# SAFETY DATA SHEET

Based upon Regulation (EC) No 1907/2006, as amended by Regulation (EU) No 2020/878

# FOAMTACK

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Product name** : FOAMTACK
**Registration number REACH** : Not applicable (mixture)
**Product type REACH** : Mixture

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**1.2.1 Relevant identified uses**

Sealing compound

**1.2.2 Uses advised against**

No uses advised against known

### 1.3. Details of the supplier of the safety data sheet

**Supplier of the safety data sheet**

TEC7*
Industrielaan 5B
B-2250 Olen
☎ +32 14 85 97 37
🖷 +32 14 85 97 38
info@tec7.be
*TEC7 is a registered trademark of Novatech International N.V.

**Manufacturer of the product**

Novatech International N.V.
Industrielaan 5B
B-2250 Olen
☎ +32 14 85 97 37
🖷 +32 14 85 97 38
info@novatech.be

### 1.4. Emergency telephone number

24h/24h (Telephone advice: English, French, German, Dutch) :
+32 14 58 45 45 (BIG)
Ireland - Beaumont Hospital, Dublin (NPIC): +353 1 809 2166 (Pucblic 8 am- 10 pm)
Ireland - Beaumont Hospital, Dublin (NPIC): +353 1 809 2566 (Professionals)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

Classified as dangerous according to the criteria of Regulation (EC) No 1272/2008

| Class | Category | Hazard statements |
|---|---|---|
| Aerosol | category 1 | H222: Extremely flammable aerosol. |
| Aerosol | category 1 | H229: Pressurised container: May burst if heated. |
| Carc. | category 2 | H351: Suspected of causing cancer. |
| Resp. Sens. | category 1 | H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin Sens. | category 1 | H317: May cause an allergic skin reaction. |
| Acute Tox. | category 4 | H332: Harmful if inhaled. |
| STOT RE | category 2 | H373: May cause damage to organs through prolonged or repeated exposure if inhaled. |
| Skin Irrit. | category 2 | H315: Causes skin irritation. |
| Eye Irrit. | category 2 | H319: Causes serious eye irritation. |
| STOT SE | category 3 | H335: May cause respiratory irritation. |

### 2.2. Label elements



Contains: polymethylene polyphenyl isocyanate, conc monomer ≥0.1%; reaction products of phosphoryl trichloride and 2-methyloxirane; 4,4'-methylenediphenyl diisocyanate.

**Signal word** Danger
**H-statements**
H222 Extremely flammable aerosol.

| | |
|---|---|
| H229 | Pressurised container: May burst if heated. |
| H351 | Suspected of causing cancer. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H317 | May cause an allergic skin reaction. |
| H332 | Harmful if inhaled. |
| H373 | May cause damage to organs through prolonged or repeated exposure if inhaled. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |

**P-statements**

| | |
|---|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P102 | Keep out of reach of children. |
| P210 | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| P211 | Do not spray on an open flame or other ignition source. |
| P251 | Do not pierce or burn, even after use. |
| P308 + P313 | IF exposed or concerned: Get medical advice/attention. |
| P405 | Store locked up. |
| P410 + P412 | Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122°F. |
| P501 | Dispose of contents/container in accordance with local/regional/national/international regulation. |

**Supplemental information**

As from 24 August 2023 adequate training is required before industrial or professional use.
- Persons already sensitised to diisocyanates may develop allergic reactions when using this product.
- Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.
- This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

### 2.3. Other hazards

Gas/vapour spreads at floor level: ignition hazard
Caution! Substance is absorbed through the skin

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Not applicable

### 3.2. Mixtures

| Name<br>REACH Registration No | CAS No<br>EC No | Conc. (C) | Classification according to CLP | Note | Remark | M-factors and ATE |
|---|---|---|---|---|---|---|
| polymethylene polyphenyl isocyanate, conc monomer ≥0.1% | 9016-87-9 | 30%<br><C<60% | Carc. 2; H351<br>Resp. Sens. 1; H334<br>Skin Sens. 1; H317<br>Acute Tox. 4; H332<br>STOT RE 2; H373<br>Skin Irrit. 2; H315<br>Eye Irrit. 2; H319<br>STOT SE 3; H335<br>Resp. Sens. 1; H334: C≥0.1%, (analogous to Annex VI)<br>Skin Irrit. 2; H315: C≥5%, (analogous to Annex VI)<br>Eye Irrit. 2; H319: C≥5%, (analogous to Annex VI)<br>STOT SE 3; H335: C≥5%, (analogous to Annex VI) | (1)(2)(10) | Constituent | |
| reaction products of phosphoryl trichloride and 2-methyloxirane<br>01-2119486772-26 | 1244733-77-4 | C<25% | Carc. 2; H351<br>Acute Tox. 4; H302<br>Aquatic Chronic 3; H412 | (1)(10) | Constituent | |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4,4'-methylenediphenyl diisocyanate<br>01-2119457014-47 | 101-68-8<br>202-966-0 | <15% | Carc. 2; H351<br>Resp. Sens. 1; H334<br>Skin Sens. 1; H317<br>Acute Tox. 4; H332<br>STOT RE 2; H373<br>Skin Irrit. 2; H315<br>Eye Irrit. 2; H319<br>STOT SE 3; H335<br>Resp. Sens. 1; H334: C≥0.1%, (CLP Annex VI (ATP 1))<br>Skin Irrit. 2; H315: C≥5%, (CLP Annex VI (ATP 1))<br>Eye Irrit. 2; H319: C≥5%, (CLP Annex VI (ATP 1))<br>STOT SE 3; H335: C≥5%, (CLP Annex VI (ATP 1)) | (1)(2)(10) | Impurity | |
| isobutane<br>01-2119485395-27 | 75-28-5<br>200-857-2 | C<15% | Flam. Gas 1A; H220<br>Press. Gas - Liquefied gas; H280 | (1)(2)(10)(21) | Propellant | |
| propane<br>01-2119486944-21 | 74-98-6<br>200-827-9 | C<15% | Flam. Gas 1A; H220<br>Press. Gas - Liquefied gas; H280 | (1)(2)(10) | Propellant | |
| butane<br>01-2119474691-32 | 106-97-8<br>203-448-7 | C<15% | Flam. Gas 1A; H220<br>Press. Gas - Liquefied gas; H280 | (1)(2)(10)(21) | Propellant | |
| dimethyl ether<br>01-2119472128-37 | 115-10-6<br>204-065-8 | C<10% | Flam. Gas 1A; H220<br>Press. Gas - Liquefied gas; H280 | (1)(2)(10) | Propellant | |

(1) For H- and EUH-statements in full: see section 16
(2) Substance with a Community workplace exposure limit
(10) Subject to restrictions of Annex XVII of Regulation (EC) No. 1907/2006
(21) 1,3-butadiene <0.1%

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

**General:**
Observe (own) safety. If possible, approach victim and check vital functions. In case of injury and/or intoxication, call the European emergency number 112. Treat symptoms starting with most life-threatening injuries and disorders. Keep victim under observation, possibility of delayed symptoms.

**After inhalation:**
Remove victim into fresh air. In case of respiratory problems, consult a doctor/medical service.

**After skin contact:**
Cured foam is hard to remove from skin. Scrape off using a pumice stone, nail file or sandpaper. Wash with water and soap. Frequent/long soakings/washings are needed to clean skin. Use vegetal oil or water to soak it off. Do not try to soak it off with solvents. If the foam is still uncured: Do not rinse with water. Wipe off with a cloth. Remove with acetone or PU cleaner. Wash with water and soap. Apply hand or skin care cream.

**After eye contact:**
Consult a doctor/medical service.

**After ingestion:**
Not applicable.

### 4.2. Most important symptoms and effects, both acute and delayed

**4.2.1 Acute symptoms**

**After inhalation:**
Irritation of the respiratory tract. Irritation of the nasal mucous membranes. Headache. Nausea. Dizziness. Vomiting.

**After skin contact:**
Tingling/irritation of the skin. ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Cracking of the skin.

**After eye contact:**
Irritation of the eye tissue. Redness of the eye tissue. Lacrimation.

**After ingestion:**
Not applicable.

**4.2.2 Delayed symptoms**
No effects known.

### 4.3. Indication of any immediate medical attention and special treatment needed

If applicable and available it will be listed below.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**5.1.1 Suitable extinguishing media:**

Small fire: Water, Quick-acting ABC powder extinguisher, Quick-acting BC powder extinguisher, Quick-acting CO2 extinguisher.

Major fire: Quantities of water.

### 5.2. Special hazards arising from the substance or mixture

On burning: release of toxic and corrosive gases/vapours (phosphorus oxides, nitrous vapours, hydrogen chloride, carbon monoxide - carbon dioxide). Pressurised container: May burst if heated.

### 5.3. Advice for firefighters

**5.3.1 Instructions:**

If exposed to fire cool the closed containers by spraying with water. Physical explosion risk: extinguish/cool from behind cover. Do not move the load if exposed to heat. After cooling: persistant risk of physical explosion. Dilute toxic gases with water spray. Take account of toxic/corrosive precipitation water.

