

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.01.2016

Version number 3

Revision: 21.01.2016

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

· **1.1 Product identifier**

· **Trade name:** illbruck FM320

· **MSDS code:** A-I-FM320

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

· **Application of the substance / the mixture** 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.

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

Aerosol 1	H222-H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Carc. 2	H351	Suspected of causing cancer.
Lact.	H362	May cause harm to breast-fed children.
STOT SE 3	H335	May cause respiratory irritation.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.
Aquatic Chronic 4	H413	May cause long lasting harmful effects to aquatic life.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.01.2016

Version number 3

Revision: 21.01.2016

Trade name: illbruck FM320

(Contd. of page 1)

- **Hazard pictograms**



GHS02 GHS07 GHS08

- **Signal word** Danger

- **Contains:**

diphenylmethanediisocyanate, isomers and homologues
Glycerol, propoxylated
alkanes, C14-17, chloro

- **Hazard statements**

H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H332 Harmful if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H362 May cause harm to breast-fed children.
H335 May cause respiratory irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H413 May cause long lasting harmful effects to aquatic life.

- **Precautionary statements**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251 Do not pierce or burn, even after use.
P284 In case of inadequate ventilation wear respiratory protection.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

- **Supplemental information:**

EUH204 Contains isocyanates. May produce an allergic reaction.

- **2.3 Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**

- **Description:** Active substance with propellant

- **Dangerous components:**

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.01.2016

Version number 3

Revision: 21.01.2016

Trade name: illbruck FM320

(Contd. of page 2)

CAS: 9016-87-9	diphenylmethanediisocyanate, isomers and homologues 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: 25791-96-2 NLP: 500-044-5	Glycerol, propoxylated Acute Tox. 4, H302	20- <30%
CAS: 85535-85-9 EINECS: 287-477-0 Reg.nr.: 01-2119519269-33-xxxx	alkanes, C14-17, chloro Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Lact., H362	10- <20%
CAS: 115-10-6 EINECS: 204-065-8 Reg.nr.: 01-2119472128-37-xxxx	dimethyl ether Flam. Gas 1, H220; Press. Gas C, H280	5- <10%
CAS: 75-28-5 EINECS: 200-857-2 Reg.nr.: 01-2119485395-27-xxxx	isobutane Flam. Gas 1, H220; Press. Gas C, H280	5- <10%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-2119486944-21-xxxx	propane Flam. Gas 1, H220; Press. Gas C, H280	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.

SECTION 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.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

GB

(Contd. on page 4)

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 28.01.2016

Version number 3

Revision: 21.01.2016

Trade name: illbruck FM320

(Contd. of page 3)

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, 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_x)
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.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
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.

SECTION 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.
Pressurised 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 pressurised containers.
- **Information about storage in one common storage facility:** Store away from water.
- **Further information about storage conditions:**
Keep container tightly sealed.
Do not seal receptacle gas tight.
Store in cool, dry conditions in well sealed receptacles.
Protect from heat and direct sunlight.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.01.2016

Version number 3

Revision: 21.01.2016

Trade name: illbruck FM320

(Contd. of page 4)

- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

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

- **Ingredients with limit values that require monitoring at the workplace:**

9016-87-9 diphenylmethanediisocyanate, isomers and homologues

WEL	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
-----	---

115-10-6 dimethyl ether

WEL	Short-term value: 958 mg/m ³ , 500 ppm Long-term value: 766 mg/m ³ , 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**
Butyl rubber, BR
Recommended thickness of the material: ≥ 0.7 mm
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.4 mm
- **Penetration time of glove material**
For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 374 Part 3: Level 6).
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**



Tightly sealed goggles

(Contd. on page 6)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.01.2016

Version number 3

Revision: 21.01.2016

Trade name: illbruck FM320

(Contd. of page 5)

- **Body protection:** Protective work clothing

SECTION 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.

· 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:

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/cm³

· 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.

· Solvent content:

VOC (EU) 160.5 g/l

VOC (EC) 16.00 %

· 9.2 Other information: No further relevant information available.

GB

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.01.2016

Version number 3

Revision: 21.01.2016

Trade name: illbruck FM320

(Contd. of page 6)

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **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.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity**
Harmful if inhaled.

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

9016-87-9 diphenylmethanediisocyanate, isomers and homologues

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

25791-96-2 Glycerol, propoxylated

Oral	LD50	> 2000 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation**
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity**
Suspected of causing cancer.
- **Reproductive toxicity**
May cause harm to breast-fed children.
- **STOT-single exposure**
May cause respiratory irritation.
- **STOT-repeated exposure**
May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

GB

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.01.2016

Version number 3

Revision: 21.01.2016

Trade name: illbruck FM320

(Contd. of page 7)

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

9016-87-9 diphenylmethanediisocyanate, isomers and homologues

LC0/96 h > 1000 mg/L (brachydanio rerio)

EC50/24 h > 1000 mg/L (daphnia magna)

NOEC/21 d > 10 mg/L (daphnia magna)

25791-96-2 Glycerol, propoxylated

LC50/96 h > 1000 mg/L (fish)

EC50/48 h > 1000 mg/L (daphnia magna)

EC50/72 h > 1000 mg/L (algae)

· **12.2 Persistence and degradability** No further relevant information available.

· **Other information:** The product is not easily biodegradable.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· Ecotoxicological effects:

· Remark:

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

· Other information:

This product contains no substances in Annex I to Directive EC 1005/2009 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.

SECTION 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.

· European waste catalogue

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.

GB

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.01.2016






Version number 3

Revision: 21.01.2016

Trade name: illbruck FM320

(Contd. of page 8)

SECTION 14: Transport information

<ul style="list-style-type: none"> · 14.1 UN-Number · ADR, IMDG, IATA 	UN1950	
<ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG · IATA 	1950 AEROSOLS AEROSOLS (alkanes, C14-17, chloro), MARINE POLLUTANT AEROSOLS, flammable	
<ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR 	<div style="display: flex; align-items: center;">   </div> <ul style="list-style-type: none"> · Class · Label 	2 5F Gases. 2.1
<ul style="list-style-type: none"> · IMDG 	<div style="display: flex; align-items: center;">   </div> <ul style="list-style-type: none"> · Class · Label 	2.1 2.1
<ul style="list-style-type: none"> · IATA 	<div style="display: flex; align-items: center;">  </div> <ul style="list-style-type: none"> · Class · Label 	2.1 2.1
<ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA 	Void	
<ul style="list-style-type: none"> · 14.5 Environmental hazards: · Marine pollutant: · Special marking (ADR): 	Product contains environmentally hazardous substances: alkanes, C14-17, chloro Yes Symbol (fish and tree) Symbol (fish and tree)	
<ul style="list-style-type: none"> · 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: 	Warning: Gases. - F-D,S-U	

(Contd. on page 10)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 28.01.2016

Version number 3

Revision: 21.01.2016

Trade name: illbruck FM320

(Contd. of page 9)

<ul style="list-style-type: none"> · Stowage Code · Segregation Code 	<p>SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, Clear of living quarters.</p> <p>SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.</p>
<ul style="list-style-type: none"> · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code 	Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: 	
<ul style="list-style-type: none"> · ADR · Limited quantities (LQ) · Excepted quantities (EQ) · Transport category · Tunnel restriction code · Remarks: 	<p>1L Code: E0 Not permitted as Excepted Quantity</p> <p>2 D</p> <p>- Special provisions: 190, 327, 344, 625 (3.3) - Special provisions for carriage: V14 (7.2.4); CV9, CV12 (7.5.11); S2 (8.5)</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) · Remarks: 	<p>1L Code: E0 Not permitted as Excepted Quantity</p> <p>- Special provisions: 63, 190, 277, 327, 344, 959 (3.3)</p>
<ul style="list-style-type: none"> · IATA · Remarks: 	<p>- Special provisions: A145, A167, A802 (4.4)</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	UN 1950 AEROSOLS, 2.1

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
"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).
COMMISSION REGULATION (EU) 2015/830 of 28 May 2015
- **Directive 2012/18/EU**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t

(Contd. on page 11)

GB

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 28.01.2016

Version number 3

Revision: 21.01.2016

Trade name: illbruck FM320

(Contd. of page 10)

- **National regulations:**
- **Information about limitation of use:**
Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.
- **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.

SECTION 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.

- **Abbreviations and acronyms:**

- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonised System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- ELINCS: European List of Notified Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- VOC: Volatile Organic Compounds (USA, EU)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- PBT: Persistent, Bioaccumulative and Toxic
- SVHC: Substances of Very High Concern
- vPvB: very Persistent and very Bioaccumulative
- Flam. Gas 1: Flammable gases, Hazard Category 1
- Aerosol 1: Flammable aerosols, Hazard Category 1
- Press. Gas C: Gases under pressure: Compressed gas
- Acute Tox. 4: Acute toxicity, Hazard Category 4
- Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
- Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
- Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
- Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
- Carc. 2: Carcinogenicity, Hazard Category 2
- Lact.: Reproductive toxicity, Additional category, Effects on or via lactation
- STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3
- STOT RE 2: Specific target organ toxicity - Repeated exposure, Hazard Category 2

(Contd. on page 12)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 28.01.2016

Version number 3

Revision: 21.01.2016

Trade name: illbruck FM320

Aquatic Acute 1: Hazardous to the aquatic environment - AcuteHazard, Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - Chronic Hazard, Category 1
Aquatic Chronic 4: Hazardous to the aquatic environment - Chronic Hazard, Category 4

(Contd. of page 11)

· *** Data compared to the previous version altered.**

—GB—