

SAFETY DATA SHEET

Based on Directive 2001/58/EC of the Commission of the European Communities

Soudaflex 40 FC

1. Identification of the substance/preparation and of the company/undertaking

- 1.1 Identification of the substance or preparation:**
- Not applicable
- 1.2 Use of the substance or the preparation:**
Sealant
- 1.3 Company/undertaking identification:**
SUDAL N.V.
Everdongenlaan 18-20
B-2300 Turnhout
Tel. : +32 14 42 42 31
Fax : +32 14 44 39 71
- 1.4 Telephone number for emergency:**
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Brandweerinformatiecentrum voor gevaarlijke stoffen (B.I.G.)
Technische Schoolstraat 43 A, B-2440 Geel

2. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS No.	Conc. in %	Hazard symbol	Risks (R-phrases)
xylene, mixture of isomers	1330-20-7 215-535-7	< 12.5	Xn	10-20/21-38 (1)
diphenylmethane-4,4'-di-isocyanate	101-68-8 202-966-0	0.1 - 1.0	Xn	20-36/37/38-42/43 (1)
thiodiethylene bis[3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate]	41484-35-9 255-392-8	0.1 - 2.5	N	51/53 (1)

(1) For R-phrases in full: see heading 16

3. Hazards identification

- Flammable
- May cause sensitization by inhalation

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Reason for revision : See 14

Revision date :
Revision number : 006

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4. First aid measures

- 4.1 **Eye contact:**
 - Rinse immediately with plenty of water
 - Seek medical advice
- 4.2 **Skin contact:**
 - Rinse immediately with plenty of water
 - If irritation persists: seek medical advice
- 4.3 **After inhalation:**
 - Remove the victim into fresh air
 - Seek medical advice
- 4.4 **After ingestion:**
 - Never give water to an unconscious person
 - Do not induce vomiting
 - Seek medical advice

5. Fire-fighting measures

- 5.1 **Suitable extinguishing media:**
 - Polyvalent foam
 - ABC powder
 - Carbon dioxide
- 5.2 **Unsuitable extinguishing media:**
 - None
- 5.3 **Special exposure hazards:**
 - On burning: release of toxic and corrosive gases/vapours: sulphur oxides, carbon monoxide and carbon dioxide
 - Gas/vapour spreads at floor level: ignition hazard
 - Vapour-air mixture is flammable/explosive within the explosion limits
- 5.4 **Instructions:**
 - Dilute toxic gases with water spray
- 5.5 **Special protective equipment for firefighters:**
 - Heat/fire exposure: compressed air/oxygen apparatus

6. Accidental release measures

- 6.1 **Personal protection/precautions:**

See heading 8.1/8.3/10.3
- 6.2 **Environmental precautions:**
 - Use appropriate containment to avoid environmental contamination
- 6.3 **Methods of cleaning up:**
 - Take up liquid spill into absorbent material e.g.: sand/earth
 - Take collected spill to manufacturer/competent authority
 - Wash clothing and equipment after handling

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7. Handling and storage

7.1 Handling:

- Observe very strict hygiene - avoid contact
- In case of insufficient ventilation: no naked flames/sparks
- Do not discharge the waste into the drain
- Clean contaminated clothing

7.2 Storage:

- Keep container tightly closed
- Keep away from: heat sources, ignition sources

Storage temperature : roomtemperature
Quantity limit : N.D. kg
Storage life : 365 days
Materials for packaging :
- suitable : aluminium

7.3 Specific uses:

- See information supplied by the manufacturer

8. Exposure controls/Personal protection

8.1 Exposure limit values:

XYLENE, MIXTURE OF ISOMERS:

TLV-TWA	: -	mg/m ³	100	ppm
TLV-STEL	: -	mg/m ³	150	ppm
TLV-Ceiling	: -	mg/m ³	-	ppm
OES-LTEL	: 441	mg/m ³	100	ppm
OES-STEL	: 662	mg/m ³	150	ppm
MAK	: 440	mg/m ³	100	ppm
TRK	: -	mg/m ³	-	ppm
MAC-TGG 8 h	: 210	mg/m ³		
MAC-TGG 15 min.	: -	mg/m ³		
MAC-Ceiling	: -	mg/m ³		
VME-8 h	: 435	mg/m ³	100	ppm
VLE-15 min.	: 650	mg/m ³	150	ppm
GWBB-8 h	: 440	mg/m ³	100	ppm
GWK-15 min.	: 660	mg/m ³	150	ppm
Momentary value	: -	mg/m ³	-	ppm
EC	: 221	mg/m ³	50	ppm
EC-STEL	: 442	mg/m ³	100	ppm