**5.3.2 Special protective equipment for fire-fighters:**

Gloves (EN 374). Protective goggles (EN ISO 16321). Head/neck protection. Protective clothing (EN 14605 or EN 13034). Heat/fire exposure: self-contained breathing apparatus (EN 136 + EN 137).

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.

**6.1.1 Protective equipment for non-emergency personnel**

See section 8.2

**6.1.2 Protective equipment for emergency responders**

Gloves (EN 374). Protective goggles (EN ISO 16321). Head/neck protection. Protective clothing (EN 14605 or EN 13034).

Suitable protective clothing

See section 8.2

### 6.2. Environmental precautions

Contain released product. Dam up the liquid spill.

### 6.3. Methods and material for containment and cleaning up

Allow product to solidify and remove it by mechanical means. Carefully collect the spill/leftovers. Clean (treat) contaminated surfaces with acetone. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

See section 13.

## SECTION 7: Handling and storage

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 7.1. Precautions for safe handling

Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Gas/vapour heavier than air at 20°C. Observe very strict hygiene - avoid contact. Remove contaminated clothing immediately.

### 7.2. Conditions for safe storage, including any incompatibilities

**7.2.1 Safe storage requirements:**

Storage temperature: < 50 °C. Meet the legal requirements. Store in a cool area. Keep container in a well-ventilated place. Keep out of direct sunlight. Protect against frost. Fireproof storeroom. Max. storage time: 1 year(s).

**7.2.2 Keep away from:**

Heat sources, ignition sources, (strong) acids, (strong) bases, oxidizing agents, reducing agents, Rubber, (some) plastics, aluminium, (some) metals.

**7.2.3 Suitable packaging material:**

Aerosol.

**7.2.4 Non suitable packaging material:**

No data available

### 7.3. Specific end use(s)

If applicable and available, exposure scenarios are attached in annex. See information supplied by the manufacturer.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**8.1.1 Occupational exposure**

**a) Occupational exposure limit values**

If limit values are applicable and available these will be listed below.

**EU**

| | | |
|---|---|---|
| Diisocyanates (measured as NCO)<br>*shall apply from 2029-01-01* | Time-weighted average exposure limit 8 h (Binding occupational exposure limit value) | 6 µg/m³ **(1)** |
| | Short time value (Binding occupational exposure limit value) | 12 µg/m³ **(1)** |
| Diisocyanates (measured as NCO)<br>*shall apply until 2028-12-31* | Time-weighted average exposure limit 8 h (Binding occupational exposure limit value) | 10 µg/m³ **(1)** |
| | Short time value (Binding occupational exposure limit value) | 20 µg/m³ **(1)** |
| Dimethylether | Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value) | 1000 ppm |
| | Time-weighted average exposure limit 8 h (Indicative occupational exposure limit value) | 1920 mg/m³ |

(1) NCO refers to isocyanate functional groups of the diisocyanate compounds.

**Belgium**

| | | |
|---|---|---|
| 4,4'-Diisocyanate de diphénylméthane (MDI) (mesuré en NCO)<br>*shall apply from 2029-01-01* | Time-weighted average exposure limit 8 h | 0.006 mg/m³ **(1)** |
| | Short time value | 0.012 mg/m³ **(1)** |
| 4,4'-Diisocyanate de diphénylméthane (MDI) (mesuré en NCO)<br>*shall apply until 2028-12-31* | Time-weighted average exposure limit 8 h | 0.01 mg/m³ **(1)** |
| | Short time value | 0.02 mg/m³ **(1)** |
| Butane, tous isomères: iso-butane | Short time value | 980 ppm |
| | Short time value | 2370 mg/m³ |
| Butane, tous isomères: n-butane | Short time value | 980 ppm |
| | Short time value | 2370 mg/m³ |
| Hydrocarbures aliphatiques sous forme gazeuse: (Alcanes C1-C3) | Time-weighted average exposure limit 8 h | 1000 ppm |
| Oxyde de diméthyle | Time-weighted average exposure limit 8 h | 1000 ppm |
| | Time-weighted average exposure limit 8 h | 1920 mg/m³ |

(1) (13): NCO désigne les groupes fonctionnels isocyanate des composés diisocyanate.

**The Netherlands**

| | | |
|---|---|---|
| Diisocyanaten (gemeten als NCO)<br>*shall apply from 2029-01-01* | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 0.0017 ppm **(1)** |
| | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 0.006 mg/m³ **(1)** |
| | Short time value (Public occupational exposure limit value) | 0.0035 ppm **(1)** |
| | Short time value (Public occupational exposure limit value) | 0.012 mg/m³ **(1)** |
| Diisocyanaten (gemeten als NCO)<br>*shall apply until 2028-12-31* | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 0.0029 ppm **(1)** |
| | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 0.010 mg/m³ **(1)** |
| | Short time value (Public occupational exposure limit value) | 0.0058 ppm **(1)** |
| | Short time value (Public occupational exposure limit value) | 0.020 mg/m³ **(1)** |
| Dimethylether | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 495 ppm |
| | Time-weighted average exposure limit 8 h (Public occupational exposure limit value) | 950 mg/m³ |
| | Short time value (Public occupational exposure limit value) | 781 ppm |
| | Short time value (Public occupational exposure limit value) | 1500 mg/m³ |

(1) Met NCO worden de functionele isocyanaatgroepen van de diisocyanaatverbindingen bedoeld. Sensibilisatie van de huid en de luchtwegen.

**France**

| | | |
|---|---|---|
| Diisocyanates Exprimés en NCO<br>*shall apply from 2029-01-01* | Time-weighted average exposure limit 8 h (VRC: Valeur réglementaire contraignante) | 0.006 mg/m³ |
| | Short time value (VRC: Valeur réglementaire contraignante) | 0.012 mg/m³ |
| Diisocyanates Exprimés en NCO<br>*shall apply until 2028-12-31* | Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative) | 0.01 mg/m³ **(1)** |
| | Short time value (VRI: Valeur réglementaire indicative) | 0.02 mg/m³ **(1)** |
| n-Butane | Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) | 800 ppm |
| | Time-weighted average exposure limit 8 h (VL: Valeur non réglementaire indicative) | 1900 mg/m³ |
| Oxyde de diméthyle | Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative) | 1000 ppm |
| | Time-weighted average exposure limit 8 h (VRI: Valeur réglementaire indicative) | 1920 mg/m³ |

(1) NCO désigne les groupes fonctionnels isocyanate des composés diisocyanate

**Germany**

| | | |
|---|---|---|
| Butan | Time-weighted average exposure limit 8 h (TRGS 900) | 1000 ppm **(1)** |
| | Time-weighted average exposure limit 8 h (TRGS 900) | 2400 mg/m³ **(1)** |
| Diisocyanate (gemessen als „NCO“) | *Die TRGS 430 „Isocyanate“ ist zu beachten.* | |
| | *Summe aus Dampf und Aerosolen.* | |
| Diisocyanate (gemessen als „NCO“)<br>*shall apply from 2029-01-01* | Time-weighted average exposure limit 8 h (TRGS 900) | 0.006 mg/m³ |
| Diisocyanate (gemessen als „NCO“)<br>*shall apply until 2028-12-31* | Time-weighted average exposure limit 8 h (TRGS 900) | 0.010 mg/m³ **(2)** |
| Dimethylether | Time-weighted average exposure limit 8 h (TRGS 900) | 1000 ppm **(3)** |
| | Time-weighted average exposure limit 8 h (TRGS 900) | 1900 mg/m³ **(3)** |
| Isobutan | Time-weighted average exposure limit 8 h (TRGS 900) | 1000 ppm **(1)** |
| | Time-weighted average exposure limit 8 h (TRGS 900) | 2400 mg/m³ **(1)** |
| Propan | Time-weighted average exposure limit 8 h (TRGS 900) | 1000 ppm **(1)** |
| | Time-weighted average exposure limit 8 h (TRGS 900) | 1800 mg/m³ **(1)** |

(1) UF: 4 (II)
(2) UF: 2
(3) UF: 8 (II)

**Austria**

| | | |
|---|---|---|
| Butan (beide Isomeren): n-Butan (R 600) Isobutan (R 600a) | Tagesmittelwert (MAK) | 800 ppm |
| | Tagesmittelwert (MAK) | 1900 mg/m³ |
| | Kurzzeitwert 60(Mow) 3x (MAK) | 1600 ppm |
| | Kurzzeitwert 60(Mow) 3x (MAK) | 3800 mg/m³ |
| Dimethylether | Tagesmittelwert (MAK) | 1000 ppm |
| | Tagesmittelwert (MAK) | 1910 mg/m³ |
| | Kurzzeitwert 60(Mow) 3x (MAK) | 2000 ppm |
| | Kurzzeitwert 60(Mow) 3x (MAK) | 3820 mg/m³ |
| Diphenylmethan-diisocyanat (alle Isomeren): Diphenylmethan-4,4'-diisocyanat Diphenylmethan-2,2'-diisocyanat Diphenylmethan-2,4'-diisocyanat *shall apply until 2028-12-31* | Tagesmittelwert (MAK) | 0.0029 ppm |
| | Tagesmittelwert (MAK) | 0.030 mg/m³ |
| | Kurzzeitwert 5(Mow) 8x (MAK) | 0.0058 ppm |
| | Kurzzeitwert 5(Mow) 8x (MAK) | 0.06 mg/m³ |
| Diphenylmethandiisocyanat *shall apply from 2029-01-01* | Tagesmittelwert (MAK) | 0.0017 ppm |
| | Tagesmittelwert (MAK) | 0.018 mg/m³ |
| | Kurzzeitwert 5(Mow) 8x (MAK) | 0.0035 ppm |
| | Kurzzeitwert 5(Mow) 8x (MAK) | 0.036 mg/m³ |
| Propan (R 290) | Tagesmittelwert (MAK) | 1000 ppm |
| | Tagesmittelwert (MAK) | 1800 mg/m³ |
| | Kurzzeitwert 60(Mow) 3x (MAK) | 2000 ppm |
| | Kurzzeitwert 60(Mow) 3x (MAK) | 3600 mg/m³ |

