

Soudal Contact Adhesive - 44A**1. Identification of the substance/preparation and the company**

- 1.1 Identification of the substance or preparation:**
- Not applicable
- 1.2 Use of the substance or the preparation:**
Adhesive
- 1.3 Company/undertaking identification:**
SODAL 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:**
+32 14 58 45 45
Brandweerinformatiecentrum voor gevaarlijke stoffen (B.I.G.)
Technische Schoolstraat 43 A, B-2440 Geel

2. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS/ELINCS No.	Conc. in %	Hazard symbol	Risks (R-phrases)
ethyl acetate	141-78-6 205-500-4	1 - 20	F;Xi	11-36-66-67 (1)
low boiling point hydrogen treated naphtha (conc benzene < 0.1%)	64742-49-0 265-151-9	1 - 25	F;Xn;N	11-51/53-65-66-67 (1) (Labelling in compliance with CONCAWE)
n-hexane	110-54-3 203-777-6	0.1 - 1.0	F;Xn;N	11-38-48/20-51/53- 62-65-67 (1)
butanone	78-93-3 201-159-0	1 - 20	F;Xi	11-36-66-67 (1)
acetone	67-64-1 200-662-2	> 25	F;Xi	11-36-66-67 (1)

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

3. Hazards identification

- Highly flammable
- Irritating to eyes
- Repeated exposure may cause skin dryness or cracking
- Vapours may cause drowsiness and dizziness
- Harmful to aquatic organisms; may cause long-term adverse effects in the aquatic environment

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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
 - Alcohol-resistant foam
 - BC powder
 - Carbon dioxide
- 5.2 Unsuitable extinguishing media:**
- None
- 5.3 Special exposure hazards:**
- Gas/vapour spreads at floor level: ignition hazard
 - Gas/vapour flammable with air within explosion limits
 - On burning: release of toxic and corrosive gases/vapours: hydrogen chloride, carbon monoxide and carbon dioxide
- 5.4 Instructions:**
- Cool closed containers with water if they are exposed to the fire
 - Do not move the load if exposed to heat
- 5.5 Special protective equipment for firefighters:**
- Heat/fire exposure: compressed air/oxygen apparatus
 - Protective clothing for exposure to chemicals

6. Accidental release measures

- 6.1 Personal protection/precautions:**
see heading 8.2/8.3/13
- 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
 - Absorbed substance: shovel in closing drums
 - Carefully collect the spill/leftovers
 - Clean contaminated surfaces with an excess of water
 - Take collected spill to manufacturer/competent authority
 - Wash clothing and equipment after handling

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7. Handling and storage

7.1 Handling:

- In case of insufficient ventilation: use spark-/explosionproof appliances and lighting system
- Observe strict hygiene
- Avoid prolonged and repeated contact with skin
- Take precautionary measures against static discharges

7.2 Storage:

- Keep container tightly closed
- Store in a dry area
- Store in a dark area
- Keep away from: heat sources, ignition sources

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

7.3 Specific uses:

- See information supplied by the manufacturer

8. Exposure controls/Personal protection

8.1 Exposure limit values:

ETHYL ACETATE:

TLV-TWA	:	mg/m ³	400	ppm
TLV-STEL	:	mg/m ³	-	ppm
TLV-Ceiling	:	mg/m ³		ppm
OES-LTEL	:	mg/m ³	200	ppm
OES-STEL	:	mg/m ³	400	ppm
MAK	:	mg/m ³	400	ppm
TRK	:	mg/m ³		ppm
MAC-TGG 8 h	:	mg/m ³	550	
MAC-TGG 15 min.	:	mg/m ³	1100	
MAC-Ceiling	:	mg/m ³		
VME-8 h	:	mg/m ³	400	ppm
VLE-15 min.	:	mg/m ³	-	ppm
GWBB-8 h	:	mg/m ³	400	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

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n-HEXANE :

