

SAFETY DATA SHEET

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

2-K SCHNELLFEST

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:

Polyurethane

1.3 Company/undertaking identification:

SOUDAL 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 43A, B-2440 Geel

2. Composition/information on ingredients

Hazardous ingredients	CAS No. EINECS/ELINCS No.	Conc. in %	Hazard symbol	Risks (R-phrases)
polymethylenepolyphenylisocyanate	9016-87-9 -	> 25	Xn	20-36/37/38-42/43 (1)

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

3. Hazards identification

- Harmful by inhalation
- Irritating to eyes, respiratory system and skin
- May cause sensitization by inhalation and skin contact

Printing date : 11-2005
Compiled by : Brandweerinformatiecentrum voor Gevaarlijke Stoffen vzw (BIG)
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MSDS established : 12-02-2003
Reference number : BIG\33370GB
Reason for revision : See 12.5

Revision date : 23-12-2004
Revision number : 004

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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:**
 - Wash immediately with lots 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
 - Seek medical advice

5. Fire-fighting measures

- 5.1 **Suitable extinguishing media:**
 - Water spray
 - Polyvalent foam
 - Alcohol-resistant foam
 - BC powder
 - Carbon dioxide
- 5.2 **Unsuitable extinguishing media:**
 - None
- 5.3 **Special exposure hazards:**
 - On burning: release of toxic and corrosive gases/vapours nitrous vapours, carbon monoxide and carbon dioxide
 - Not easily combustible
 - On heating: release of toxic/combustible gases/vapours hydrogen cyanide
 - Heat may cause pressure rise in tanks/drums: explosion risk
- 5.4 **Instructions:**
 - Cool drums with water spray/remove them into safety
 - Dilute toxic gases with water spray
 - 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 for cleaning up:**
 - Allow product to solidify and remove it by mechanical means
 - Remove uncured foam with acetone

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7. Handling and storage

7.1 Handling:

- Observe very strict hygiene - avoid contact
- Do not discharge the waste into the drain
- Remove contaminated clothing immediately
- Clean contaminated clothing

7.2 Storage:

- Keep container tightly closed
- Store in a dry area
- Keep container in a well-ventilated place

- Keep away from: heat sources, acids, bases, alcohols, amines, water/moisture

Storage temperature : Roomtemperature
Quantity limits : N.D. kg
Storage life : 365 days
Materials for packaging :
- suitable : synthetic material

7.3 Specific uses:

- See information supplied by the manufacturer

8. Exposure controls/Personal protection

8.1 Exposure limit values:

POLYMETHYLENEPOLYPHENYLISOCYANATE:

TLV-TWA	: -	mg/m ³	-	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	: -	mg/m ³	-	ppm
TRK	: -	mg/m ³	-	ppm
MAC-TGG 8 h	: -	mg/m ³		
MAC-TGG 15 min.	: -	mg/m ³		
MAC-Ceiling	: -	mg/m ³		
VME-8 h	: -	mg/m ³	-	ppm
VLE-15 min.	: -	mg/m ³	-	ppm
GWBB-8 h	: -	mg/m ³	-	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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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
- Suitable materials: GIVE GOOD RESISTANCE:
PVA
PVC

8.3.3 eye protection:

- Safety glasses

8.3.4 skin protection:

- Suitable protective clothing
- Suitable materials: GIVE GOOD RESISTANCE:
PVA
PVC

9. Physical and chemical properties

9.1 General information:

Appearance (at 20°C)	: Paste
Odour	: Stuffy
Colour	: Variable in colour

9.2 Important health, safety and environmental information:

pH value	: N.D.	
Boiling point/boiling range	: N.D.	°C
Flashpoint	: > 205	°C
Explosion limits	: N.D.	vol%
Vapour pressure (at 20°C)	: < 0.0001	hPa
Vapour pressure (at 50°C)	: N.D.	hPa
Relative density (at 20°C)	: N.D.	
Water solubility	: Insoluble	
Soluble in	: No data available	
Relative vapour density	: N.D.	
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