**UK**

| | | |
|---|---|---|
| Butane | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 600 ppm |
| | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 1450 mg/m³ |
| | Short time value (Workplace exposure limit (EH40/2005)) | 750 ppm |
| | Short time value (Workplace exposure limit (EH40/2005)) | 1810 mg/m³ |
| Dimethyl ether | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 400 ppm |
| | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 766 mg/m³ |
| | Short time value (Workplace exposure limit (EH40/2005)) | 500 ppm |
| | Short time value (Workplace exposure limit (EH40/2005)) | 958 mg/m³ |
| Isocyanates, all (as -NCO) Except methyl isocyanate | Time-weighted average exposure limit 8 h (Workplace exposure limit (EH40/2005)) | 0.02 mg/m³ |
| | Short time value (Workplace exposure limit (EH40/2005)) | 0.07 mg/m³ |

**Ireland**

| | | |
|---|---|---|
| Aliphatic hydrocarbon gases Alkanes (C1-C3): Propane | *Asphx.* | |
| Butane, all isomers | Short time value (Advisory occupational exposure limit values) | 1000 ppm |
| Diisocyanates (measured as -NCO)<br>*shall apply from 2028-12-31* | Time-weighted average exposure limit 8 h (Binding occupational exposure limit values) | 0.006 mg/m³ |
| | Short time value (Binding occupational exposure limit values) | 0.012 mg/m³ |
| Diisocyanates (measured as -NCO)<br>*shall apply until 2028-12-31* | Time-weighted average exposure limit 8 h (Binding occupational exposure limit values) | 0.01 mg/m³ |
| | Short time value (Binding occupational exposure limit values) | 0.02 mg/m³ |
| Dimethyl ether | Time-weighted average exposure limit 8 h (Binding occupational exposure limit values) | 1000 ppm |
| | Time-weighted average exposure limit 8 h (Binding occupational exposure limit values) | 1920 mg/m³ |

**USA (TLV-ACGIH)**

| | | |
|---|---|---|
| Butane, isomers | Short time value (TLV - Adopted Value) | 1000 ppm |
| | *Explosion hazard* | |
| Dimethyl Ether | Time-weighted average exposure limit 8 h (WEEL) | 1000 ppm |
| Methylene bisphenyl isocyanate | Time-weighted average exposure limit 8 h (TLV - Adopted Value) | 0.005 ppm |
| Propane | *See Appendix F: Minimal Oxygen Content; Simple asphyxiant, Explosion hazard* | |

**b) National biological limit values**

If limit values are applicable and available these will be listed below.

**UK**

| | | | |
|---|---|---|---|
| Isocyanates (applies to HDI, IPDI, TDI and MDI) (isocyanate-derived diamine) | Urine: at the end of the period of exposure | 1 µmol/mol creatinine | |

**8.1.2 Sampling methods**

| Product name | Test | Number |
|---|---|---|
| 4,4-Methylene Bisphenyl Isocyanate (MDI) (Isocyanates) | NIOSH | 5521 |
| 4,4'-Methylenebis(phenylisocyanate) | NIOSH | 5525 |
| 4,4-Methylenediphenyl isocyanate (MDI) | NIOSH | 5522 |
| Isocyanates | NIOSH | 5521 |
| Isocyanates | NIOSH | 5522 |
| Methylene Bisphenyl Isocyanate (MDI) | OSHA | 5002 |
| Polymeric 4-4'-Methylene Diisocyanate | OSHA | 5002 |

**8.1.3 Applicable limit values when using the substance or mixture as intended**

If limit values are applicable and available these will be listed below.

**8.1.4 Threshold values**

**DNEL/DMEL - Workers**

reaction products of phosphoryl trichloride and 2-methyloxirane

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|---|---|---|---|
| DNEL | Long-term systemic effects inhalation | 8.2 mg/m³ | |
| | Acute systemic effects inhalation | 22.6 mg/m³ | |
| | Long-term systemic effects dermal | 2.91 mg/kg bw/day | |

4,4'-methylenediphenyl diisocyanate

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|---|---|---|---|
| DNEL | Long-term local effects inhalation | 0.03 mg/m³ | |
| | Acute local effects inhalation | 0.06 mg/m³ | |

**DNEL/DMEL - General population**

reaction products of phosphoryl trichloride and 2-methyloxirane

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|---|---|---|---|
| DNEL | Long-term systemic effects inhalation | 1.45 mg/m³ | |
| | Acute systemic effects inhalation | 5.6 mg/m³ | |
| | Long-term systemic effects dermal | 1.04 mg/kg bw/day | |
| | Long-term systemic effects oral | 0.52 mg/kg bw/day | |
| | Acute systemic effects oral | 2 mg/kg bw/day | |

4,4'-methylenediphenyl diisocyanate

| Effect level (DNEL/DMEL) | Type | Value | Remark |
|---|---|---|---|
| DNEL | Long-term local effects inhalation | 0.015 mg/m³ | |
| | Acute local effects inhalation | 0.03 mg/m³ | |

**PNEC**

reaction products of phosphoryl trichloride and 2-methyloxirane

| Compartments | Value | Remark |
|---|---|---|
| Fresh water | 0.32 mg/l | |
| Marine water | 0.032 mg/l | |
| Fresh water (intermittent releases) | 0.51 mg/l | |
| STP | 19.1 mg/l | |
| Fresh water sediment | 25.79 mg/kg sediment dw | |
| Marine water sediment | 2.579 mg/kg sediment dw | |
| Soil | 0.34 mg/kg soil dw | |
| Oral | 11.6 mg/kg food | |

4,4'-methylenediphenyl diisocyanate

| Compartments | Value | Remark |
|---|---|---|
| Fresh water | 3.7 µg/l | |
| Marine water | 0.37 µg/l | |
| Fresh water (intermittent releases) | 37 µg/l | |
| Fresh water sediment | 11.7 mg/kg sediment dw | |
| Marine water sediment | 1.17 mg/kg sediment dw | |
| Soil | 2.33 mg/kg soil dw | |

**8.1.5 Control banding**

If applicable and available it will be listed below.

### 8.2. Exposure controls

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

**8.2.1 Appropriate engineering controls**

Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Measure the concentration in the air regularly.

**8.2.2 Individual protection measures, such as personal protective equipment**

Observe very strict hygiene - avoid contact. Do not eat, drink or smoke during work.

a) Respiratory protection:

Full face mask with filter type A at conc. in air > exposure limit.

b) Hand protection:

Protective gloves against chemicals (EN 374).

| Materials | Measured breakthrough time | Thickness | Protection index | Remark |
|---|---|---|---|---|
| polyethylene | > 10 minutes | 0.02 mm | Class 1 | |

c) Eye protection:

Protective goggles (EN ISO 16321).

d) Skin protection:

Head/neck protection. Protective clothing (EN 14605 or EN 13034).

**8.2.3 Environmental exposure controls:**

See sections 6.2, 6.3 and 13

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical form | Foam aerosol |
| Colour | Variable in colour, depending on the composition |
| Odour | Characteristic odour |
| Odour threshold | No data available in the literature |
| Melting point | Not applicable (aerosol) |
| Boiling point | No data available in the literature |
| Flammability | Extremely flammable aerosol. |
| Explosion limits | No data available in the literature |
| Flash point | Not applicable (aerosol) |
| Auto-ignition temperature | Not applicable (aerosol) |
| Decomposition temperature | No data available in the literature |
| pH | Not applicable (non-soluble in water) |
| Kinematic viscosity | Not applicable (aerosol) |
| Dynamic viscosity | Not applicable (aerosol) |
| Solubility | Water ; insoluble |
| Log Kow | Not applicable (mixture) |
| Vapour pressure | No data available in the literature |
| Absolute density | Not applicable (aerosol) |
| Relative density | Not applicable (aerosol) |
| Relative vapour density | > 1 |
| Particle size | Not applicable (aerosol) |

### 9.2. Other information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No data available.

### 10.4. Conditions to avoid

**Precautionary measures**

Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks.

### 10.5. Incompatible materials

(strong) acids, (strong) bases, oxidizing agents, reducing agents, Rubber, (some) plastics, aluminium, (some) metals.

### 10.6. Hazardous decomposition products

On burning: release of toxic and corrosive gases/vapours (phosphorus oxides, nitrous vapours, hydrogen chloride, carbon monoxide - carbon dioxide).