TLV-TWA	:	mg/m ³	50	ppm
TLV-STEL	:	mg/m ³	-	ppm
TLV-Ceiling	:	mg/m ³		ppm
OES-LTEL	: 72	mg/m ³	20	ppm
OES-STEL	: -	mg/m ³	-	ppm
MAK	: 180	mg/m ³	50	ppm
TRK	:	mg/m ³		ppm
MAC-TGG 8 h	: 90	mg/m ³		
MAC-TGG 15 min.	: 180	mg/m ³		
MAC-Ceiling	:	mg/m ³		
VME-8 h	: 170	mg/m ³	50	ppm
VLE-15 min.	: -	mg/m ³	-	ppm
GWBB-8 h	: 179	mg/m ³	50	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

BUTANONE :

TLV-TWA	:	mg/m ³	200	ppm
TLV-STEL	:	mg/m ³	300	ppm
TLV-Ceiling	:	mg/m ³		ppm
OES-LTEL	: 600	mg/m ³	200	ppm
OES-STEL	: 899	mg/m ³	300	ppm
MAK	: 600	mg/m ³	200	ppm
TRK	:	mg/m ³		ppm
MAC-TGG 8 h	: 590	mg/m ³		
MAC-TGG 15 min.	: 900	mg/m ³		
MAC-Ceiling	:	mg/m ³		
VME-8 h	: 600	mg/m ³	200	ppm
VLE-15 min.	: -	mg/m ³	-	ppm
GWBB-8 h	: 600	mg/m ³	200	ppm
GWK-15 min.	: 900	mg/m ³	300	ppm
Momentary value	:	mg/m ³		ppm
EC	: 600	mg/m ³	200	ppm
EC-STEL	: 900	mg/m ³	300	ppm

ACETONE :

TLV-TWA	:	mg/m ³	500	ppm
TLV-STEL	:	mg/m ³	750	ppm
TLV-Ceiling	:	mg/m ³		ppm
OES-LTEL	: 1210	mg/m ³	500	ppm
OES-STEL	: 3620	mg/m ³	1500	ppm
MAK	: 1200	mg/m ³	500	ppm
TRK	:	mg/m ³		ppm
MAC-TGG 8 h	: 1210	mg/m ³		
MAC-TGG 15 min.	: 2420	mg/m ³		
MAC-Ceiling	:	mg/m ³		
VME-8 h	: 1800	mg/m ³	750	ppm
VLE-15 min.	: -	mg/m ³	-	ppm
GWBB-8 h	: 1210	mg/m ³	500	ppm
GWK-15 min.	: 2420	mg/m ³	1000	ppm
Momentary value	:	mg/m ³		ppm
EC	: 1210	mg/m ³	500	ppm
EC-STEL	: -	mg/m ³	-	ppm

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8.2 Exposure controls:

8.2.1 Occupational exposure controls:

- Measure the concentration in the air regularly
- Work under local exhaust/ventilation

8.2.2 Environmental exposure controls: see heading 13

8.3 Personal protection:

8.3.1 respiratory protection:

- In case of insufficient ventilation: respiratory protection with filtertype A

8.3.2 hand protection:

- Gloves

8.3.3 eye protection:

- Protective goggles

8.3.4 skin protection:

- Protective clothing

9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C)	: Viscous
Odour	: Solvent
Colour	: Colourless

9.2 Important health, safety and environmental information:

pH value	: N.D.	
Boiling point/boiling range	: N.D.	°C
Flashpoint	: < 23	°C
Explosion limits	: N.D.	Vol%
Vapour pressure (at 20°C)	: N.D.	hPa
Vapour pressure (at 50°C)	: < 1100	hPa
Relative density (at 20°C)	: N.D.	
Water solubility	: poorly soluble	
Soluble in	: organic solvents	
Relative vapour density	: > 2	
Viscosity (at 20°C)	: 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:

- Keep away from: heat sources, ignition sources

10.3 Hazardous decomposition products:

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

11. Toxicological information

11.1 Acute toxicity:

ETHYL ACETATE

LD50 oral rat	: 5620	mg/kg
LD50 dermal rabbit	: N.D.	mg/kg
LD50 dermal rabbit	: > 18000	mg/kg
LC50 inhalation rat	: N.D.	mg/l/4 h
LC50 inhalation rat	: N.D.	ppm/4 h

n-HEXANE:

LD50 oral rat	: 28710	mg/kg
LD50 dermal rabbit	: N.D.	mg/kg
LD50 dermal rabbit	: > 2000	mg/kg
LC50 inhalation rat	: > 20	mg/l/4 h
LC50 inhalation rat	: > 50000	ppm/4 h

BUTANONE:

LD50 oral rat	: 2737	mg/kg
LD50 dermal rabbit	: N.D.	mg/kg
LD50 dermal rabbit	: 6480	mg/kg
LC50 inhalation rat	: 34	mg/l/4 h
LC50 inhalation rat	: 11300	ppm/4 h

ACETONE:

LD50 oral rat	: 5800	mg/kg
LD50 dermal rabbit	: 20000	mg/kg
LD50 dermal rabbit	: N.D.	mg/kg
LC50 inhalation rat	: 71	mg/l/4 h
LC50 inhalation rat	: 30000	ppm/4 h

11.2 Chronic toxicity:

ETHYL ACETATE:

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)	: not listed
Mutagenicity (MAK)	: not listed
Teratogenicity (MAK)	: Group C

IARC classification	: not listed
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n-HEXANE:

EC carc. cat.	: not listed
EC muta. cat.	: not listed
EC repr. cat.	: 3

Carcinogenicity (TLV)	: not listed
Carcinogenicity (MAC)	: not listed
Carcinogenicity (VME)	: not listed
Carcinogenicity (GWBB)	: not listed

Carcinogenicity (MAK)	: not listed
Mutagenicity (MAK)	: not listed
Teratogenicity (MAK)	: Group C

IARC classification	: not listed
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BUTANONE:

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) : not listed
Mutagenicity (MAK) : not listed
Teratogenicity (MAK) : Group C

IARC classification : not listed

ACETONE:

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) : Group -

IARC classification : not listed

11.3 Routes of exposure: ingestion, inhalation, eye and skin
Warning! Substance is absorbed through the skin

11.4 Acute effects/symptoms:

AFTER INHALATION:

EXPOSURE TO HIGH CONCENTRATIONS:

- CNS depression
- Irritation of the respiratory tract
- Irritation of the nasal mucous membranes
- Headache
- Nausea
- Dizziness
- Narcosis
- Drunkenness
- Disturbances of consciousness

AFTER INGESTION:

- Nausea
- Vomiting
- Symptoms similar to those listed under inhalation

AFTER SKIN CONTACT:

ON CONTINUOUS EXPOSURE/CONTACT:

- Dry skin
- Cracking of the skin

AFTER EYE CONTACT:

- Irritation of the eye tissue

11.5 Chronic effects:

- Contains traces of a (possible) fertility impairing subst.
- Contains substance of group C (MAK-Schwangerschaftsgruppe)
- Not listed in mutagenicity class (EC,MAK)

ON CONTINUOUS EXPOSURE/CONTACT:

- Feeling of weakness
- Dry skin
- Tingling/irritation of the skin
- Skin rash/inflammation
- Gastrointestinal complaints
- Loss of appetite

12. Ecological information

12.1 Ecotoxicity:

ETHYL ACETATE:

- LC50 (96 h) : 454.7 mg/l (SALMO GAIRDNERI/ ONCORHYNCHUS MYKISS)
- EC50 (48 h) : 154 mg/l (DAPHNIA MAGNA)
- EC50 (48 h) : 3300 mg/l (SCENEDESMUS SUBSPICATUS)

n-HEXANE:

- LC50 (96 h) : 113 mg/l (TILAPIA MOSAMBICA)
- EC50 (48 h) : 2.1 mg/l (DAPHNIA MAGNA)
- EC50 (48 h) : 114 mg/l (CHLOROPHYTA)

BUTANONE:

- LC50 (96 h) : 3200 mg/l (PIMEPHALES PROMELAS)
- EC50 (48 h) : 5091 mg/l (DAPHNIA MAGNA)
- EC50 (72 h) : 120 mg/l (ALGAE)

ACETONE:

- LC50 (96 h) : 5540 mg/l (SALMO GAIRDNERI/ ONCORHYNCHUS MYKISS)
- EC50 (48 h) : 39 mg/l (DAPHNIA MAGNA)
- EC50 (96 h) : 7000 mg/l (SELENASTRUM CAPRICORNUTUM)

12.2 Mobility:

- Volatile organic compounds (VOC): 79%
- Poorly soluble in water
- For other physicochemical properties see heading 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)
- Hazardous waste (91/689/EEC)

13.2 Disposal methods:

- Incinerate under surveillance
- Do not discharge into drains or the environment

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

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- 14.1 Classification of the substance in compliance with UN Recommendations**
- UN number : 1133
 CLASS : 3
 SUB RISKS : -
 PACKING : III
 PROPER SHIPPING NAME :
 UN 1133, Adhesives, Special provision 640H
- 14.2 ADR (transport by road)**
- CLASS : 3
 PACKING : III
 CLASSIFICATION CODE :
 DANGER LABEL TANKS : 3
 DANGER LABEL PACKAGES : 3
- 14.3 RID (transport by rail)**
- CLASS : 3
 PACKING : III
 CLASSIFICATION CODE :
 DANGER LABEL TANKS : 3
 DANGER LABEL PACKAGES : 3
- 14.4 ADNR (transport by inland waterways)**
- CLASS : 3
 PACKING : III
 CLASSIFICATION CODE :
 DANGER LABEL TANKS : 3
 DANGER LABEL PACKAGES : 3
- 14.5 IMDG (maritime transport)**
- CLASS : 3
 SUB RISKS : -
 PACKING : III
 MFAG : -
 EMS : F-E, S-D
 MARINE POLLUTANT : P
- 14.6 ICAO (air transport)**
- 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** :
- viscous liquid with a flashpoint below 23°C, which meets the conditions indicated in 2.2.3.1.4 of ADR, RID and ADNR, in 2.3.2.3 of IMDG and in 3.3.3.1 of ICAO
- 14.8 Limited quantities (LQ)** :
- When substances and their packaging meet the conditions established by ADR/RID/ADNR in chapter 3.4, **only** the following prescriptions shall be complied with:
 each package shall display a diamond-shaped figure with the following inscription:
 - 'UN 1133'
 or, in the case of different goods with different identification numbers within a single package:
 - the letters 'LQ'

15. Regulatory information

Labelling in accordance with directives 67/548/EEC and 1999/45/EC



Highly flammable



Irritant

- R36 : Irritating to eyes
R52/53 : Harmful to aquatic organisms; may cause long-term adverse effects in the aquatic environment
R66 : Repeated exposure may cause skin dryness or cracking
R67 : Vapours may cause drowsiness and dizziness
- S(02) : (Keep out of reach of children)
S23 : Do not breathe vapour
S24 : Avoid contact with skin
S(46) : (If swallowed, seek medical advice immediately and show this container or label)
S61 : Avoid release to the environment. Refer to special instructions/safety data sheets.

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 (NFPA)

Exposure limits:

TLV : Threshold Limit Value - ACGIH US 2004
OES : Occupational Exposure Standards - United Kingdom 2003
MEL : Maximum Exposure Limits - United Kingdom 2003
MAK : Maximale Arbeitsplatzkonzentrationen - Germany 2002
TRK : Technische Richtkonzentrationen - Germany 2002
MAC : Maximale aanvaarde concentratie - the Netherlands 2004
VME : Valeurs limites de Moyenne d'Exposition - France 1999
VLE : Valeurs limites d'Exposition à court terme - France 1999
GWBB : Grenswaarde beroepsmatige blootstelling - Belgium 2002
GWK : Grenswaarde kortstondige blootstelling - Belgium 2002
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:	fibres	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 2005

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

R11 : Highly flammable
R36 : Irritating to eyes
R38 : Irritating to skin
R48/20 : Harmful: danger of serious damage to health by prolonged exposure through inhalation
R51/53 : Toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment
R62 : Possible risk of impaired fertility
R65 : Harmful: may cause lung damage if swallowed
R66 : Repeated exposure may cause skin dryness or cracking
R67 : Vapours may cause drowsiness and dizziness