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DIPHENYLMETHANE-4,4'-DI-ISOCYANATE:

TLV-TWA	: -	mg/m ³	0.005	ppm
TLV-STEL	: -	mg/m ³	-	ppm
TLV-Ceiling	: -	mg/m ³	-	ppm
MEL-LTEL	: 0.02(-NCO)	mg/m ³	-	ppm
MEL-STEL	: 0.07(-NCO)	mg/m ³	-	ppm
MAK	: 0.05 aeros.	mg/m ³	-	ppm
TRK	: -	mg/m ³	-	ppm
MAC-TGG 8 h	: 0.05	mg/m ³		
MAC-TGG 15 min.	: 0.21	mg/m ³		
MAC-Ceiling	: -	mg/m ³		
VME-8 h	: 0.1	mg/m ³	0.01	ppm
VLE-15 min.	: 0.2(5 min)	mg/m ³	0.02(5 min.)	ppm
GWBB-8 h	: 0.052	mg/m ³	0.005	ppm
GWK-15 min.	: -	mg/m ³	-	ppm
Momentary value	: -	mg/m ³	-	ppm
EC	: -	mg/m ³	-	ppm
EC-STEL	: -	mg/m ³	-	ppm

8.2 Exposure controls:

8.2.1 Occupational exposure controls:

- Use only in well ventilated area

8.2.2 Environmental exposure controls: see heading 13

8.3 Personal protection:

8.3.1 respiratory protection:

- In case of insufficient ventilation: gas mask with filter type A

8.3.2 hand protection:

- Gloves

8.3.3 eye protection:

- Safety glasses

8.3.4 skin protection:

- Protective clothing

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9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C)	: Viscous liquid
Odour	: Solvent
Colour	: Variable in colour

9.2 Important health, safety and environmental information:

pH value	: N.D.	
Boiling point/boiling range	: N.D.	°C
Flashpoint	: 25	°C
Explosion limits	: N.D.	vol%
Vapour pressure (at 20°C)	: N.D.	hPa
Vapour pressure (at 50°C)	: N.D.	hPa
Relative density (at 20°C)	: 1.2	
Water solubility	: Insoluble	
Soluble in	: N.D.	
Relative vapour density	: > 1	
Flow time (ISO 2431)	: > 60	s
Viscosity	: N.D.	Pa.s
Partition coefficient n-octanol/water	: N.D.	
Evaporation rate		
ratio to butyl acetate	: N.D.	
ratio to ether	: N.D.	

9.3 Other information:

Melting point/melting range	: N.D.	°C
Auto-ignition point	: N.D.	°C
Saturation concentration	: N.D.	g/m ³

10. Stability and reactivity

10.1 Conditions to avoid/reactivity:

- Stable under normal conditions

10.2 Materials to avoid:

- Heat sources, ignition sources

10.3 Hazardous decomposition products:

- On burning: release of toxic and corrosive gases/vapours: sulphur oxides, carbon monoxide and carbon dioxide

11. Toxicological information

11.1 Acute toxicity:

XYLENE, MIXTURE OF ISOMERS:

LD50 oral rat	: > 4300	mg/kg
LD50 dermal rabbit	: > 2000	mg/kg
LD50 dermal rabbit	: > 1700	mg/kg
LC50 inhalation rat	: 22	mg/l/4 h
LC50 inhalation rat	: 5000	ppm/4 h

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE:

LD50 oral rat	: 9200	mg/kg
LD50 dermal rabbit	: N.D.	mg/kg
LD50 dermal rabbit	: > 10000	mg/kg
LC50 inhalation rat	: N.D.	mg/l/4 h
LC50 inhalation rat	: N.D.	ppm/4 h