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

**11.1.1 Test results**

**Acute toxicity**

FOAMTACK

No (test)data on the mixture available

Classification is based on the relevant ingredients

polymethylene polyphenyl isocyanate, conc monomer ≥0.1%

| Route of exposure | Parameter | Method | Value | Exposure time | Species | Value determination | Remark |
|---|---|---|---|---|---|---|---|
| Oral | LD50 | | > 2000 mg/kg | | | Literature study | |
| Dermal | LD50 | | > 2000 mg/kg | | | Literature study | |
| Inhalation (vapours) | LC50 | | 11 mg/l | 4 h | | Literature study | |

reaction products of phosphoryl trichloride and 2-methyloxirane

| Route of exposure | Parameter | Method | Value | Exposure time | Species | Value determination | Remark |
|---|---|---|---|---|---|---|---|
| Oral | LD50 | EU Method B.1 | 632 mg/kg bw | | Rat (female) | Experimental value | |
| Dermal | LD50 | OECD 402 | > 2000 mg/kg bw | 24 h | Rat (male / female) | Experimental value | |
| Inhalation (aerosol) | LC50 | OECD 403 | > 7 mg/l | 4 h | Rat (male / female) | Experimental value | |

4,4'-methylenediphenyl diisocyanate

| Route of exposure | Parameter | Method | Value | Exposure time | Species | Value determination | Remark |
|---|---|---|---|---|---|---|---|
| Oral | LD50 | | > 2000 mg/kg bw | | Rat (male / female) | Read-across | |
| Dermal | LD50 | Equivalent to OECD 402 | > 9400 mg/kg bw | 24 h | Rabbit (male / female) | Read-across | |
| Inhalation (dust) | LD50 | Equivalent to OECD 403 | 0.42 mg/l | 4 h | Rat (male / female) | Experimental value | |
| Inhalation (dust) | | | category 4 | | | Annex VI | |

**Conclusion**

Harmful if inhaled.

Not classified as acute toxic in contact with skin

Not classified as acute toxic if swallowed

**Corrosion/irritation**

FOAMTACK

No (test)data on the mixture available

Classification is based on the relevant ingredients

polymethylene polyphenyl isocyanate, conc monomer ≥0.1%

| Route of exposure | Result | Method | Exposure time | Time point | Species | Value determination | Remark |
|---|---|---|---|---|---|---|---|
| Eye | Irritating; category 2 | | | | | Literature study | |
| Skin | Irritating; category 2 | | | | | Literature study | |
| Inhalation | Irritating; STOT SE cat.3 | | | | | Literature study | |

reaction products of phosphoryl trichloride and 2-methyloxirane

| Route of exposure | Result | Method | Exposure time | Time point | Species | Value determination | Remark |
|---|---|---|---|---|---|---|---|
| Eye | Not irritating | OECD 405 | 24 h | 24; 48; 72 hours | Rabbit | Experimental value | Single treatment with rinsing |
| Skin | Not irritating | OECD 404 | 4 h | 24; 48; 72 hours | Rabbit | Experimental value | |

4,4'-methylenediphenyl diisocyanate

| Route of exposure | Result | Method | Exposure time | Time point | Species | Value determination | Remark |
|---|---|---|---|---|---|---|---|
| Eye | Irritating | OECD 405 | | 24; 48; 72 hours | Rabbit | Experimental value | Single treatment |
| Eye | Irritating | Human observation | | | Human | Weight of evidence | |
| Skin | Irritating | OECD 404 | 4 h | 24; 48; 72 hours | Rabbit | Experimental value | |
| Inhalation | Irritating | Human observation | | | Human | Experimental value | |

**Conclusion**

Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.

**Respiratory or skin sensitisation**

FOAMTACK

No (test)data on the mixture available

Classification is based on the relevant ingredients

polymethylene polyphenyl isocyanate, conc monomer ≥0.1%

| Route of exposure | Result | Method | Exposure time | Observation time point | Species | Value determination | Remark |
|---|---|---|---|---|---|---|---|
| Skin | Sensitizing; category 1 | | | | | Literature study | |
| Inhalation | Sensitizing; category 1 | | | | | Literature study | |

reaction products of phosphoryl trichloride and 2-methyloxirane

| Route of exposure | Result | Method | Exposure time | Observation time point | Species | Value determination | Remark |
|---|---|---|---|---|---|---|---|
| Dermal (on the ears) | Not sensitizing | OECD 429 | | | Mouse (female) | Experimental value | |

4,4'-methylenediphenyl diisocyanate

| Route of exposure | Result | Method | Exposure time | Observation time point | Species | Value determination | Remark |
|---|---|---|---|---|---|---|---|
| Skin | Sensitizing | Equivalent to OECD 406 | | | Guinea pig (male / female) | Experimental value | |
| Skin | Sensitizing | Patch test | | | Human | Experimental value | |
| Inhalation | Sensitizing | | | | Guinea pig (female) | Experimental value | |

**Conclusion**

May cause an allergic skin reaction.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Specific target organ toxicity**

FOAMTACK

No (test)data on the mixture available

Classification is based on the relevant ingredients

polymethylene polyphenyl isocyanate, conc monomer ≥0.1%

| Route of exposure | Parameter | Method | Value | Organ/Effect | Exposure time | Species | Value determination | Remark |
|---|---|---|---|---|---|---|---|---|
| Inhalation | | | STOT RE cat.2 | | | | Literature study | |

reaction products of phosphoryl trichloride and 2-methyloxirane

| Route of exposure | Parameter | Method | Value | Organ/Effect | Exposure time | Species | Value determination | Remark |
|---|---|---|---|---|---|---|---|---|
| Oral (diet) | NOAEL | Subchronic toxicity test | 171 mg/kg bw/day | No effect | 13 weeks (daily) | Rat (female) | Experimental value | |
| Oral (diet) | Dose level | Subchronic toxicity test | 52 mg/kg bw/day | Liver (enlargement /affection of the liver) | 13 weeks (daily) | Rat (male) | Experimental value | |

4,4'-methylenediphenyl diisocyanate

| Route of exposure | Parameter | Method | Value | Organ/Effect | Exposure time | Species | Value determination | Remark |
|---|---|---|---|---|---|---|---|---|
| Inhalation (aerosol) | LOAEC | EPA OPPTS 870.3200 | 0.23 mg/m³ air | Respiratory tract (impairment/ degeneration) | 104 weeks (6h / day, 5 days / week) | Rat (female) | Experimental value | |

**Conclusion**

May cause damage to organs through prolonged or repeated exposure if inhaled.
Not classified as sub-chronically toxic if swallowed
Not classified as sub-chronically toxic in contact with skin

**Mutagenicity (in vitro)**

FOAMTACK

No (test)data on the mixture available
Judgement is based on the relevant ingredients
reaction products of phosphoryl trichloride and 2-methyloxirane

| Result | Method | Test substrate | Effect | Value determination | Remark |
|---|---|---|---|---|---|
| Negative without metabolic activation, positive with metabolic activation | OECD 476 | Mouse (lymphoma L5178Y cells) | No effect | Experimental value | |
| Negative with metabolic activation, negative without metabolic activation | OECD 471 | Bacteria (S. typhimurium and E. coli) | No effect | Experimental value | |

4,4'-methylenediphenyl diisocyanate

| Result | Method | Test substrate | Effect | Value determination | Remark |
|---|---|---|---|---|---|
| Negative with metabolic activation, negative without metabolic activation | EU Method B.13/14 | Bacteria (S.typhimurium) | No effect | Experimental value | |

**Mutagenicity (in vivo)**

FOAMTACK

No (test)data on the mixture available
Judgement is based on the relevant ingredients
reaction products of phosphoryl trichloride and 2-methyloxirane

| Result | Method | Exposure time | Test substrate | Organ/Effect | Value determination | Remark |
|---|---|---|---|---|---|---|
| Negative (Oral (stomach tube)) | | | Rat (male) | No effect | Experimental value | Single treatment |

4,4'-methylenediphenyl diisocyanate

| Result | Method | Exposure time | Test substrate | Organ/Effect | Value determination | Remark |
|---|---|---|---|---|---|---|
| Negative (Inhalation (dust)) | OECD 474 | 3 weeks (1h / day, 1 day / week) | Rat (male) | No effect | Experimental value | |

**Conclusion**

Not classified for mutagenic or genotoxic toxicity

**Carcinogenicity**

FOAMTACK

No (test)data on the mixture available
Classification is based on the relevant ingredients
polymethylene polyphenyl isocyanate, conc monomer ≥0.1%

| Route of exposure | Parameter | Method | Value | Organ/Effect | Exposure time | Species | Value determination | Remark |
|---|---|---|---|---|---|---|---|---|
| Inhalation | | | category 2 | | | | Literature study | |
| Dermal | | | category 2 | | | | Literature study | |
| Oral | | | category 2 | | | | Literature study | |

reaction products of phosphoryl trichloride and 2-methyloxirane

| Route of exposure | Parameter | Method | Value | Organ/Effect | Exposure time | Species | Value determination | Remark |
|---|---|---|---|---|---|---|---|---|
| Oral (diet) | Dose level | Carcinogenic toxicity study | 626 mg/kg bw/day | Liver (carcinogenicity) | 104 weeks (daily) | Mouse (male) | Experimental value | |
| Unknown | | | category 2 | | | | Literature study | |

4,4'-methylenediphenyl diisocyanate

| Route of exposure | Parameter | Method | Value | Organ/Effect | Exposure time | Species | Value determination | Remark |
|---|---|---|---|---|---|---|---|---|
| Inhalation (aerosol) | NOAEC | Carcinogenic toxicity study | 0.7 mg/m³ air | No carcinogenic effect | 104 weeks (5 days / week) | Rat (female) | Experimental value | |
| Unknown | | | category 2 | | | | Annex VI | |

**Conclusion**

Suspected of causing cancer.

