

FILL & FIX FOAM

1. Identification of the Substance/Preparation and of the Company

1.1 Identification of the substance:

- Not Applicable

1.2 Use of the substance or the preparation:

- Polyurethane foam

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

Information centre on dangerous goods (BIG)

Technische Schoolstraat 43A, B-2440 Geel, Belgium

2. Composition / Information of Ingredient

Hazardous Ingredients	CAS-No. EINECS/ELINCS-No.	Conc. in %	Hazardous Symbol	Hazards (R-phrases)
polymethylene polyphenyl isocyanate	9016-87-9 -	>25	Xn	20-36/37/38-42/43 (1)
dimethyl ether	115-10-6 204-065-8	1 – 15	F+	12 (1)
propane	74-98-6 200-827-9	1 – 5	F+	12 (1)
isobutane	75-28-5 200-857-2	1 – 5	F+	12 (1)

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

3. Hazards Identification

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

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

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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. Firefighting Measures

5.1 Suitable Extinguishable Media

- Quantities of water
- Polyvalent 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: hydrogen chloride, carbon monoxide and carbon dioxide
- Gas/vapour spreads at floor level: ignition hazard
- Gas/vapour flammable with air within explosion limits
- Aerosol may explode under the effect of heat

5.4 Instructions

- If exposed to fire cool the closed containers by spraying with water
- 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
- Protective clothing for exposure to chemicals

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

- Allow product to solidify and remove it by mechanical means
- Remove uncured foam with acetone

7. Handling Measures

7.1 Handling

- Observe very strict hygiene - avoid contact
- Remove contaminated clothing immediately
- Use spark-/explosion proof appliances and lighting system
- Clean contaminated clothing
- Use only in well-ventilated areas

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7.2 Clean contaminated clothing

Storage

- Keep container tightly closed
- Store in a dry area
- Store in a cool area
- Keep containers in a well-ventilated place
- Keep away from: heat sources, oxidizing agents

Storage Temperature	:	<50	°C
Quantity Limit	:	N.D.	kg
Storage Life	:	N.D.	days
Materials for packing	:	suitable	aerosol

7.3 Specific uses

- See information supplied by the manufacturer for the identified use(s)

8. Exposure Controls / Personal Protection

8.1 Exposure Limit Values:

POLYMETHYLENE POLYPHENYL ISOCYANATE:

TLV-TWA	:	-	mg/m ³	1000	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	-	ppm
MAC-TGG 15 min.	:	-	mg/m ³	-	ppm
MAC-Ceiling	:	-	mg/m ³	-	ppm

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

DIMETHYL ETHER:

TLV-TWA	:	-	mg/m ³	1000	ppm
TLV-STEL	:	-	mg/m ³	-	ppm
TLV-Ceiling	:	-	mg/m ³	-	ppm

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OES-LTEL	:	-	mg/m ³	400	ppm
OES-STEL	:	-	mg/m ³	500	ppm
MAK	:	1900	mg/m ³	1000	ppm
TRK	:	-	mg/m ³	-	ppm
MAC-TGG 8 h	:	950	mg/m ³	-	Ppm
MAC-TGG 15 min.	:	1500	mg/m ³	-	ppm
MAC-Ceiling	:	-	mg/m ³	-	ppm
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	:	1920	mg/m ³	1000	ppm
EC-STEL	:	-	mg/m ³	-	ppm
PROPANE:					
TLV-TWA	:	-	mg/m ³	2500	ppm
TLV-STEL	:	-	mg/m ³	-	ppm
TLV-Ceiling	:	-	mg/m ³	-	ppm
OES-LTEL	:	-	mg/m ³	-	ppm
OES-STEL	:	-	mg/m ³	-	ppm
MAK	:	1800	mg/m ³	1000	ppm
TRK	:	-	mg/m ³	-	ppm
MAC-TGG 8 h	:	-	mg/m ³	-	Ppm
MAC-TGG 15 min.	:	-	mg/m ³	-	ppm
MAC-Ceiling	:	-	mg/m ³	-	ppm
VME-8 h	:	-	mg/m ³	-	ppm
VLE-15 min.	:	-	mg/m ³	-	ppm
GWBB-8 h	:	-	mg/m ³	1000	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
ISOBUTANE:					
TLV-TWA	:	-	mg/m ³	2500	ppm

