

# Safety data sheet

## according to 1907/2006/EC, Article 31

Printing date 15.03.2013

Version number 3

Revision: 05.01.2012

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

#### • 1.1 Product identifier

• Trade name: **illbruck FM310**

• **MSDS code:** A-I-FM310

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

• **Application of the substance / the preparation** Sealant

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

##### • **Manufacturer/Supplier:**

Tremco illbruck Productie B.V.

Vlietskade 1032, 4241 WC Arkel

T: +31 (0) 183568000, F: +31 (0) 183568100

msds@tremco-illbruck.com

##### • **Further information obtainable from:**

Tremco illbruck Ltd

Coupland Road, Hindley Green, Wigan, WN2 4HT

T: +44 (0) 1942251400, F: +44 (0) 1942251410

www.tremco-illbruck.co.uk, uk.info@tremco-illbruck.com

#### • 1.4 Emergency telephone number:

During office hours tel.: +44 (0) 1942251400. At all other times please contact your national poisoning centre.

### 2 Hazards identification

#### • 2.1 Classification of the substance or mixture

##### • **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xn; Harmful

R20-40-48/20: Harmful by inhalation. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation.



Xn; Sensitising

R42/43: May cause sensitisation by inhalation and skin contact.



Xi; Irritant

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



F+; Extremely flammable

R12: Extremely flammable.

R53-64: May cause long-term adverse effects in the aquatic environment. May cause harm to breastfed babies.

##### • **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Warning! Pressurized container.

##### • **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

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**· 2.2 Label elements****· Labelling according to EU guidelines:**

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials.

**· Code letter and hazard designation of product:**

Xn Harmful

F+ Extremely flammable

**· Hazard-determining components of labelling:**

diphenylmethanediisocyanate, isomers and homologues

**· Risk phrases:**

12 Extremely flammable.

20 Harmful by inhalation.

36/37/38 Irritating to eyes, respiratory system and skin.

40 Limited evidence of a carcinogenic effect.

42/43 May cause sensitisation by inhalation and skin contact.

48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

53 May cause long-term adverse effects in the aquatic environment.

64 May cause harm to breastfed babies.

**· Safety phrases:**

2 Keep out of the reach of children.

16 Keep away from sources of ignition - No smoking.

23 Do not breathe vapour/spray.

36/37 Wear suitable protective clothing and gloves.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

51 Use only in well-ventilated areas.

57 Use appropriate container to avoid environmental contamination.

**· Special labelling of certain preparations:**

Contains isocyanates. See information supplied by the manufacturer

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use.

Do not spray on a naked flame or any incandescent material.

**· Classification in accordance with Directive 75/324/EEC: Extremely flammable****· 2.3 Other hazards****· Results of PBT and vPvB assessment****· PBT:** Not applicable.**· vPvB:** Not applicable.

### 3 Composition/information on ingredients

**· 3.2 Chemical characterization: Mixtures****· Description:** Active substance with propellant

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








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**· Dangerous components:**

CAS: 9016-87-9 EINECS: 202-966-0	diphenylmethanediisocyanate, isomeres and homologues  Xn R20-40-48/20;  Xn R42/43;  Xi R36/37/38 Carc. Cat. 3  Resp. Sens. 1, H334; Carc. 2, H351; STOT RE 2, H373;  Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	30- <50%
CAS: 85535-85-9 EINECS: 287-477-0	alkanes, C14-17, chloro  N R50/53 R64-66  Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Lact., H362	5- <10%
CAS: 115-10-6 EINECS: 204-065-8	dimethyl ether  F+ R12  Flam. Gas 1, H220;  Press. Gas, H280	5- <10%
CAS: 75-28-5 EINECS: 200-857-2	isobutane  F+ R12  Flam. Gas 1, H220;  Press. Gas, H280	5- <10%
CAS: 74-98-6 EINECS: 200-827-9	propane  F+ R12  Flam. Gas 1, H220;  Press. Gas, H280	1- <5%
CAS: 1244733-77-4 EC number: 911-815-4	tris(2-chloro-1-methylethyl)phosphate  Xn R22  Acute Tox. 4, H302	1- <5%

**· Additional information:**

While curing the following substances are formed and released by a reaction with atmospheric humidity:

Carbon dioxide

For the wording of the listed risk phrases refer to section 16.

**4 First aid measures****· 4.1 Description of first aid measures**

· **General information:** Take affected persons out of danger area and lay down.

**· After inhalation:**

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

**· After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If symptoms persist consult doctor.

**· After eye contact:**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

· **After swallowing:** Do not induce vomiting; call for medical help immediately.

**· 4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· **Information for doctor:** No further relevant information available.

· **Hazards** No further relevant information available.

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- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
Carbon monoxide (CO)  
Carbon dioxide  
Nitrogen oxides (NO<sub>x</sub>)  
Under certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:  
Hydrogen cyanide (HCN)
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

### 6 Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Not required.  
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### 7 Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.
- **Information about fire - and explosion protection:**  
Do not spray onto a naked flame or any incandescent material.  
Protect against electrostatic charges.  
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Observe official regulations on storing packagings with pressurized containers.
- **Information about storage in one common storage facility:** Store away from water.
- **Further information about storage conditions:**  
Keep container tightly sealed.

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- Do not seal receptacle gas tight.
- Store in cool, dry conditions in well sealed receptacles.
- Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

· <b>Ingredients with limit values that require monitoring at the workplace:</b>	
<b>9016-87-9 diphenylmethanediisocyanate, isomers and homologues</b>	
WEL	Short-term value: 0.07 mg/m <sup>3</sup> Long-term value: 0.02 mg/m <sup>3</sup> Sen; as -NCO
<b>115-10-6 dimethyl ether</b>	
WEL	Short-term value: 958 mg/m <sup>3</sup> , 500 ppm Long-term value: 766 mg/m <sup>3</sup> , 400 ppm

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Immediately remove all soiled and contaminated clothing
  - Wash hands before breaks and at the end of work.
  - Avoid contact with the eyes and skin.
  - Do not inhale gases / fumes / aerosols.
- **Respiratory protection:**
  - 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.
- **Protection of hands:**



Protective gloves

- **Material of gloves** PE gloves
- **Penetration time of glove material**
  - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact gloves made of the following materials are suitable:**
  - Nitrile rubber, NBR
  - Natural rubber, NR
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
  - PE gloves

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- **Eye protection:**



Tightly sealed goggles

- **Body protection:** Protective work clothing

## 9 Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Aerosol  
 Colour: According to product specification

- **Odour:** Characteristic

- **Odour threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range: Not applicable, as aerosol.

Boiling point/Boiling range: Not applicable, as aerosol.

- **Flash point:** -97°C

- **Flammability (solid, gaseous):** Not applicable.

- **Ignition temperature:** 235°C

- **Decomposition temperature:** Not determined.

- **Self-igniting:** Product is not selfigniting.

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

- **Explosion limits:**

Lower: 3.0 Vol %  
 Upper: 18.6 Vol %

- **Vapour pressure at 20°C:** 5200 hPa

- **Density at 20°C:** 1 g/cm<sup>3</sup>

- **Relative density** Not determined.

- **Vapour density** Not determined.

- **Evaporation rate** Not applicable.

- **Solubility in / Miscibility with water:**

Not miscible or difficult to mix.

- **Partition coefficient (n-octanol/water):** Not determined.

- **Viscosity:**

Dynamic: Not determined.

Kinematic: Not determined.

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- **Solvent content:**
- VOC (EU)** 169.5 g/l
- VOC (EC)** 16.90 %
- **9.2 Other information** No further relevant information available.