**Reproductive toxicity**

FOAMTACK

No (test)data on the mixture available

Judgement is based on the relevant ingredients

reaction products of phosphoryl trichloride and 2-methyloxirane

| Category | Parameter | Method | Value | Exposure time | Species | Effect | Value determination | Remark |
|---|---|---|---|---|---|---|---|---|
| Developmental toxicity (Oral (stomach tube)) | NOAEL | OECD 414 | 500 mg/kg bw/day | 23 days (gestation, daily) | Rabbit | No effect | Experimental value | |
| Maternal toxicity (Oral (stomach tube)) | NOAEL | OECD 414 | 500 mg/kg bw/day | 23 days (gestation, daily) | Rabbit | No effect | Experimental value | |
| Effects on fertility (Oral (diet)) | NOAEL | OECD 416 | 85 mg/kg bw/day | | Rat (male) | No effect | Experimental value | |

4,4'-methylenediphenyl diisocyanate

| Category | Parameter | Method | Value | Exposure time | Species | Effect | Value determination | Remark |
|---|---|---|---|---|---|---|---|---|
| Developmental toxicity (Inhalation (aerosol)) | NOAEC | Equivalent to OECD 414 | 3 mg/m³ air | 10 days (gestation, daily) | Rat | Foetus (no effect) | Experimental value | |
| Effects on fertility (Inhalation (vapours)) | NOAEC | Equivalent to OECD 416 | 0.3 ppm | | Rat (male / female) | No effect | Experimental value | |

**Conclusion**

Not classified for reprotoxic or developmental toxicity

**Aspiration hazard**

FOAMTACK

Judgement is based on the relevant ingredients

Not classified for aspiration toxicity

**Toxicity other effects**

FOAMTACK

No (test)data on the mixture available

**Chronic effects from short and long-term exposure**

FOAMTACK

Skin rash/inflammation. Respiratory difficulties.

### 11.2. Information on other hazards

No evidence of endocrine disrupting properties

## SECTION 12: Ecological information

### 12.1. Toxicity

FOAMTACK

No (test)data on the mixture available

Judgement of the mixture is based on the relevant ingredients

reaction products of phosphoryl trichloride and 2-methyloxirane

| | Parameter | Method | Value | Duration | Species | Test design | Fresh/salt water | Value determination |
|---|---|---|---|---|---|---|---|---|
| Acute toxicity fishes | LC50 | | 51 mg/l | 96 h | Pimephales promelas | Static system | Fresh water | Experimental value; Measured concentration |
| Acute toxicity crustacea | EC50 | | 131 mg/l | 48 h | Daphnia magna | Static system | Fresh water | Experimental value; Measured concentration |
| Toxicity algae and other aquatic plants | ErC50 | OECD 201 | 82 mg/l | 72 h | Pseudokirchneriella subcapitata | Static system | Fresh water | Experimental value; Nominal concentration |
| | NOEC | OECD 201 | 13 mg/l | 72 h | Pseudokirchneriella subcapitata | Static system | Fresh water | Experimental value; Growth rate |
| Long-term toxicity aquatic crustacea | NOEC | OECD 202 | 32 mg/l | 21 day(s) | Daphnia magna | Semi-static system | Fresh water | Experimental value; Nominal concentration |
| Toxicity aquatic micro-organisms | EC50 | ISO 8192 | 784 mg/l | 3 h | Activated sludge | Static system | Fresh water | Experimental value; GLP |

4,4'-methylenediphenyl diisocyanate

| | Parameter | Method | Value | Duration | Species | Test design | Fresh/salt water | Value determination |
|---|---|---|---|---|---|---|---|---|
| Acute toxicity fishes | LL50 | OECD 203 | > 100 mg/l | 96 h | Danio rerio | Semi-static system | Fresh water | Experimental value; Nominal concentration |
| Acute toxicity crustacea | EL50 | EU Method C.2 | 9 mg/l | 48 h | Daphnia magna | Semi-static system | Fresh water | Experimental value; Locomotor effect |
| Toxicity algae and other aquatic plants | EL50 | OECD 201 | > 100 mg/l | 72 h | Desmodesmus subspicatus | Static system | Fresh water | Experimental value; Growth rate |
| | NOELR | OECD 201 | ≥ 100 mg/l | 72 h | Desmodesmus subspicatus | Static system | Fresh water | Experimental value; Growth rate |
| Long-term toxicity aquatic crustacea | NOEC | | ≥ 10 mg/l | 21 day(s) | Daphnia sp. | | | Read-across; Reproduction |
| Toxicity aquatic micro-organisms | NOEC | OECD 209 | 250 mg/l | 180 minutes | Activated sludge | Static system | Fresh water | Experimental value; Nominal concentration |

**Conclusion**

Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008

## 12.2. Persistence and degradability

reaction products of phosphoryl trichloride and 2-methyloxirane

**Biodegradation water**

| Method | Value | Duration | Value determination |
|---|---|---|---|
| EU Method C.4-D | 14 %; GLP | 28 day(s) | Experimental value |

4,4'-methylenediphenyl diisocyanate

**Biodegradation water**

| Method | Value | Duration | Value determination |
|---|---|---|---|
| OECD 301F | 0 %; Oxygen consumption | 28 day(s) | Experimental value |

**Half-life water (t1/2 water)**

| Method | Value | Primary degradation/mineralisation | Value determination |
|---|---|---|---|
| OECD 111 | 5 minutes - 8 minutes; GLP | Primary degradation | Experimental value |

**Conclusion**

**Water**

Contains non readily biodegradable component(s)

## 12.3. Bioaccumulative potential

FOAMTACK

**Log Kow**

| Method | Remark | Value | Temperature | Value determination |
|---|---|---|---|---|
| | Not applicable (mixture) | | | |

polymethylene polyphenyl isocyanate, conc monomer ≥0.1%

**BCF other aquatic organisms**

| Parameter | Method | Value | Duration | Species | Value determination |
|---|---|---|---|---|---|
| BCF | BCFBAF v3.01 | 268.1 l/kg; Fresh weight | | | Estimated value |

**Log Kow**

| Method | Remark | Value | Temperature | Value determination |
|---|---|---|---|---|
| KOWWIN | | 10 | | Estimated value |

reaction products of phosphoryl trichloride and 2-methyloxirane

**BCF fishes**

| Parameter | Method | Value | Duration | Species | Value determination |
|---|---|---|---|---|---|
| BCF | OECD 305 | 0.8 - 14; Fresh | 6 week(s) | Cyprinus carpio | Experimental value |

**Log Kow**

| Method | Remark | Value | Temperature | Value determination |
|---|---|---|---|---|
| EU Method A.8 | | 2.7 | 30 °C | Experimental value |

4,4'-methylenediphenyl diisocyanate

**BCF fishes**

| Parameter | Method | Value | Duration | Species | Value determination |
|---|---|---|---|---|---|
| BCF | OECD 305 | 92 - 200; GLP | 28 day(s) | Cyprinus carpio | Experimental value |

**Log Kow**

| Method | Remark | Value | Temperature | Value determination |
|---|---|---|---|---|
| OECD 117 | | 4.5 | 22 °C | Experimental value |

**Conclusion**

Does not contain bioaccumulative component(s)

## 12.4. Mobility in soil

polymethylene polyphenyl isocyanate, conc monomer ≥0.1%

**(log) Koc**

| Parameter | Method | Value | Value determination |
|---|---|---|---|
| log Koc | SRC PCKOCWIN v2.0 | 9.1 - 11 | Calculated value |

reaction products of phosphoryl trichloride and 2-methyloxirane

**(log) Koc**

| Parameter | Method | Value | Value determination |
|---|---|---|---|
| log Koc | SRC PCKOCWIN v2.0 | 3.2 | QSAR |

4,4'-methylenediphenyl diisocyanate

**(log) Koc**

| Parameter | Method | Value | Value determination |
|---|---|---|---|
| log Koc | SRC PCKOCWIN v2.0 | 4.5 - 5.5 | Calculated value |

**Percent distribution**

| Method | Fraction air | Fraction biota | Fraction sediment | Fraction soil | Fraction water | Value determination |
|---|---|---|---|---|---|---|
| Fugacity Model Level III | 0.31 % | | 56 % | 39 % | 4.7 % | Calculated value |

**Conclusion**

Contains component(s) that adsorb(s) into the soil

## 12.5. Results of PBT and vPvB assessment

Does not contain component(s) that meet(s) the criteria of PBT and/or vPvB as listed in Annex XIII of Regulation (EC) No 1907/2006.