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10. Stability and reactivity

10.1 Conditions to avoid/reactivity:

- Unstable on exposure to heat

10.2 Materials to avoid:

- Keep away from: heat sources, acids, bases, alcohols, amines, water/moisture

10.3 Hazardous decomposition products:

- Reacts slowly with water (moisture): release of harmful/irritant gases/vapours carbon dioxide and release of carcinogenic products
- Reacts violently with hot water: pressure rise and possible bursting of container
- Polymerizes on exposure to temperature rise: pressure build-up may cause closed container to burst
- On heating: release of toxic/combustible gases/vapours hydrogen cyanide
- On burning: release of toxic and corrosive gases/vapours nitrous vapours, carbon monoxide and carbon dioxide
- Violent polymerisation on exposure to (strong) bases

11. Toxicological information

11.1 Acute toxicity:

LD50 oral rat	: > 5000	mg/kg
LD50 dermal rat	: N.D.	mg/kg
LD50 dermal rabbit	: > 5000	mg/kg
LC50 inhalation rat	: N.D.	mg/l/4 h
LC50 inhalation rat	: N.D.	ppm/4 h

11.2 Chronic toxicity:

POLYMETHYLENEPOLYPHENYLISOCYANATE:

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, eyes and skin

11.4 Acute effects/symptoms:

AFTER INHALATION:

- Dry/sore throat
- Coughing
- Runny nose
- Irritation of the respiratory tract
- Irritation of the nasal mucous membranes
- Possible inflammation of the respiratory tract

EXPOSURE TO HIGH CONCENTRATIONS:

- Risk of pneumonia
- Respiratory difficulties

FOLLOWING SYMPTOMS MAY APPEAR LATER:

- Risk of lung oedema

AFTER INGESTION:

- Irritation of the gastric/intestinal mucosa

AFTER SKIN CONTACT:

- Tingling/irritation of the skin

AFTER EYE CONTACT:

- Irritation of the eye tissue

11.5 Chronic effects:

- May cause sensitization by skin contact
- May cause sensitization by inhalation
- No cumulative effect
- Contains substance with uncertain carcinogenic properties (polymethylenepolyphenylisocyanate)
- Not classified as toxic to reproduction (EC)

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT:

- Itching
- Skin rash/inflammation
- May stain the skin
- Feeling of weakness
- Coughing
- Possible inflammation of the respiratory tract
- Respiratory difficulties

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12. Ecological information

12.1 Ecotoxicity:

- No data available

12.2 Mobility:

- Volatile organic compounds (VOC): 0 %
- Insoluble in water
- Substance sinks 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 : - (classification 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 05 01* (waste isocyanates)
- Waste material code (Flanders): 034; 516
- Hazardous waste (91/689/EEC)

13.2 Disposal methods:

- Dissolve or mix with a combustible solvent
- Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber
- Do not discharge into surface water

13.3 Packaging/Container:

- 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)

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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)

CLASS : NOT SUBJECT
SUB RISKS :
PACKING :
PACKING INSTRUCTIONS PASSENGER AIRCRAFT :
PACKING INSTRUCTIONS CARGO AIRCRAFT :

14.7 Special precautions in connection with transport

: not restricted for any mode of international transport

15. Regulatory information

Classification according to directives 67/548/EEC and 1999/45/EC



Harmful

contains : polymethylenepolyphenylisocyanate

R20 : Harmful by inhalation

R36/37/38 : Irritating to eyes, respiratory system and skin

R42/43 : May cause sensitization by inhalation and skin contact

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

S23 : Do not breathe vapour

S36/37 : Wear suitable protective clothing and gloves

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

Exposure limits:

TLV : Threshold Limit Value - ACGIH USA 2002
OES : Occupational Exposure Standards - United Kingdom 2001
MEL : Maximum Exposure Limits - United Kingdom 2001
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 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

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

R20 : Harmful by inhalation
R36/37/38 : Irritating to eyes, respiratory system and skin
R42/43 : May cause sensitization by inhalation and skin contact