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TLV-STEL	:	-	mg/m ³	-	ppm
TLV-Ceiling	:	-	mg/m ³	-	ppm
OES-LTEL	:	-	mg/m ³	-	ppm
OES-STEL	:	-	mg/m ³	-	ppm
MAK	:	2400	mg/m ³	1000	ppm
TRK	:	-	mg/m ³	-	ppm
MAC-TGG 8 h	:	-	mg/m ³	-	Ppm
MAC-TGG 15 min.	:	-	mg/m ³	-	ppm
MAC-Ceiling	:	-	mg/m ³	-	ppm
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

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, 6.2 and 6.3

8.3 Personal protection

8.3.1 Respiratory protection

- Wear gas mask with filter type A if conc. in air > exposure limit
- High vapour/gas concentration: self-contained respirator

8.3.2 Hand protection

- Gloves

8.3.3 Eye protection

- Protective goggles

8.3.4 Skin protection

- Protective clothing
- Head/neck protection

9. Physical and Chemical Properties

9.1 Identification of the substance: General information

Appearance (at 20°C)	:	Aerosol
Odour	:	Characteristics
Colour	:	Variable in Color

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9.2 Use of the substance or the preparation:

pH value	:	N.D.	
Boiling point/boiling range	:	N.D.	°C
Flashpoint	:	Contains extremely flammable components	
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)	:	1.0 – 1.3	
Water solubility	:	Insoluble	
Soluble in	:	No data available	
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 Company/Undertaking Identification:

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

- Unstable on exposure to heat

10.2 Materials to avoid

- Keep away from heat sources, ignition sources, acids and bases

10.3 Company/undertaking identification: Hazardous decomposition products

- On heating: release of toxic/combustible gases/vapours: hydrogen cyanide
- On burning: release of toxic and corrosive gases/vapours: phosphorus oxides, nitrous vapours, hydrogen chloride, carbon monoxide and carbon dioxide
- May polymerize on exposure to temperature rise
- May polymerize with many compounds e.g.: (strong) bases and amines
- Reacts violently with (some) acids/bases

11. Toxicological Information

11.1 Acute toxicity

POLYMETHYLENE POLYPHENYL ISOCYANATE:

LD50 oral rat	:	>10000	mg/kg
LD50 dermal rabbit	:	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

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PROPANE:

LD50 oral rat	:	N.D.	mg/kg
LD50 dermal rabbit	:	N.D.	mg/kg
LD50 dermal rabbit	:	N.D.	mg/kg
LC50 inhalation rat	:	513	mg/l/4 h
LC50 inhalation rat	:	280000	ppm/4 h

ISOBUTANE:

LD50 oral rat	:	N.D.	mg/kg
LD50 dermal rabbit	:	N.D.	mg/kg
LD50 dermal rabbit	:	N.D.	mg/kg
LC50 inhalation rat	:	658	mg/l/4 h
LC50 inhalation rat	:	N.D.	ppm/4 h

11.2 Chronic toxicity
POLYMETHYLENE POLYPHENYL 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)	:	Category 3B
Mutagenicity (MAK)	:	not listed
Teratogenicity (MAK)	:	Group -

IARC classification	:	3
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DIMETHYL ETHER:

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 D

IARC classification	:	not listed
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11.3 Routes of exposure

- Ingestion
- Inhalation
- eye and skin

11.4 Acute effect/symptoms (upon overexposure)

After Inhalation

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

Following symptoms may appear later

- Possible inflammation of the respiratory tract
- Risk of lung oedema
- Respiratory difficulties

After skin contact

- Tingling/irritation of the skin

After eye contact

- Irritation of the eye tissue
- Lacrimation

11.5 Chronic effects

- May cause sensitization by skin contact
- May cause sensitization by inhalation
- Contains substance with uncertain carcinogenic properties
- Not listed in mutagenicity class (EC, MAK)
- Not classified as toxic to reproduction (EC)

ON CONTINUOUS/REPEATED EXPOSURE/CONTACT:

- Body temperature rise
- Tremor
- Feeling of weakness
- Headache
- Skin rash/inflammation
- May stain the skin
- Dry skin
- Risk of pneumonia

12. Ecological Information

12.1 Ecotoxicity

- No data available

12.2 Mobility

- **Volatile organic compounds (VOC):** 20%
- Insoluble in water

For other physicochemical properties see section 9

12.3 Result of PBT assessment:

- No data available

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12.4 Persistence and degradability

Biodegradation BOD5	:	N.D.	% ThOD
Water	:	No data available	
Soil	:	T ½:	N.D. days

12.5 Bioaccumulative potential:

log Pow	:	N.D.
BCF	:	N.D.

12.6 Other adverse effects

WGK	:	(classification in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999)
Effect on the ozone layer	:	no data available
Greenhouse effect	:	no data available

13. Waste 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)
- Hazardous waste (91/689/EEC)

13.2 Disposal methods

- Specific treatment

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	:	1950
CLASS	:	2.1
SUB RISKS	:	-
PACKING	:	UN 1950, Aerosols

14.2 ADR (transport by road)

CLASS	:	2
PACKING	:	5F
DANGER LABEL TANKS	:	-
DANGER LABEL PACKAGES	:	2.1
PROPER SHIPPING NAME	:	Aerosol

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14.3 RID (transport by rail)

CLASS	:	2
PACKING	:	5F
DANGER LABEL TANKS	:	-
DANGER LABEL PACKAGES	:	2.1
PROPER SHIPPING NAME	:	Aerosol

14.4 ADNR (transport by inland waterways)

CLASS	:	2
PACKING	:	5F
DANGER LABEL TANKS	:	-
DANGER LABEL PACKAGES	:	2.1

14.5 IMDG (maritime transport)

CLASS	:	2.1
SUB RISKS	:	-
PACKING	:	-
MFAG	:	-
EMS	:	F-D, S-U
MARINE POLLUTANT	:	-

14.6 ICAO (air transport)

CLASS	:	2.1
SUB RISKS	:	-
PACKING	:	-
PACKING INSTRUCTIONS PASSENGER AIRCRAFT	:	203/Y203
PACKING INSTRUCTIONS CARGO AIRCRAFT	:	203

14.7 Special precautions

: 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 1950'

or, in the case of different good with different identification numbers within a single package:

- the letter 'LQ'

15. Regulatory Information

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



Extremely flammable



Harmful

Contains	:	polymethylene polyphenyl isocyanates
R20	:	Harmful by inhalation
R36/37/38	:	Irritating to eyes, respiratory system and skin
R42/43	:	May cause sensitization by inhalation and skin contact
S23	:	Do not breathe spray

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- | | | |
|-----------|---|--|
| S36/37/39 | : | Wear suitable protective clothing gloves, and eye/face Protection |
| S38 | : | In case of insufficient ventilation, wear respiratory Equipment |
| S45 | : | In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible) |
| | : | Keep away from sources of ignition - No smoking. Keep out of the reach of children. |
| | : | Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C. |
| | : | Do not pierce or burn, even after use. |
| | : | Do not spray on a naked flame or any incandescent material. |
| | : | Contains isocyanates. See information supplied by the manufacturer. |

16. Identification of the Substance/Preparation and of the Company

The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as 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) |

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

- | | | |
|-----------|---|--|
| R12 | : | Extremely flammable |
| R20 | : | Harmful by inhalation |
| R36/37/38 | : | Irritating to eyes, respiratory system and skin |
| R42/43 | : | May cause sensitization by inhalation and skin contact |

Exposure limits:

- | | | |
|----------|---|--|
| TLV | : | Threshold Limit Value - ACGIH US 2000 |
| WEL | : | Workplace Exposure Limits - United Kingdom |
| TRGS 900 | : | Technische Regel für Gefahrstoffe 900 (Arbeitsplatzgrenzwerte) - Germany |
| MAK | : | Maximale Arbeitsplatzkonzentrationen - 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) | (oil mist) | | | | |
| P | : | poussière (dust) | part | : | particles | | | | | |

Chronic toxicity:

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