## 12.6. Endocrine disrupting properties

No evidence of endocrine disrupting properties

## 12.7. Other adverse effects

**PMT conclusion**

Does not contain component(s) that meet(s) the criteria of PMT and/or vPvM as listed in Annex I of Regulation (EC) No 1272/2008

FOAMTACK

**Greenhouse gases**

Contains component(s) included in the list of substances which may contribute to the greenhouse effect (IPCC)

None of the known components is included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573)

**Ozone-depleting potential (ODP)**

Not classified as dangerous for the ozone layer (Regulation (EC) No 2024/590)

**Groundwater**

Groundwater pollutant

polymethylene polyphenyl isocyanate, conc monomer ≥0.1%

**Greenhouse gases**

Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573)

**Ozone-depleting potential (ODP)**

Not classified as dangerous for the ozone layer (Regulation (EC) No 2024/590)

reaction products of phosphoryl trichloride and 2-methyloxirane

**Greenhouse gases**

Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573)

**Ozone-depleting potential (ODP)**

Not classified as dangerous for the ozone layer (Regulation (EC) No 2024/590)

4,4'-methylenediphenyl diisocyanate

**Greenhouse gases**

Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573)

**Ozone-depleting potential (ODP)**

Not classified as dangerous for the ozone layer (Regulation (EC) No 2024/590)

## SECTION 13: Disposal considerations

The information in this section is a general description. If applicable and available, exposure scenarios are attached in annex. Always use the relevant exposure scenarios that correspond to your identified use.

### 13.1. Waste treatment methods

**13.1.1 Provisions relating to waste**

**European Union**

Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.
Waste material code (Directive 2008/98/EC, Decision 2000/0532/EC).
16 05 04* (gases in pressure containers and discarded chemicals: gases in pressure containers (including halons) containing hazardous substances). Depending on branch of industry and production process, also other waste codes may be applicable.

**13.1.2 Disposal methods**

Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Specific treatment. Do not discharge into drains or the environment. Dispose of at authorized waste collection point.

**13.1.3 Packaging/Container**

**European Union**

Waste material code packaging (Directive 2008/98/EC).
15 01 10* (packaging containing residues of or contaminated by dangerous substances).

## SECTION 14: Transport information

### Road (ADR)

14.1. UN number or ID number

| | |
|---|---|
| UN number | 1950 |

14.2. UN proper shipping name

| | |
|---|---|
| Proper shipping name | aerosols |

14.3. Transport hazard class(es)

| | |
|---|---|
| Hazard identification number | |
| Class | 2 |
| Classification code | 5F |

14.4. Packing group

| | |
|---|---|
| Packing group | |
| Labels | 2.1 |

14.5. Environmental hazards

| | |
|---|---|
| Environmentally hazardous substance mark | no |

14.6. Special precautions for user

| | |
|---|---|
| Special provisions | 190 |
| Special provisions | 327 |
| Special provisions | 344 |
| Special provisions | 625 |
| Limited quantities | Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg (gross mass). |

### Rail (RID)

14.1. UN number or ID number

| | |
|---|---|
| UN number | 1950 |

14.2. UN proper shipping name

| | |
|---|---|
| Proper shipping name | aerosols |

14.3. Transport hazard class(es)

| | |
|---|---|
| Hazard identification number | 23 |
| Class | 2 |
| Classification code | 5F |

14.4. Packing group

| | |
|---|---|
| Packing group | |
| Labels | 2.1 |

14.5. Environmental hazards

| | |
|---|---|
| Environmentally hazardous substance mark | no |

14.6. Special precautions for user

| | |
|---|---|
| Special provisions | 190 |
| Special provisions | 327 |
| Special provisions | 344 |
| Special provisions | 625 |
| Limited quantities | Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg (gross mass). |

### Inland waterways (ADN)

14.1. UN number or ID number

| | |
|---|---|
| UN number/ID number | 1950 |

14.2. UN proper shipping name

| | |
|---|---|
| Proper shipping name | aerosols |

14.3. Transport hazard class(es)

| | |
|---|---|
| Class | 2 |
| Classification code | 5F |

14.4. Packing group

| | |
|---|---|
| Packing group | |
| Labels | 2.1 |

14.5. Environmental hazards

| | |
|---|---|
| Environmentally hazardous substance mark | no |

14.6. Special precautions for user

| | |
|---|---|
| Special provisions | 190 |
| Special provisions | 327 |
| Special provisions | 344 |
| Special provisions | 625 |
| Limited quantities | Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg (gross mass). |

### Sea (IMDG/IMSBC)

14.1. UN number or ID number

| | |
|---|---|
| UN number | 1950 |

14.2. UN proper shipping name

| | |
|---|---|
| Proper shipping name | aerosols |

14.3. Transport hazard class(es)

| | |
|---|---|
| Class | 2.1 |

14.4. Packing group

| | |
|---|---|
| Packing group | |
| Labels | 2.1 |

14.5. Environmental hazards

| | |
|---|---|
| Marine pollutant | - |
| Environmentally hazardous substance mark | no |

14.6. Special precautions for user

| | |
|---|---|
| Special provisions | 190 |
| Special provisions | 277 |
| Special provisions | 327 |
| Special provisions | 344 |
| Special provisions | 381 |
| Special provisions | 63 |
| Special provisions | 959 |
| Limited quantities | Combination packagings: not more than 1 liter per inner packaging for liquids. A package shall not weigh more than 30 kg (gross mass). |

14.7. Maritime transport in bulk according to IMO instruments

| | |
|---|---|
| Annex II of MARPOL 73/78 | Not applicable |

### Air (ICAO-TI/IATA-DGR)

14.1. UN number or ID number

| | |
|---|---|
| UN number/ID number | 1950 |

14.2. UN proper shipping name

| | |
|---|---|
| Proper shipping name | aerosols, flammable |

14.3. Transport hazard class(es)

| | |
|---|---|
| Class | 2.1 |

14.4. Packing group

| | |
|---|---|
| Packing group | |
| Labels | 2.1 |

14.5. Environmental hazards

| | |
|---|---|
| Environmentally hazardous substance mark | no |

14.6. Special precautions for user

| | |
|---|---|
| Special provisions | A145 |
| Special provisions | A167 |
| Special provisions | A802 |

Passenger and cargo transport

| | |
|---|---|
| Limited quantities: maximum net quantity per packaging | 30 kg G |

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

**European legislation:**

VOC content Directive 2010/75/EU

| VOC content | Remark |
|---|---|
| < 55 % | |

polymethylene polyphenyl isocyanate, conc monomer ≥0.1%

| Product name | Respiratory sensitation |
|---|---|
| Diisocyanates (measured as NCO) | The substance can cause sensitisation of the respiratory tract |

| Product name | Skin sensitation |
|---|---|
| Diisocyanates (measured as NCO) | The substance can cause sensitisation of the skin |

4,4'-methylenediphenyl diisocyanate

| Product name | Respiratory sensitation |
|---|---|
| Diisocyanates (measured as NCO) | The substance can cause sensitisation of the respiratory tract |

| Product name | Skin sensitation |
|---|---|
| Diisocyanates (measured as NCO) | The substance can cause sensitisation of the skin |

Directive 2012/18/EU (Seveso III)

Threshold values under normal circumstances

| Substance or category | Low tier (tonnes) | Top tier (tonnes) | Group | For this substance or mixture the summation rule has to be applied for: |
|---|---|---|---|---|
| P3b FLAMMABLE AEROSOLS | 5000 (net) | 50000 (net) | None | Flammability |

REACH Candidate list

Does not contain component(s) included in candidate list of substances of very high concern (SVHC) for authorisation (Article 59 of Regulation (EC) No 1907/2006)

REACH Annex XIV - Authorisation

Does not contain component(s) included in Annex XIV of Regulation (EC) No 1907/2006: list of substances subject to authorisation

REACH Annex XVII - Restriction

Contains component(s) subject to restrictions of Annex XVII of Regulation (EC) No 1907/2006: restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles.