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THIODIETHYLENE BIS[3-(3,5-DI-TERT-BUTYL-4-HYDROXYPHENYL)PROPIONATE]:

LD50 oral rat	: > 2000	mg/kg
LD50 dermal rabbit	: N.D.	mg/kg
LD50 dermal rabbit	: > 3000	mg/kg
LC50 inhalation rat	: N.D.	mg/l/4 h
LC50 inhalation rat	: N.D.	ppm/4 h

11.2 Chronic toxicity:

XYLENE, MIXTURE OF ISOMERS:

EC carc. cat.	: not listed
EC muta. cat.	: not listed
EC repr. cat.	: not listed
Carcinogenicity (TLV)	: A4
Carcinogenicity (MAC)	: not listed
Carcinogenicity (VME)	: not listed
Carcinogenicity (GWBB)	: not listed
Carcinogenicity (MAK)	: not listed
Mutagenicity (MAK)	: not listed
Teratogenicity (MAK)	: D
IARC classification	: 3

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE:

EC carc. cat.	: not listed
EC muta. cat.	: not listed
EC repr. cat.	: not listed
Carcinogenicity (TLV)	: not listed
Carcinogenicity (MAC)	: not listed
Carcinogenicity (VME)	: not listed
Carcinogenicity (GWBB)	: not listed
Carcinogenicity (MAK)	: 3B
Mutagenicity (MAK)	: not listed
Teratogenicity (MAK)	: -
IARC classification	: 3

11.3 Routes of exposure: ingestion, inhalation, eye and skin

11.4 Acute effects/symptoms:

AFTER INHALATION:

ON CONTINUOUS EXPOSURE/CONTACT:

- Headache
- Nausea
- Dizziness
- Narcosis

AFTER INGESTION:

AFTER ABSORPTION OF HIGH QUANTITIES:

- Symptoms similar to those listed under inhalation

11.5 Chronic effects:

- May cause sensitization by inhalation

ON CONTINUOUS EXPOSURE/CONTACT:

- Respiratory difficulties

12. Ecological information

12.1 Ecotoxicity:

XYLENE, MIXTURE OF ISOMERS:

- LC50 (96 h) : 3.77 mg/l (SALMO GAIIRDNERI/ONCORHYNCHUS MYKISS)
- EC50 (48 h) : 7.4 mg/l (DAPHNIA MAGNA)
- EC50 (72 h) : 10 mg/l (SKELETONEMA COSTATUM)

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE:

- LC50 (24 h) : >=500 mg/l (BRACHYDANIO RERIO)
- EC50 : >100 mg/l (DAPHNIA MAGNA)

12.2 Mobility:

- Volatile organic compounds (VOC): 10 - 13%
- Insoluble in water

For other physicochemical properties see section 9

12.3 Persistence and degradability:

- biodegradation BOD₅ : N.D. % ThOD
- water : No data available
- soil : T ½: N.D. days

12.4 Bioaccumulative potential:

- log P_{ow} : N.D.
- BCF : N.D.

12.5 Other adverse effects:

- WGK : 2 (classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
- Effect on the ozone layer : Not dangerous for the ozone layer (1999/45/EC)
- Greenhouse effect : no data available
- Effect on waste water purification : no data available

13. Disposal considerations

13.1 Provisions relating to waste:

- Waste material code (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 08 04 09 (waste adhesives and sealants containing organic solvents or other dangerous substances)
- Waste material code (Flanders): 015; 516
- Waste code (Germany): 55907
- Hazardous waste (91/689/EEC)

13.2 Disposal methods:

- Recycle/reuse
- Incinerate under surveillance

13.3 Packaging:

- Waste material code packaging (91/689/EEC, Council Decision 2001/118/EC, O.J. L47 of 16/2/2001): 15 01 10 (packaging containing residues of or contaminated by dangerous substances)

14. Transport information

14.1 Classification of the substance in compliance with UN Recommendations

UN number : -
 CLASS : NOT SUBJECT
 SUB RISKS :
 PACKING :
 PROPER SHIPPING NAME :

14.2 ADR (transport by road)

CLASS : NOT SUBJECT
 PACKING :
 DANGER LABEL TANKS :
 DANGER LABEL PACKAGES :

