

# SAFETY DATA SHEET

Op basis van richtlijn 91/155/EEG van der  
Commission of the European Communities

## CLICK & FIX FOAM

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

#### 1.1 Identification of the substance or preparation:

CAS no. : N.A.  
EC index no. : N.A.  
EINECS no. : N.A.  
RETCS no. : N.A.  
NFPA code : N.D.  
Molecular weight : N.A.  
Formula : N.A.

#### 1.2 Company/undertaking identification:

SOUDAL N.V.  
Everdongenlaan 18-20  
B-2300 Turnhout  
Tel. : (+32) (0)14-42 42 31 - Fax. : (+32) (0)14-44 39 71

#### 1.3 Telephone number for emergency:

(+32) (0)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.    | Conc. in % | Hazard-symbol | Risks (R-phrases) |
|--|------------|------------|---------------|-------------------|
| polymethylenepolyphenylisocyanate  | 9016-87-9  | > 25       | Xn            | 20-36/37/38-42/43 |
| dimethyl ether   | 115-10-6   | < 10       | F+            | 12                |
| propane  | 74-98-6    | < 5        | F+            | 12                |
| isobutane  | 75-28-5    | < 10       | F+            | 12                |
| tris(2-chloro-1-methylethyl)phosphate  | 13674-84-5 | < 25       | -             | 52/53             |
| alpha,alpha',alpha''-1,2,3-propanetriyl-tris-(omega-hydroxy-)-poly[oxy(methyl-1,2-ethanediyl)] | 25791-96-2 | < 25       | Xn            | 22                |

### 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:

- 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

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## 5. Fire-fighting measures

### 5.1 Suitable extinguishing media:

- Quantities of water
- Polyvalent foam
- Dry chemical powder
- Carbon dioxide

### 5.2 Unsuitable extinguishing media:

- None

### 5.3 Special exposure hazards:

- On burning: release of toxic and corrosive gases/vapours: phosphorus oxides, nitrous 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:

- 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: see 8.3

### 6.2 Environmental precautions:

- Use appropriate containment to avoid environmental contamination

### 6.3 Clean-up:

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

## 7. Handling and storage

### 7.1 Handling:

- Observe very strict hygiene - avoid contact
- In case of insufficient ventilation: keep naked flames/sparks away

### 7.2 Storage:

- Store in a cool area
- Store in a dry area
- Keep out of direct sunlight
- Keep away from: heat sources, ignition sources, acids, bases

Storage temperature: < 50 °C

### 7.3 Materials for packaging:

- suitable : aerosol dispenser

## 8. Exposure controls/Personal protection

- 8.1 Recommended engineering controls:  
 - Use only in well ventilated area

8.2 Exposure limits:

POLYMETHYLENEPOLYPHENYLISOCYANATE :

|                 |               |                   |   |     |
|-----------------|---------------|-------------------|---|-----|
| TLV-TWA         | : -           | mg/m <sup>3</sup> | - | ppm |
| TLV-STEL        | : -           | mg/m <sup>3</sup> | - | ppm |
| TLV-Ceiling     | : -           | mg/m <sup>3</sup> | - | ppm |
| OES-LTEL        | : 0.02 (-NCO) | mg/m <sup>3</sup> | - | ppm |
| OES-STEL        | : 0.07 (-NCO) | mg/m <sup>3</sup> | - | ppm |
| MEL-LTEL        | : -           | mg/m <sup>3</sup> | - | ppm |
| MEL-STEL        | : -           | mg/m <sup>3</sup> | - | ppm |
| MAK             | : -           | mg/m <sup>3</sup> | - | ppm |
| TRK             | : -           | mg/m <sup>3</sup> | - | ppm |
| MAC-TGG 8 h     | : -           | mg/m <sup>3</sup> |   |     |
| MAC-TGG 15 min. | : -           | mg/m <sup>3</sup> |   |     |
| MAC-Ceiling     | : -           | mg/m <sup>3</sup> |   |     |
| VME-8 h         | : -           | mg/m <sup>3</sup> | - | ppm |
| VLE-15 min.     | : -           | mg/m <sup>3</sup> | - | ppm |
| GWBB-8 h        | : -           | mg/m <sup>3</sup> | - | ppm |
| GWK-15 min.     | : -           | mg/m <sup>3</sup> | - | ppm |
| Momentary value | : -           | mg/m <sup>3</sup> | - | ppm |

PROPANE :

|                 |        |                   |      |     |
|-----------------|--------|-------------------|------|-----|
| TLV-TWA         | : -    | mg/m <sup>3</sup> | 2500 | ppm |
| TLV-STEL        | : -    | mg/m <sup>3</sup> | -    | ppm |
| TLV-Ceiling     | : -    | mg/m <sup>3</sup> | -    | ppm |
| OES-LTEL        | : -    | mg/m <sup>3</sup> | -    | ppm |
| OES-STEL        | : -    | mg/m <sup>3</sup> | -    | ppm |
| MEL-LTEL        | : -    | mg/m <sup>3</sup> | -    | ppm |
| MEL-STEL        | : -    | mg/m <sup>3</sup> | -    | ppm |
| MAK             | : 1800 | mg/m <sup>3</sup> | 1000 | ppm |
| TRK             | : -    | mg/m <sup>3</sup> | -    | ppm |
| MAC-TGG 8 h     | : -    | mg/m <sup>3</sup> |      |     |
| MAC-TGG 15 min. | : -    | mg/m <sup>3</sup> |      |     |
| MAC-Ceiling     | : -    | mg/m <sup>3</sup> |      |     |
| VME-8 h         | : -    | mg/m <sup>3</sup> | -    | ppm |
| VLE-15 min.     | : -    | mg/m <sup>3</sup> | -    | ppm |
| GWBB-8 h        | : -    | mg/m <sup>3</sup> | -    | ppm |
| GWK-15 min.     | : -    | mg/m <sup>3</sup> | -    | ppm |
| Momentary value | : -    | mg/m <sup>3</sup> | -    | ppm |

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DIMETHYL ETHER:

|                 |        |                   |      |     |
|-----------------|--------|-------------------|------|-----|
| TLV-TWA         | : -    | mg/m <sup>3</sup> | -    | ppm |
| TLV-STEL        | : -    | mg/m <sup>3</sup> | -    | ppm |
| TLV-Ceiling     | : -    | mg/m <sup>3</sup> | -    | ppm |
| OES-LTEL        | : 766  | mg/m <sup>3</sup> | 400  | ppm |
| OES-STEL        | : 958  | mg/m <sup>3</sup> | 500  | ppm |
| MEL-LTEL        | : -    | mg/m <sup>3</sup> | -    | ppm |
| MEL-STEL        | : -    | mg/m <sup>3</sup> | -    | ppm |
| MAK             | : 1900 | mg/m <sup>3</sup> | 1000 | ppm |
| TRK             | : -    | mg/m <sup>3</sup> | -    | ppm |
| MAC-TGG 8 h     | : 950  | mg/m <sup>3</sup> |      |     |
| MAC-TGG 15 min. | : 1500 | mg/m <sup>3</sup> |      |     |
| MAC-Ceiling     | : -    | mg/m <sup>3</sup> |      |     |
| VME-8 h         | : -    | mg/m <sup>3</sup> | -    | ppm |
| VLE-15 min.     | : -    | mg/m <sup>3</sup> | -    | ppm |
| GWBB-8 h        | : -    | mg/m <sup>3</sup> | -    | ppm |
| GWK-15 min.     | : -    | mg/m <sup>3</sup> | -    | ppm |
| Momentary value | : -    | mg/m <sup>3</sup> | -    | ppm |

ISO-BUTANE:

|                 |        |                   |      |     |
|-----------------|--------|-------------------|------|-----|
| TLV-TWA         | : -    | mg/m <sup>3</sup> | -    | ppm |
| TLV-STEL        | : -    | mg/m <sup>3</sup> | -    | ppm |
| TLV-Ceiling     | : -    | mg/m <sup>3</sup> | -    | ppm |
| OES-LTEL        | : -    | mg/m <sup>3</sup> | -    | ppm |
| OES-STEL        | : -    | mg/m <sup>3</sup> | -    | ppm |
| MEL-LTEL        | : -    | mg/m <sup>3</sup> | -    | ppm |
| MEL-STEL        | : -    | mg/m <sup>3</sup> | -    | ppm |
| MAK             | : 2400 | mg/m <sup>3</sup> | 1000 | ppm |
| TRK             | : -    | mg/m <sup>3</sup> | -    | ppm |
| MAC-TGG 8 h     | : -    | mg/m <sup>3</sup> |      |     |
| MAC-TGG 15 min. | : -    | mg/m <sup>3</sup> |      |     |
| MAC-Ceiling     | : -    | mg/m <sup>3</sup> |      |     |
| VME-8 h         | : -    | mg/m <sup>3</sup> | -    | ppm |
| VLE-15 min.     | : -    | mg/m <sup>3</sup> | -    | ppm |
| GWBB-8 h        | : -    | mg/m <sup>3</sup> | -    | ppm |
| GWK-15 min.     | : -    | mg/m <sup>3</sup> | -    | ppm |
| Momentary value | : -    | mg/m <sup>3</sup> | -    | ppm |

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### 8.3 Personal protection:

**eye protection:**

- Safety glasses

**hand protection:**

- Chemically resistant gloves

**skin protection:**

- Suitable protective clothing

**respiratory protection:**

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

## 9. Physical and chemical properties

|                                 |   |                                       |                  |
|---------------------------------|---|---------------------------------------|------------------|
| 9.1 Appearance (at 20°C)        | : | Aerosol                               |                  |
| 9.2 Odour                       | : | Characteristic                        |                  |
| 9.3 Colour                      | : | Variable in colour                    |                  |
| 9.4 pH value                    | : | N.A.                                  |                  |
| 9.5 Boiling point/boiling range | : | N.A.                                  | °C               |
| 9.6 Melting point/melting range | : | N.A.                                  | °C               |
| 9.7 Flashpoint                  | : | Contains (highly) flammable component |                  |
| 9.8 Auto-ignition point         | : | N.A.                                  | °C               |
| 9.9 Explosion limits            | : | N.A.                                  | Vol%             |
| 9.10 Vapour pressure (at 20°C)  | : | N.A.                                  | hPa              |
| 9.11 Relative density (at 20°C) | : | N.A.                                  |                  |
| 9.12 Water solubility           | : | N.A.                                  |                  |
| 9.13 Soluble in                 | : | N.A.                                  |                  |
| 9.14 Relative vapour density    | : | > 1                                   |                  |
| 9.15 Saturation concentration   | : | N.A.                                  | g/m <sup>3</sup> |
| 9.16 Viscosity                  | : | N.A.                                  | Pa.s             |

## 10. Stability and reactivity

### 10.1 Stability:

- Unstable on exposure to heat

### 10.2 Reactivity/Hazardous decomposition products:

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

### 10.3 Conditions/materials to avoid:

- Heat sources, ignition sources, acids, bases

## 11. Toxicological information

### 11.1 Acute toxicity:

POLYMETHYLENEPOLYPHENYLISOCYANATE:

|                     |           |          |
|---------------------|-----------|----------|
| 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 |

TRIS (2-CHLORO-1-METHYLETHYL) PHOSPHATE:

|                     |          |          |
|---------------------|----------|----------|
| LD50 oral rat       | : 3600   | mg/kg    |
| LD50 dermal rabbit  | : > 2000 | mg/kg    |
| LD50 dermal rabbit  | : > 2000 | mg/kg    |
| LC50 inhalation rat | : > 5    | mg/l/4 h |

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 |

ISO-BUTANE:

|                     |        |          |
|---------------------|--------|----------|
| 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 |

ALPHA, ALPHA', ALPHA'' -1, 2, 3-PROPANETRIYL-TRIS-(OMEGA-HYDROXY-) POLY[ OXY (METHYL-1, 2-ETHANEDIYL) ],

|                     |             |          |
|---------------------|-------------|----------|
| LD50 oral rat       | : 1500/2000 | mg/kg    |
| LD50 dermal rabbit  | : N.D.      | mg/kg    |
| LD50 dermal rabbit  | : > 2000    | mg/kg    |
| LC50 inhalation rat | : N.D.      | mg/l/4 h |

### 11.2 Chronic toxicity:

|                       |   |
|-----------------------|---|
| EC carc. cat.         | : not listed                            |
| EC muta. cat.         | : not listed                            |
| EC repr. cat.         | : not listed                            |
| Mutagenicity (MAK)    | : not listed                            |
| Teratogenicity (MAK)  | : D (dimethyl ether)                    |
| Carcinogenicity (MAK) | : 3 (polymethylenepolyphenylisocyanate) |
| IARC classification   | : 3 (polymethylenepolyphenylisocyanate) |

**Obligatory medical control in Belgium (ARAB-RGPT Art. 124):**

|          |   |
|----------|---|
| Group: V | Number: 5.2 (polymethylenepolyphenylisocyanate) |
| Group: I | Number: 21 (iso-butane)                         |
| Group: I | Number: 23.3 (dimethyl ether)                   |