| | Designation of the substance, of the group of substances or of the mixture | Conditions of restriction |
|---|---|---|
| · polymethylene polyphenyl isocyanate, conc monomer ≥0.1%<br>· reaction products of phosphoryl trichloride and 2-methyloxirane | Liquid substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008:<br>(a) hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F;<br>(b) hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10;<br>(c) hazard class 4.1;<br>(d) hazard class 5.1. | 1. Shall not be used in:<br>— ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,<br>— tricks and jokes,<br>— games for one or more participants, or any article intended to be used as such, even with ornamental aspects,<br>2. Articles not complying with paragraph 1 shall not be placed on the market.<br>3. Shall not be placed on the market if they contain a colouring agent, unless required for fiscal reasons, or perfume, or both, if they:<br>— can be used as fuel in decorative oil lamps for supply to the general public, and,<br>— present an aspiration hazard and are labelled with H304,<br>4. Decorative oil lamps for supply to the general public shall not be placed on the market unless they conform to the European Standard on Decorative oil lamps (EN 14059) adopted by the European Committee for Standardisation (CEN).<br>5. Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of dangerous substances and mixtures, suppliers shall ensure, before the placing on the market, that the following requirements are met:<br>a) lamp oils, labelled with H304, intended for supply to the general public are visibly, legibly and indelibly marked as follows: “Keep lamps filled with this liquid out of the reach of children”; and, by 1 December 2010, “Just a sip of lamp oil — or even sucking the wick of lamps — may lead to life- threatening lung damage”;<br>b) grill lighter fluids, labelled with H304, intended for supply to the general public are legibly and indelibly marked by 1 December 2010 as follows: “Just a sip of grill lighter may lead to life threatening lung damage”;<br>c) lamp oils and grill lighters, labelled with H304, intended for supply to the general public are packaged in black opaque containers not exceeding 1 litre by 1 December 2010. |
| · 4,4'-methylenediphenyl diisocyanate | Methylenediphenyl diisocyanate (MDI) including the following specific isomers: 4,4’-Methylenediphenyl diisocyanate; 2,4’-Methylenediphenyl diisocyanate; 2,2’- | 1. Shall not be placed on the market after 27 December 2010, as a constituent of mixtures in concentrations equal to or greater than 0,1 % by weight of MDI for supply to the general public, unless suppliers shall ensure before the placing on the market that the packaging: |

| | | |
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| | Methylenediphenyl diisocyanate | (a) contains protective gloves which comply with the requirements of Council Directive 89/686/EEC;<br>(b) is marked visibly, legibly and indelibly as follows, and without prejudice to other Community legislation concerning the classification, packaging and labelling of substances and mixtures:<br>"— Persons already sensitised to diisocyanates may develop allergic reactions when using this product.<br>— Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product.<br>— This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.<br>2. By way of derogation, paragraph 1(a) shall not apply to hot melt adhesives. |
| · polymethylene polyphenyl isocyanate, conc monomer ≥0.1%<br>· 4,4'-methylenediphenyl diisocyanate | Diisocyanates, O = C=N-R-N = C=O, with R an aliphatic or aromatic hydrocarbon unit of unspecified length | 1. Shall not be used as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 August 2023, unless:<br>(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or<br>(b) the employer or self-employed ensures that industrial or professional user(s) have successfully completed training on the safe use of diisocyanates prior to the use of the substance(s) or mixture(s).<br>2. Shall not be placed on the market as substances on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) after 24 February 2022, unless:<br>(a) the concentration of diisocyanates individually and in combination is less than 0,1 % by weight, or<br>(b) the supplier ensures that the recipient of the substance(s) or mixture(s) is provided with information on the requirements referred to in point (b) of paragraph 1 and the following statement is placed on the packaging, in a manner that is visibly distinct from the rest of the label information: "As from 24 August 2023 adequate training is required before industrial or professional use".<br>3. For the purpose of this entry "industrial and professional user(s)" means any worker or self-employed worker handling diisocyanates on their own, as a constituent in other substances or in mixtures for industrial and professional use(s) or supervising these tasks.<br>4. The training referred to in point (b) of paragraph 1 shall include the instructions for the control of dermal and inhalation exposure to diisocyanates at the workplace without prejudice to any national occupational exposure limit value or other appropriate risk management measures at national level. Such training shall be conducted by an expert on occupational safety and health with competence acquired by relevant vocational training. That training shall cover as a minimum:<br>(a) the training elements in point (a) of paragraph 5 for all industrial and professional use(s).<br>(b) the training elements in points (a) and (b) of paragraph 5 for the following uses:<br>— handling open mixtures at ambient temperature (including foam tunnels);<br>— spraying in a ventilated booth;<br>— application by roller;<br>— application by brush;<br>— application by dipping and pouring;<br>— mechanical post treatment (e.g. cutting) of not fully cured articles which are not warm anymore;<br>— cleaning and waste;<br>— any other uses with similar exposure through the dermal and/or inhalation route;<br>(c) the training elements in points (a), (b) and (c) of paragraph 5 for the following uses:<br>— handling incompletely cured articles (e.g. freshly cured, still warm);<br>— foundry applications;<br>— maintenance and repair that needs access to equipment;<br>— open handling of warm or hot formulations (> 45 °C);<br>— spraying in open air, with limited or only natural ventilation (includes large industry working halls) and spraying with high energy (e.g. foams, elastomers);<br>— and any other uses with similar exposure through the dermal and/or inhalation route.<br>5. Training elements:<br>(a) general training, including on-line training, on:<br>— chemistry of diisocyanates;<br>— toxicity hazards (including acute toxicity);<br>— exposure to diisocyanates;<br>— occupational exposure limit values;<br>— how sensitisation can develop;<br>— odour as indication of hazard;<br>— importance of volatility for risk;<br>— viscosity, temperature, and molecular weight of diisocyanates;<br>— personal hygiene;<br>— personal protective equipment needed, including practical instructions for its correct use and its limitations;<br>— risk of dermal contact and inhalation exposure;<br>— risk in relation to application process used;<br>— skin and inhalation protection scheme;<br>— ventilation;<br>— cleaning, leakages, maintenance;<br>— discarding empty packaging;<br>— protection of bystanders;<br>— identification of critical handling stages;<br>— specific national code systems (if applicable);<br>— behaviour-based safety;<br>— certification or documented proof that training has been successfully completed<br>(b) intermediate level training, including on-line training, on:<br>— additional behaviour-based aspects; |

| | | |
|---|---|---|
| | | — maintenance;<br>— management of change;<br>— evaluation of existing safety instructions;<br>— risk in relation to application process used;<br>— certification or documented proof that training has been successfully completed<br>(c) advanced training, including on-line training, on:<br>— any additional certification needed for the specific uses covered;<br>— spraying outside a spraying booth;<br>— open handling of hot or warm formulations (> 45 °C);<br>— certification or documented proof that training has been successfully completed<br>6. The training shall comply with the provisions set by the Member State in which the industrial or professional user(s) operate. Member States may implement or continue to apply their own national requirements for the use of the substance(s) or mixture(s), as long as the minimum requirements set out in paragraphs 4 and 5 are met.<br>7. The supplier referred to in point (b) of paragraph 2 shall ensure that the recipient is provided with training material and courses pursuant to paragraphs 4 and 5 in the official language(s) of the Member State(s) where the substance(s) or mixture(s) are supplied. The training shall take into consideration the specificity of the products supplied, including composition, packaging, and design.<br>8. The employer or self-employed shall document the successful completion of the training referred to in paragraphs 4 and 5. The training shall be renewed at least every five years.<br>9. Member States shall include in their reports pursuant to Article 117(1) the following information:<br>(a) any established training requirements and other risk management measures related to the industrial and professional uses of diisocyanates foreseen in national law;<br>(b) the number of cases of reported and recognised occupational asthma and occupational respiratory and dermal diseases in relation to diisocyanates;<br>(c) national exposure limits for diisocyanates, if there are any;<br>(d) information about enforcement activities related to this restriction.<br>10. This restriction shall apply without prejudice to other Union legislation on the protection of safety and health of workers at the workplace. |
| · 4,4'-methylenediphenyl diisocyanate | Substances falling within one or more of the following points:<br>(a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008:<br>— carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation<br>— reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation<br>— skin sensitiser category 1, 1A or 1B<br>— skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2<br>— serious eye damage category 1 or eye irritant category 2<br>(b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council<br>(c) substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a condition is specified in at least one of the columns g, h and i of the table in that Annex (d) substances listed in Appendix 13 to this Annex.<br>The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry. | Mixtures for tattooing purposes are subject to the restrictions of Regulation (EU) 2020/2081 |
| · 4,4'-methylenediphenyl diisocyanate | Substances falling within one or more of the following points:<br>(a) substances classified as any of the following in Part 3 of Annex VI to Regulation (EC) No 1272/2008:<br>— carcinogen category 1A, 1B or 2, or germ cell mutagen category 1A, 1B or 2, but excluding any such substances classified due to effects only following exposure by inhalation<br>— reproductive toxicant category 1A, 1B or 2 but excluding any such substances classified due to effects only following exposure by inhalation<br>— skin sensitiser category 1, 1A or 1B<br>— skin corrosive category 1, 1A, 1B or 1C or skin irritant category 2<br>— serious eye damage category 1 or eye irritant category 2 | Mixtures for tattooing purposes are subject to the restrictions of Regulation (EU) 2020/2081 |

| | | |
|---|---|---|
| | (b) substances listed in Annex II to Regulation (EC) No 1223/2009 of the European Parliament and of the Council<br>(c) substances listed in Annex IV to Regulation (EC) No 1223/2009 for which a condition is specified in at least one of the columns g, h and i of the table in that Annex (d) substances listed in Appendix 13 to this Annex.<br>The ancillary requirements in paragraphs 7 and 8 of column 2 of this entry apply to all mixtures for use for tattooing purposes, whether or not they contain a substance falling within points (a) to (d) of this column of this entry. | |

