect	Experimental value
Negative	Equivalent to OECD 471	Bacteria (S.typhimurium)	No effect	Experimental value

Mutagenicity (in vivo)

Soudaflex 40 FC

No (test) data on the mixture available

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

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

toluene

Result	Method	Exposure time	Test substrate	Organ	Value determination
Negative	Other		Rat		Experimental value
Negative	Equivalent to OECD 478	8 weeks (6h/day, 5 days/week)	Mouse (male)		Experimental value

Carcinogenicity

Soudaflex 40 FC

No (test) data on the mixture available

xylene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Organ	Effect
Oral	NOAEC	Other	≥ 1000mg/kg bw/day	103 weeks (5 days/week)	Mouse (male/female)	Experimental value		No effect
Oral	NOAEC	Other	≥ 500mg/kg bw/day	103 weeks (5 days/week)	Rat (male/female)	Experimental value		No effect

ethylbenzene

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

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4,4'-methylenediphenyl diisocyanate

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Organ	Effect
Inhalation (aerosol)	NOAEC	Other	0.7mg/m ³ air	104 weeks (17h/day, 5 days/week)	Rat (female)	Experimental value		No carcinogenic effect

toluene

Route of exposure	Parameter	Method	Value	Exposure time	Species	Value determination	Organ	Effect
Inhalation (vapours)	NOAEC	Equivalent to OECD 453	1200ppm	103 weeks (6h/day, 5 days/week)	Rat (male/female)	Experimental value		No effect
Dermal	NOAEL	Not further determined	0.05ml (twice a week)		Mouse (male)	Experimental value		No effect

Reproductive toxicity

Soudaflex 40 FC

No (test) data on the mixture available

xylene

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	Equivalent to OECD 414	100ppm	21 days (6h/day)	Rat (male/female)	No effect		Experimental value
Maternal toxicity	NOAEC	OECD 414	500ppm		Rat	No effect		Experimental value
Effects on fertility	NOAEC (P)	EPA OPPTS 870.3800	≥ 500ppm	70 days (6h/day)	Rat (male/female)	No effect		Experimental value
	NOAEC (F1)	EPA OPPTS 870.3800	≥ 500ppm	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	500ppm	15 days (gestation, daily)	Rat (female)	No effect		Experimental value
	NOAEC	OECD 426	500ppm	70 days (6h/day)	Rat (male/female)	No effect		Experimental value
Effects on fertility	NOAEC (P/F1/F2)	OECD 416	500ppm	70 days (6h/day)	Rat (male/female)	No effect		Experimental value
	NOAEC (P)	Equivalent to OECD 415	1000ppm	2 week(s)	Rat (male/female)	No effect		Experimental value
	NOEC (F1)	Equivalent to OECD 415	100ppm		Rat (male/female)	No effect		Experimental value
	NOAEL	Other	750ppm	104 weeks (6h/day, 5 days/week)	Mouse (male/female)	No effect		Experimental value
	NOEC	OECD 408	750ppm	13 week(s)	Rat (male/female)	No effect		Experimental value

4,4'-methylenediphenyl diisocyanate

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

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toluene

	Parameter	Method	Value	Exposure time	Species	Effect	Organ	Value determination
Developmental toxicity	NOAEC	EPA OTS 798.4350	750ppm	20 days (6h/day)	Rat (female)	No effect		Experimental value
Maternal toxicity	NOAEC	EPA OTS 798.4350	750ppm	20 days (6h/day)	Rat (female)	Maternal toxicity		Experimental value
Effects on fertility	NOAEC (P)	OECD 416	2000ppm	11 weeks (6h/day, 7 days/week)	Rat (male/female)	No effect		Experimental value
	NOAEC (F1)	OECD 416	500ppm	11 weeks (6h/day, 7 days/week)	Rat (male/female)	No effect		Experimental value
	NOAEC (F2)	OECD 416	500ppm	11 weeks (6h/day, 7 days/week)	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

Soudaflex 40 FC

No (test) data on the mixture available

4,4'-methylenediphenyl diisocyanate

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

Chronic effects from short and long-term exposure

Soudaflex 40 FC

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

SECTION 12: Ecological information

12.1 Toxicity:

Soudaflex 40 FC

No (test) data on the mixture available

xylene

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	2.6mg/l	96 h	Oncorhynchus mykiss	Static system	Fresh water	Read-across; Lethal
Acute toxicity invertebrates	EC50		3.82mg/l	48 h	Daphnia magna	Flow-through system	Fresh water	Read-across
Toxicity algae and other aquatic plants	EC50	OECD 201	4.36mg/l	72 h	Pseudokirchneriella subcapitata	Static system	Fresh water	Experimental value; Growth rate
Long-term toxicity fish	NOEC		> 1.3mg/l	56 day(s)	Oncorhynchus mykiss	Flow-through system	Fresh water	Experimental value; Lethal
Long-term toxicity aquatic invertebrates	NOEC	US EPA	1.17mg/l	7 day(s)	Ceriodaphnia dubia		Fresh water	Read-across; Reproduction