## 10 Stability and reactivity

- **10.1 Reactivity**
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

### 9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

Oral	LD50	> 10000 mg/kg (rat)
Dermal	LD50	> 10000 mg/kg (rabbit)
Inhalative	LC50/4 h	ca. 0.493 mg/L (rat)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:**  
Sensitization possible through inhalation.  
Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:  
Harmful  
Irritant

## 12 Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

### 9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

EC50/24 h	> 1000 mg/L (daphnia magna)
LC0/96 h	> 1000 mg/L (brachydanio rerio)
NOEC/21 d	> 10 mg/L (daphnia magna)

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- **12.2 Persistence and degradability** No further relevant information available.
- **Other information:** The product is difficultly biodegradable.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.

· <b>Ecotoxicological effects:</b>	
NOEC (static)	> 1000 mg/L (daphnia magna)
	> 1000 mg/L (algae)

- **Remark:**

Using the previously mentioned tests, it can be proven that the ecotoxicological effects are very low. In keeping with the underlying regulations, the labeling was adjusted accordingly.

- **Other information:**

This product contains no substances in Annex I to Directive EC 2037/2000 concerning ozone depleting substances

- **Additional ecological information:**

- **General notes:**

Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even small quantities leak into the ground.

- **12.5 Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **12.6 Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **13.1 Waste treatment methods**

- **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· <b>European waste catalogue</b>	
16 05 05	gases in pressure containers other than those mentioned in 16 05 04
15 01 04	metallic packaging

- **Uncleaned packaging:**

- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

· <b>14.1 UN-Number</b>	
· <b>ADR, IMDG, IATA</b>	UN1950

· <b>14.2 UN proper shipping name</b>	
· <b>ADR</b>	1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS
· <b>IMDG</b>	AEROSOLS
· <b>IATA</b>	AEROSOLS, flammable

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#### · 14.3 Transport hazard class(es)

##### · ADR



##### · Class

2 5F Gases.

##### · Label

2.1

#### · IMDG, IATA



##### · Class

2.1

##### · Label

2.1

#### · 14.4 Packing group

##### · ADR, IMDG, IATA

Void

#### · 14.5 Environmental hazards:

##### · Marine pollutant:

No

##### · Special marking (ADR):

Symbol (fish and tree)

#### · 14.6 Special precautions for user

Warning: Gases.

##### · Danger code (Kemler):

-

##### · EMS Number:

F-D,S-U

#### · 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

#### · Transport/Additional information:

##### · ADR

##### · Tunnel restriction code

D

## 15 Regulatory information

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

Directive 1999/45/EC.

"CLP" Regulation (EC) No 1272/2008 (OJ L 353, 31.12.2008, p.1).

"CHIP" SI 2009 No.716.

"REACH" Regulation (EC) No 1907/2006 (OJ L 396, 30.12.2006, p.1, with subsequent amendments).

"Aerosol" Regulation (EC) No 75/324.

#### · National regulations:

#### · Information about limitation of use:

Employment restrictions concerning juveniles must be observed.

Employment restrictions concerning pregnant and lactating women must be observed.

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- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57** Not applicable.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

- |           |  |
|-----------|--|
| H220      | Extremely flammable gas.   |
| 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.   |
| H362      | May cause harm to breast-fed children.   |
| H373      | May cause damage to organs through prolonged or repeated exposure.                               |
| H400      | Very toxic to aquatic life.  |
| H410      | Very toxic to aquatic life with long lasting effects.  |
| .....     |  |
| R12       | Extremely flammable.   |
| R20       | Harmful by inhalation.   |
| R22       | Harmful if swallowed.  |
| R36/37/38 | Irritating to eyes, respiratory system and skin.   |
| R40       | Limited evidence of a carcinogenic effect.   |
| R42/43    | May cause sensitisation by inhalation and skin contact.  |
| R48/20    | Harmful: danger of serious damage to health by prolonged exposure through inhalation.            |
| R50/53    | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |
| R64       | May cause harm to breastfed babies.  |
| R66       | Repeated exposure may cause skin dryness or cracking.  |

- **Previous Revision Date:** 03-11-2010 (UK)
- **\* Data compared to the previous version altered.**

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