### 11.3 Routes of exposure: inhalation, eyes and skin

### 11.4 Acute effects/symptoms (upon overexposure) :

**AFTER INHALATION:**

- Harmful by inhalation
- Dry/sore throat
- Coughing, irritation of the respiratory tract, irritation of the nasal mucous membranes
- Runny nose

**FOLLOWING SYMPTOMS MAY APPEAR LATER:**

- 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

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## 11.5 Chronic effects:

- May cause sensitization by skin contact
- May cause sensitization by inhalation
- Contains substance with uncertain carcinogenic properties (polymethylenepolyphenylisocyanate)
- 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 Mobility:

- Volatile organic compounds (VOC): 22 %

### 12.2 Biodegradation:

- |         |                  |        |                               |
|---------|------------------|--------|-------------------------------|
| - Soil: | T $\frac{1}{2}$  | : N.D. | days                          |
|         | BOD <sub>5</sub> | : N.D. | g O <sub>2</sub> /g substance |
|         | COD              | : N.D. | g O <sub>2</sub> /g substance |

- Water: - No data available

### 12.3 Bioaccumulation:

- log P<sub>ow</sub> : N.D.
- BCF : N.D.

### 12.4 Aquatic toxicity:

#### TRIS(2-CHLORO-1-METHYLETHYL)PHOSPHATE:

- LC50 (96 h) : 98 mg/l (PIMEPHALES PROMELAS)
- LC50 (48 h) : 131 mg/l (DAPHNIA MAGNA)
- EC50 (96 h) : 57/97 mg/l (SELENASTRUM CAPRICORNUTUM)

### 12.5 Other information:

- WGK: - (002)
- Not dangerous for the ozone layer (1999/45/EC)
- Waste water purification: N.D.

## 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)
- Waste material code (Flanders): 015; 651
- Hazardous waste (91/689/EEC)

### 13.2 Disposal methods:

- Landfill or incinerate at an approved site in accordance with national and local regulations
- Specific treatment
- 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)

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## 14. Transport information



- 14.1 Proper shipping name: UN 1950, Aerosols
- 14.2 Transport by road/rail (ADR/RID): Class 2, 5 A  
Danger code: -  
Danger labels on tanks : -  
on packages : 2
- 14.3 Substance identification number (UN number): 1950  
Packing: -
- 14.4 Maritime transport (IMDG code): Class 2.2 p 2102 (1998 edit.)  
EMS : 2-13  
MFAG : 620 (1998 edit.)  
Marine pollutant : -
- 14.5 Inland navigation (ADNR): Class 2, 5 A
- 14.6 Air freight (ICAO) : Class 2.2  
Instruction "passenger": 203/Y203  
Instruction "cargo" : 203
- 14.7 Other information:

When substances and their packaging meet the conditions established by ADR/RID marginal 2201a, **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 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 16):



Extremely flammable



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
- S23 : Do not breathe spray  
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 (show the label where possible)  
S51 : Use only in well ventilated area.

Keep away from sources of ignition - No smoking  
Keep out of reach of children  
Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C.  
Do not pierce or burn after use.

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.

### WGK:

- 001 : Internal classification  
002 : Classification in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999  
003 : Classification based on R phrases in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999  
004 : Classification based on the components in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 17 May 1999

### Exposure limits:

- TLV** : Threshold Limit Value - ACGIH US 1999  
**OES** : Occupational Exposure Standards - United Kingdom 1999  
**MEL** : Maximum Exposure Limits - United Kingdom 1999  
**MAK** : Maximale Arbeitsplatzkonzentrationen - Germany 2000  
**TRK** : Technische Richtkonzentrationen - Germany 2000  
**MAC** : Maximale aanvaarde concentratie - the Netherlands 2000  
**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

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

|                   |          |                     |         |
|-------------------|----------|---------------------|---------|
| <b>a:</b> aerosol |          | <b>p:</b> poussière | (dust)  |
| <b>d:</b> damp    | (vapour) | <b>r:</b> rook      | (fume)  |
| <b>du:</b> dust   |          | <b>st:</b> stof     | (dust)  |
| <b>fa:</b> Faser  | (fibre)  | <b>ve:</b> vezel    | (fibre) |
| <b>fi:</b> fibre  |          | <b>va:</b> vapour   |         |
| <b>fu:</b> fume   |          |                     |         |

### Chronic toxicity:

- K** : List of the carcinogenic substances and processes - The Netherlands 2000

**MSDS established** : 25-05-2000  
**Reference number** : BIG\32972GB rev03

**Reason for revision** : See: 2;8.2;11.1;11.2  
**Revision date** : 26-09-2001  
**Revision number** : 03