14.3 RID (transport by rail)

CLASS : NOT SUBJECT
 PACKING :
 DANGER LABEL TANKS :
 DANGER LABEL PACKAGES :

14.4 ADNR (transport by inland waterways)

CLASS : NOT SUBJECT
 PACKING :
 DANGER LABEL TANKS :
 DANGER LABEL PACKAGES :

14.5 IMDG (maritime transport)

CLASS : NOT SUBJECT
 SUB RISKS :
 PACKING :
 MFAG :
 EMS :
 MARINE POLLUTANT :

14.6 ICAO (air transport)

: subject to ICAO technical instructions

PROPER SHIPPING NAME :
 UN 1993, Flammable liquid, n.o.s (xylenes)

CLASS : 3
 SUB RISKS : -
 PACKING : III
 PACKING INSTRUCTIONS PASSENGER AIRCRAFT : 309/Y309
 PACKING INSTRUCTIONS CARGO AIRCRAFT : 310

14.7 Special precautions in connection with transport

not subject to ADR, RID, ADNR and IMDG: viscous liquid with a flash point ranging from 23°C to 61°C, which meets the conditions indicated in 2.2.3.1.5 of ADR, RID and ADNR and in 2.3.2.5 of IMDG

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15. Regulatory information

Labelling in accordance with EC directives 67/548/EEC and 1999/45/EC (**: see heading 16)



Harmful

Contains : diphenylmethane-4,4'-di-isocyanate

R10 : Flammable

R42 : May cause sensitization by inhalation

S(02) : (Keep out of reach of children)

S23 : Do not breathe vapour

S45 : In case of accident or if you feel unwell, seek medical advice (show the label where possible)

S(63) : (In case of accident by inhalation: remove casualty to fresh air and keep at rest)

Contains isocyanates. See information supplied by the manufacturer.

16. Other information

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

N.A. = NOT APPLICABLE
N.D. = NOT DETERMINED
***** = INTERNAL CLASSIFICATION

(**) Labelling:

The labelling of the substance described in this MSDS complies with the provisions of Directive 1999/45/EC of 31 May 1999, published in the Official Journal of the European Communities L 200 of 30/07/1999. This Directive replaces Directive 88/379/EEC of 7 June 1988, published in the Official Journal of the European Communities L 187 of 16/07/1988.

Member States shall apply the laws, regulations and administrative provisions referred to in article 22 of this Directive:

- (a) to preparations not within the scope of Directive 91/414/EEC or Directive 98/8/EC as from 30 July 2002; and
- (b) to preparations within the scope of Directive 91/414/EEC or Directive 98/8/EC as from 30 July 2004.

Full text of any R-phrases referred to under heading 2:

R10 : Flammable
R20 : Harmful by inhalation
R20/21 : Harmful by inhalation en bij aanraking with de hui
R36/37/38 : Irritating to eyes, respiratory system and skin
R38 : Irritant to the skin
R42/43 : May cause sensitization by inhalation and skin contact
R51/53 : Toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment

Exposure limits:

TLV : Threshold Limit Value - ACGIH US 2000
OES : Occupational Exposure Standards - United Kingdom 1999
MEL : Maximum Exposure Limits - United Kingdom 1999
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2001
TRK : Technische Richtkonzentrationen - Germany 2001
MAC : Maximale aanvaarde concentratie - the Netherlands 2002
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à court terme - France 1999
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium 1998
GWK : Grenswaarde kortstondige blootstelling - Belgium 1998
EC : Indicative occupational exposure limit values - directive 2000/39/EC

I : Inhalable fraction = **T** : Total dust = **E** : Einatembarer Aerosolanteil
R : Respirable fraction = **A** : Alveolengängiger Aerosolanteil/Alveolar dust
C : Ceiling limit

a:	aerosol	r:	rook/Rauch	(fume)
d:	damp (vapour)	st:	stof/Staub	(dust)
du:	dust	ve:	vezel	(fibre)
fa:	Faser (fibre)	va:	vapour	
fi:	fibre	om:	oil mist	
fu:	fume	on:	olienevel/Ölnebel	(oil mist)
p:	poussière (dust)	part:	particles	

Chronic toxicity:

K : List of the carcinogenic substances and processes - the Netherlands 2002