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Soudaflex 40 FC

ethylbenzene

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50	OECD 203	4.2mg/l	96 h	Salmo gairdneri	Semi-static system	Fresh water	Experimental value
Acute toxicity invertebrates	EC50	US EPA	1.8mg/l - 2.4mg/l	48 h	Daphnia magna	Static system	Fresh water	Experimental value
Toxicity algae and other aquatic plants	EC50	OECD 201	4.6mg/l	72 h	Selenastrum capricornutum			Experimental value; Growth rate
Long-term toxicity fish	ChV	ECOSAR v1.00	1.13mg/l	30 day(s)	Pisces			QSAR
Long-term toxicity aquatic invertebrates	NOEC	US EPA	1mg/l	7 day(s)	Ceriodaphnia dubia	Semi-static system	Fresh water	Experimental value; Reproduction
Toxicity aquatic micro-organisms	EC50		96mg/l	24 h	Nitrosomonas			Experimental value
	Parameter	Method	Value	Duration	Species	Value determination		
Toxicity soil macro-organisms	LC50	OECD 207	0.042mg/cm ² - 0.053mg/cm ²	48 h	Eisenia fetida		Experimental value	

4,4'-methylenediphenyl diisocyanate

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

toluene

	Parameter	Method	Value	Duration	Species	Test design	Fresh/salt water	Value determination
Acute toxicity fishes	LC50		5.5mg/l	96 h	Oncorhynchus kisutch	Flow-through system	Fresh water	Experimental value
Acute toxicity invertebrates	LC50	US EPA	3.78mg/l	48 h	Ceriodaphnia dubia		Fresh water	Experimental value
Toxicity algae and other aquatic plants	EC50		12.5mg/l	72 h	Selenastrum capricornutum			Literature study
Long-term toxicity fish	NOEC		1.39mg/l	40 day(s)	Oncorhynchus kisutch	Flow-through system	Fresh water	Experimental value; Growth rate
Long-term toxicity aquatic invertebrates	NOEC	US EPA	0.74mg/l	7 day(s)	Ceriodaphnia dubia		Fresh water	Experimental value; Reproduction
Toxicity aquatic micro-organisms	EC50		84mg/l	24 h	Nitrosomonas	Static system	Fresh water	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:

xylylene

Biodegradation water

Method	Value	Duration	Value determination
OECD 301F: Manometric Respirometry Test	87.8%; GLP	28 day(s)	Read-across

Soudaflex 40 FC

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 /cm ³	

Half-life soil (t1/2 soil)

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

Half-life air (t1/2 air)

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

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	0.92day(s)		QSAR

Half-life water (t1/2 water)

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

toluene

Biodegradation water

Method	Value	Duration	Value determination
OECD 301C: Modified MITI Test (I)	100%	14 day(s)	Experimental value

Half-life soil (t1/2 soil)

Method	Value	Primary degradation/mineralisation	Value determination
	2.6day(s)		Literature study

Conclusion

Contains non readily biodegradable component(s)

12.3 Bioaccumulative potential:

Soudaflex 40 FC

Log Kow

Method	Remark	Value	Temperature	Value determination
	Not applicable (mixture)			

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

Soudaflex 40 FC

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

toluene

BCF fishes

Parameter	Method	Value	Duration	Species	Value determination
BCF		90	72 h	Leuciscus idus	Experimental value

Log Kow

Method	Remark	Value	Temperature	Value determination
Other		2.73	20 °C	Experimental value

Conclusion

Does not contain bioaccumulative component(s)

12.4 Mobility in soil:

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
0.00843atm m ³ /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

4,4'-methylenediphenyl diisocyanate

Volatility (Henry's Law constant H)

Value	Method	Temperature	Remark	Value determination
8.95E-7atm m ³ /mol		25°C		Estimated value

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:

Soudaflex 40 FC

Global warming potential (GWP)

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

Ozone-depleting potential (ODP)

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

xylene

Global warming potential (GWP)

Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 517/2014)

Ground water

Ground water pollutant

ethylbenzene

Global warming potential (GWP)

Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 517/2014)

4,4'-methylenediphenyl diisocyanate

Global warming potential (GWP)

Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 517/2014)

Soudaflex 40 FC

toluene

Global warming potential (GWP)

Not included in the list of fluorinated greenhouse gases (Regulation (EC) No 517/2014)

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

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 dangerous substances). Depending on branch of industry and production process, also other waste codes may be applicable. Hazardous waste according to Directive 2008/98/EC.

