

## SAFETY DATA SHEET

according to 1907/2006/EC, Article 31

### BRC02 - BRC03

One-component polyurethane foam  
FOR ROOFING

Revision n. **02**

Dated **11/03/2021**

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

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

Application of the substance / the mixture	BRC02	One-component polyurethane foam GUN EXTRUSION
	BRC03	One-component polyurethane foam MANUAL EXTRUSION

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

Company name	Tecfi S.p.A.
Address	S.S.Appia km 193 81050 Pastorano (CE) - Italia - tel. 0823 88 3338 - fax 0823 - 883260
e-mail	rdc@tecfi.it

### 1.4. Emergency telephone number

For urgent inquiries refer to	Osp. NIGUARDA CA' GRANDA – Milano 02/66101029 CAV Policlinico "A. Gemelli" - Roma 06/3054343 Osp. "A. Cardarelli" - Napoli 081/7472870
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## 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



Signal word: Danger

Hazard-determining components of labelling:  
diphenylmethanediisocyanate, isomeres and homologues  
alkanes, C14-17, chloro

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#### Hazard statements:

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

#### Precautionary statements:

<b>P102</b>	Keep out of reach of children
<b>P201</b>	Obtain special instructions before use
<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
<b>P211</b>	Do not spray on an open flame or other ignition source
<b>P251</b>	Do not pierce or burn, even after use
<b>P260</b>	Do not breathe vapours/spray
<b>P280</b>	Wear protective gloves/protective clothing/eye protection
<b>P284</b>	In case of inadequate ventilation wear respiratory protection (a protective mask with an appropriate gas filter - i.e. type A1 according to standard EN 14387).
<b>P302+P352</b>	IF ON SKIN: Wash with plenty of water/soap
<b>P304+P340</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing
<b>P308+P313</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
<b>P308+P313</b>	IF exposed or concerned: Get medical advice/attention
<b>P410+P412</b>	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F
<b>P501</b>	Dispose of container to in accordance with local/regional/national/international regulatione
<b>Additional information</b>	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. Contains isocyanates. May produce an allergic reaction

#### 2.3. Other hazards

Results of PBT and vPvB assessment Not applicable

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## 3. Composition/information on ingredients

### 3.1. Chemical characterisation: Mixtures

Description: Mixture of substances listed below with nonhazardous additions

#### Dangerous components:

CAS: 9016-87-9	DIPHENYLMETHANEDIISOCYANATE, ISOMERES 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 <u>Specific concentration limits:</u> Skin Irrit. 2; H315: C ≥ 5 % Eye Irrit. 2; H319: C ≥ 5 % Resp. Sens. 1; H334: C ≥ 0,1 % STOT SE 3; H335: C ≥ 5 %	30-40%
CAS: 75-28-5 EINECS: 200-857-2 Reg.nr.: 01-2119485395-27- xxxx	ISOBUTANE ⚠ Flam. Gas 1, H220; Press. Gas (Comp.), H280	1-10%
CAS: 115-10-6 EINECS: 204-065-8 Reg.nr.: 01-2119472128-37	DIMETHYL ETHER ⚠ Flam. Gas 1, H220; Press. Gas (Comp.), H280	5-15%
CAS: 85535-85-9 EINECS: 287-477-0 Reg.nr.: 01-2119519269-33	ALKANES, C14-17, CHLORO ⚠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Lact., H362	10-20%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-2119486944-21- xxxx	PROPANE ⚠ Flam. Gas 1, H220; Press. Gas (Comp.), H280	1-5%
CAS: 13674-84-5 EINECS: 237-158-7 Reg.nr.: 01-2119447716-31	TRIS(2-chlorisopropyl)-PHOSPHATE ⚠ Acute Tox. 4, H302	1-5%

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

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## 4. First aid measures

### 4.1. Description of first aid measures

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- 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.
- After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: If symptoms persist consult doctor.

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

No further relevant information available

### 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: Foam

For safety reasons unsuitable extinguishing agents: Water with full jet

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

In case of fire, the following can be released:

- Nitrogen oxides (NOx)
- Carbon monoxide (CO)
- Hydrogen cyanide (HCN)

### 5.3. Advice for firefighters

Protective equipment: Mouth respiratory protective device

Additional information: Cool endangered receptacles with water spray. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

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## 6. Accidental release measures

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

Keep away from ignition sources.  
Ensure adequate ventilation  
Wear protective equipment. Keep unprotected persons away

### 6.2. Environmental precautions

Inform respective authorities in case of seepage into water course or sewage system.  
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

### 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 that suitable extractors are available on processing machines  
Ensure good ventilation/exhaustion at the workplace.  
Information about fire - and explosion protection:  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.

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

#### Storage:

#### Requirements to be met by storerooms and receptacles:

Store only in the original receptacle. Observe official regulations on storing packagings with pressurised containers.

· Information about storage in one common storage facility: Store away from oxidising agents.

· Further information about storage conditions:

Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.

Protect from humidity and water. Keep container tightly sealed.

**Classe di stoccaggio: 2B**

### 7.3. Specific end use(s)

No further relevant information available

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## 8. Exposure controls/personal protection

### 8.1. Control parameters

Additional information about design of technical facilities: No further data; see item 7

#### Ingredients with limit values that require monitoring at the workplace

CAS: 9016-87-9 diphenylmethanediisocyanate, isomeres and homologues

WEL Short-term value: 0,07 mg/m<sup>3</sup>

Long-term value: 0,02 mg/m<sup>3</sup>

CAS: 115-10-6 dimethyl ether

WEL Valore a lungo termine: 1920 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.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

##### Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

##### Protective gloves:



Protective gloves according to EN 374

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

##### Material of gloves:

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

##### 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

##### Eye protection:



Wear airtight protective goggles EN 166

**Body protection:** Protective work clothing EN 13688

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## 9. Physical and chemical properties

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

#### General Information

Form	Aerosol
Colour	According to product specification
Odour	Characteristic
Odour threshold	Not determined
pH-value	Not determined

#### Change in condition

Melting point/freezing point	Undetermined
Initial boiling point and boiling range	Not applicable, as aerosol
Flash point	Not applicable, as aerosol
Flammability (solid, gas)	Not applicable
Ignition temperature	199 °C
Decomposition temperature	Not determined
Auto-ignition temperature	Product is not selfigniting
Explosive properties	Not determined

#### Vapour pressure

Lower	3,0 Vol %
Upper	18,6 Vol %
Vapour pressure	Not determined
Density	Not determined
Relative density	Not determined
Vapour density	Not determined
Evaporation rate	Not determined
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 (CE)	20,3 %

### 9.2. Other information

No further relevant information available

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## 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

Hydrogen cyanide (prussic acid) / Carbon monoxide / Nitrogen oxides (NOx)

## 11. Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity: Harmful if inhaled

### LD/LC50 values relevant for classification

CAS: 115-10-6 dimethyl ether

Inhalative	LC50/4 h	308 mg/l (rat)
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#### 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.

#### