

SAFETY DATA SHEET

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

Universal Adhesive 49A

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:

- Adhesive

1.3 Company/undertaking identification:

SOUDAL N.V.
Everdongenlaan 18-20
B-2300 Turnhout
Tel. : +32 14 42 42 31
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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)
low boiling point hydrogen treated naphtha (conc. benzene < 0.1%)	64742-49-0 265-151-9	2.5 - 25	F;Xn;N	11-51/53-65-66(1) (Labelling in compliance with CONCAWE)
n-hexane	110-54-3 203-777-6	< 5	F;Xn;N	11-38-48/20-51/53-62-65- 67 (1)
acetone	67-64-1 200-662-2	< 5	F;Xi	11-36-66-67 (1)

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

3. Hazards identification

- Highly flammable
- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment

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Reason for revision : See 14.1

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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:**
- Water spray
 - Polyvalent foam
 - ABC powder
 - Carbon dioxide
- 5.2 Unsuitable extinguishing media:**
- None
- 5.3 Special exposure hazards:**
- On burning: release of carbon monoxide and carbon dioxide
 - Gas/vapour spreads at floor level: ignition hazard
 - Gas/vapour flammable with air within explosion limits
- 5.4 Instructions:**
- Take account of toxic firefighting water
 - Use firefighting water moderately and contain it
 - Do not move the load if exposed to heat
- 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 inert absorbent material, e.g.: sand/earth
 - Take collected spill to competent authority
 - Wash clothing and equipment after handling

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7. Handling and storage

7.1 Handling:

- Avoid prolonged and repeated contact with skin
- In case of insufficient ventilation: keep naked flames/sparks away
- Do not discharge the waste into the drain
- Remove contaminated clothing immediately
- 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 : tin, polyamide

7.3 Specific uses:

- See information supplied by the manufacturer

8. Exposure controls/Personal protection

8.1 Exposure limit values:

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.	: -	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

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ACETONE :

TLV-TWA	: -	mg/m ³	500	ppm
TLV-STEL	: -	mg/m ³	750	ppm
TLV-Ceiling	: -	mg/m ³	-	ppm
OES-LTEL	: 1810	mg/m ³	750	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	: 1780	mg/m ³		
MAC-TGG 15 min.	: -	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	: 1806	mg/m ³	750	ppm
GWK-15 min.	: 2415	mg/m ³	1000	ppm
Momentary value	: -	mg/m ³	-	ppm
EC	: 1210	mg/m ³	500	ppm
EC-STEL	: -	mg/m ³	-	ppm

8.2 Exposure controls:

8.2.1 Occupational exposure controls:

- 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:

- 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)	: Liquid
Odour	: Characteristic
Colour	: Yellow

9.2 Important health, safety and environmental information:

pH value	: N.D.	
Boiling point/boiling range	: N.D.	°C
Flashpoint	: < 21	°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	: Insoluble	
Soluble in	: N.D.	
Relative vapour density	: N.D.	
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 carbon monoxide and carbon dioxide

11. Toxicological information

11.1 Acute toxicity:

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

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:

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

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

11.4 Acute effects/symptoms:

AFTER INHALATION:

EXPOSURE TO HIGH CONCENTRATIONS:

- Narcosis

ON CONTINUOUS EXPOSURE/CONTACT:

- Slight irritation

AFTER SKIN CONTACT:

ON CONTINUOUS EXPOSURE/CONTACT:

- Dry skin

AFTER EYE CONTACT:

- Slight irritation

11.5 Chronic effects:

ON CONTINUOUS EXPOSURE/CONTACT:

- Skin rash/inflammation

12. Ecological information

12.1 Ecotoxicity:

n-HEXANE:

- LC50 (96 h) : 113 mg/l (TILAPIA MOSAMBICA)
- EC50 (48 h) : 2.1 mg/l (DAPHNIA MAGNA)
- EC50 (24 h) : 114 mg/l (CHLOROPHYTA)

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): 25%
- 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 van waste materials

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): 034; 516
- Waste code (Germany): 55905
- Hazardous waste (91/689/EEC)

13.2 Disposal methods:

- Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber
- Do not discharge into drains or the environment
- Do not discharge into surface water

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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1133

14.1 Classification of the substance in compliance with UN Recommendations

```

UN number           : 1133
CLASS               : 3
SUB RISKS           : -
PACKING             : II
PROPER SHIPPING NAME :
UN 1133, Adhesives having a vapour pressure at 50°C of not more than 110 kPa
(1,10 bar)
    
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14.2 ADR (transport by road)

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CLASS               : 3
PACKING             : II
DANGER LABEL TANKS : 3
DANGER LABEL PACKAGES : 3
    
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14.3 RID (transport by rail)

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class               : 3
PACKING             : II
DANGER LABEL TANKS : 3
DANGER LABEL PACKAGES : 3
    
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14.4 ADNR (transport by inland waterways)

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CLASS               : 3
PACKING             : II
DANGER LABEL TANKS : 3
DANGER LABEL PACKAGES : 3
    
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14.5 IMDG (maritime transport)

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CLASS               : 3
SUB RISKS           : -
PACKING             : II
MFAG                : -
EMS                 : 3-05
Marine pollutant    : -
    
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14.6 ICAO (air transport)

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CLASS               : 3
SUB RISKS           : -
PACKING             : II
PACKING INSTRUCTIONS PASSENGER AIRCRAFT :
PACKING INSTRUCTIONS CARGO AIRCRAFT :
    
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14.7 Special precautions in connection with transport : None

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



Highly flammable

- R52/53 : Harmful to aquatic organisms; may cause long-term adverse effects in the aquatic environment
- S(02) : (Keep out of reach of children)
- 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

(**) 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:

R11 : Highly flammable
R36 : Irritant to the eyes
R38 : Irritant to the skin
R48/20 : Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R51/53 : Harmful 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

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