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
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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
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14.6 Special precautions for user:

Special provisions	
Limited quantities	

Inland waterways (ADN)

14.1 UN number:

Transport	Not subject
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14.2 UN proper shipping name:

14.3 Transport hazard class(es):

Class	
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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 73/78 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
6%	
72g/l	

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.

xylene ethylbenzene toluene	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 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;	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 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
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	(d) hazard class 5.1.	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 toluene	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.
toluene	Toluene	Shall not be placed on the market, or used, as a substance or in mixtures in a concentration equal to or greater than 0,1 % by weight where the substance or mixture is used in adhesives or spray paints intended for supply to the general public.
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

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

SZW - List of reprotoxic substances (development)	Possibly hazardous to the foetus
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toluene

SZW - List of reprotoxic substances (development)	Possibly hazardous to the foetus
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National legislation Germany

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

Schwangerschaft Gruppe	D
MAK 8-Stunden-Mittelwert ppm	Xylol (alle Isomeren); 100 ppm
MAK 8-Stunden-Mittelwert mg/m ³	Xylol (alle Isomeren); 440 mg/m ³
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/m ³	Ethylbenzol; 88 mg/m ³
TA-Luft	5.2.5; I

4,4'-methylenediphenyl diisocyanate

MAK - Krebserzeugend Kategorie	4
Schwangerschaft Gruppe	C
MAK 8-Stunden-Mittelwert mg/m ³	Diphenylmethan-4,4'-diisocyanat (MDI) (eintembare Fraktion); 0.05 mg/m ³ ; gemessen als eintembare Fraktion (vgl. Abschn. Vd) S. 191)
TA-Luft	5.2.5; I 5.2.5

toluene

Schwangerschaft Gruppe	C
MAK 8-Stunden-Mittelwert ppm	Toluol; 50 ppm
MAK 8-Stunden-Mittelwert mg/m ³	Toluol; 190 mg/m ³
TA-Luft	5.2.5; I

National legislation France

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No data available

4,4'-methylenediphenyl diisocyanate

Catégorie cancérigène	C2
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National legislation Belgium

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No data available

Other relevant data

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No data available

xylene

TLV - Carcinogen	Xylene (all isomers); A4
IARC - classification	3; Xylenes

ethylbenzene

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

4,4'-methylenediphenyl diisocyanate

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

TLV - Carcinogen	Toluene; A4
IARC - classification	3; Toluene

15.2 Chemical safety assessment:

No chemical safety assessment is required.

SECTION 16: Other information

Full text of any R-phrases referred to under headings 2 and 3:

- R10 Flammable
- R20 Harmful by inhalation
- R20/21 Harmful by inhalation and in contact with skin
- R36/37/38 Irritating to eyes, respiratory system and skin
- R38 Irritating to skin
- R40 Limited evidence of a carcinogenic effect
- R42 May cause sensitisation by inhalation
- R42/43 May cause sensitisation by inhalation and skin contact

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R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation
 R63 Possible risk of harm to the unborn child
 R65 Harmful: may cause lung damage if swallowed
 R67 Vapours may cause drowsiness and dizziness

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.
 H336 May cause drowsiness or dizziness.
 H351 Suspected of causing cancer.
 H361d Suspected of damaging the unborn child.
 H373 May cause damage to the central nervous system through prolonged or repeated exposure if inhaled.
 H373 May cause damage to the ears (hearing damage) through prolonged or repeated exposure.
 H373 May cause damage to organs through prolonged or repeated exposure if inhaled.
 H373 May cause damage to organs through prolonged or repeated exposure.
 H412 Harmful to aquatic life with long lasting effects.

(*) = INTERNAL CLASSIFICATION BY BIG

PBT-substances = persistent, bioaccumulative and toxic substances

DSD Dangerous Substance Directive

DPD Dangerous Preparation Directive

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)

Specific concentration limits DSD

xylene	C ≥ 12,5 %	Xn; R20/21	DSD Annex VI (ATP 0)
4,4'-methylenediphenyl diisocyanate	C ≥ 5 %	Xi; R36/37/38	DSD Annex VI (ATP 1)
	C ≥ 0,1 %	R42	DSD Annex VI (ATP 1)

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