**National legislation Belgium**

FOAMTACK

No data available

4,4'-methylenediphenyl diisocyanate

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|---|---|
| Résorption peau | 4,4'-Diisocyanate de diphénylméthane (MDI) (mesuré en NCO); D; la mention "D" signifie qu'une contribution substantielle à la charge corporelle totale par l'exposition de la peau, des muqueuses ou des yeux est possible, et/ou des effets sur la santé après une exposition cutanée sont possibles. Cela peut être dû à un contact direct ou à sa présence dans l'air. |

isobutane

| | |
|---|---|
| Additional classification | Butane, tous isomères: iso-butane; VI.2; la mention "VI.2" signifie que l'agent en question relève du champ d'application du titre 2 relatif aux agents cancérigènes, mutagènes et reprotoxiques et agents possédant des propriétés perturbant le système endocrinien du livre VI du code du bien-être au travail, sur la base de sa classification harmonisée |

propane

| | |
|---|---|
| Additional classification | Hydrocarbures aliphatiques sous forme gazeuse: (Alcanes C1-C3); VI.2 (N); la mention " VI.2 (N)" signifie que l'agent en question relève du champ d'application du titre 2 relatif aux agents cancérogènes, mutagènes et reprotoxiques et aux agents ayant des propriétés de perturbation endocrinienne du livre VI du code sur le bien-être au travail, sur la base de sa classification notifiée. |

butane

| | |
|---|---|
| Additional classification | Butane, tous isomères: n-butane; VI.2; la mention "VI.2" signifie que l'agent en question relève du champ d'application du titre 2 relatif aux agents cancérigènes, mutagènes et reprotoxiques et agents possédant des propriétés perturbant le système endocrinien du livre VI du code du bien-être au travail, sur la base de sa classification harmonisée |

dimethyl ether

| | |
|---|---|
| Additional classification | Oxyde de diméthyle; VI.2 (N); la mention " VI.2 (N)" signifie que l'agent en question relève du champ d'application du titre 2 relatif aux agents cancérogènes, mutagènes et reprotoxiques et aux agents ayant des propriétés de perturbation endocrinienne du livre VI du code sur le bien-être au travail, sur la base de sa classification notifiée. |

**National legislation The Netherlands**

FOAMTACK

| | |
|---|---|
| Waterbezwaarlijkheid | Z (2); Algemene Beoordelingsmethodiek (ABM) |

polymethylene polyphenyl isocyanate, conc monomer ≥0.1%

| | |
|---|---|
| Huidopname (wettelijk) | Diisocyanaten (gemeten als NCO); H |

4,4'-methylenediphenyl diisocyanate

| | |
|---|---|
| Huidopname (wettelijk) | Diisocyanaten (gemeten als NCO); H |

**National legislation France**

FOAMTACK

No data available

4,4'-methylenediphenyl diisocyanate

| | |
|---|---|
| Risque de pénétration percutanée | Diisocyanates Exprimés en NCO; Risque de pénétration percutanée |

**National legislation Germany**

FOAMTACK

| | |
|---|---|
| Lagerklasse (TRGS510) | 2B: Aerosolpackungen und Feuerzeuge |
| WGK | 2; Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen (AwSV) - 18. April 2017 |

polymethylene polyphenyl isocyanate, conc monomer ≥0.1%

| | |
|---|---|
| TA-Luft | 5.2.5/I |
| Sensibilisierende Stoffe | Diisocyanate (gemessen als „NCO“); Sh; Hautsensibilisierende Stoffe |
| TRGS905 - Krebserzeugend | Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); 2 |
| TRGS905 - Erbgutverändernd | Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); - |
| TRGS905 - Fruchtbarkeitsgefährdend | Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); - |
| TRGS905 - Fruchtschädigend | Techn. ("Polymeres") MDI (pMDI) (in Form atembarer Aerosole, A-Fraktion); - |

reaction products of phosphoryl trichloride and 2-methyloxirane

| | |
|---|---|
| TA-Luft | 5.2.5/I |

4,4'-methylenediphenyl diisocyanate

| | |
|---|---|
| TA-Luft | 5.2.5/I |
| Sensibilisierende Stoffe | Diisocyanate (gemessen als „NCO“); Sh; Hautsensibilisierende Stoffe |

**National legislation Austria**

FOAMTACK

No data available

4,4'-methylenediphenyl diisocyanate

| | |
|---|---|
| Krebserzeugend | Diphenylmethan-diisocyanat (alle Isomeren):Diphenylmethan-4,4'-diisocyanat Diphenylmethan-2,2'-diisocyanat Diphenylmethan-2,4'-diisocyanat; Kat 2 |
| Gefahr der Sensibilisierung der Haut | Diphenylmethan-diisocyanat (alle Isomeren):Diphenylmethan-4,4'-diisocyanat Diphenylmethan-2,2'-diisocyanat Diphenylmethan-2,4'-diisocyanat; Sh |
| Gefahr der Sensibilisierung der Atemwege | Diphenylmethan-diisocyanat (alle Isomeren):Diphenylmethan-4,4'-diisocyanat Diphenylmethan-2,2'-diisocyanat Diphenylmethan-2,4'-diisocyanat; Sa |

**National legislation United Kingdom**

FOAMTACK

No data available

polymethylene polyphenyl isocyanate, conc monomer ≥0.1%

| | |
|---|---|
| Skin Sensitisation | Isocyanates, all (as -NCO) Except methyl isocyanate; Sen |
| Respiratory sensitisation | Isocyanates, all (as -NCO) Except methyl isocyanate; Sen |

4,4'-methylenediphenyl diisocyanate

| | |
|---|---|
| Skin Sensitisation | Isocyanates, all (as -NCO) Except methyl isocyanate; Sen |
| Respiratory sensitisation | Isocyanates, all (as -NCO) Except methyl isocyanate; Sen |

**National legislation Ireland**

FOAMTACK

No data available

4,4'-methylenediphenyl diisocyanate

| | |
|---|---|
| Skin resorption | Diisocyanates (measured as -NCO); Skin |
| Dermal sensitisation | Diisocyanates (measured as -NCO); Sens. |
| Respiratory sensitisation | Diisocyanates (measured as -NCO); Sens. |

**Other relevant data**

FOAMTACK

No data available

polymethylene polyphenyl isocyanate, conc monomer ≥0.1%

| | |
|---|---|
| IARC - classification | 3; Polymethylene polyphenyl isocyanate |

4,4'-methylenediphenyl diisocyanate

| | |
|---|---|
| IARC - classification | 3; 4,4'-methylenediphenyl diisocyanate and polymeric 4,4'-methylenediphenyl diisocyanate |

### 15.2. Chemical safety assessment

No chemical safety assessment is required for a mixture.

## SECTION 16: Other information

**Full text of any H- and EUH-statements referred to under section 3:**

H220 Extremely flammable gas.
H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H280 Contains gas under pressure; may explode if heated.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer.
H373 May cause damage to organs (respiratory system) through prolonged or repeated exposure if inhaled.
H373 May cause damage to organs through prolonged or repeated exposure if inhaled.
H412 Harmful to aquatic life with long lasting effects.

| | |
|---|---|
| (*) | INTERNAL CLASSIFICATION BY BIG |
| ADI | Acceptable daily intake |
| AOEL | Acceptable operator exposure level |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration Factor |
| BEI | Biological Exposure Indices |
| CLP (EU-GHS) | Classification, labelling and packaging (Globally Harmonised System in Europe) |
| DMEL | Derived Minimal Effect Level |
| DNEL | Derived No Effect Level |
| EC10 | Effect Concentration 10 % |
| EC50 | Effect Concentration 50 % |
| ErC50 | EC50 in terms of reduction of growth rate |
| GLP | Good Laboratory Practice |
| HS | Harmonized System of Nomenclature, a standardized international system for classifying goods under the Harmonized System Convention, as drawn up by the World Customs Organization Secretariat |
| LC0 | Lethal Concentration 0 % |

| | |
|---|---|
| LC50 | Lethal Concentration 50 % |
| LD50 | Lethal Dose 50 % |
| LOAEC/LOAEL | Lowest Observed Adverse Effect Concentration/Lowest Observed Adverse Effect Level |
| NOAEC/NOAEL | No Observed Adverse Effect Concentration/No Observed Adverse Effect Level |
| NOEC/NOEL | No Observed Effect Concentration/No Observed Effect Level |
| OECD | Organisation for Economic Co-operation and Development |
| PBT | Persistent, Bioaccumulative & Toxic |
| PNEC | Predicted No Effect Concentration |
| STP | Sludge Treatment Process |
| vPvB | very Persistent & very Bioaccumulative |

The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time to time. Only the most recent versions may be used. Unless indicated otherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheet offers no quality specification for the substances/preparations/mixtures in question. Compliance with the instructions in this safety data sheet does not release the user from the obligation to take all measures dictated by common sense, regulations and recommendations or which are necessary and/or useful based on the real applicable circumstances. BIG does not guarantee the accuracy or exhaustiveness of the information provided and cannot be held liable for any changes by third parties. This safety data sheet is only to be used within the European Union, Switzerland, Iceland, Norway and Liechtenstein. Any use outside of this area is at your own risk. Use of this safety data sheet is subject to the licence and liability limiting conditions as stated in your BIG licence agreement or when this is failing the general conditions of BIG. All intellectual property rights to this sheet are the property of BIG and its distribution and reproduction are limited. Consult the mentioned agreement/conditions for details.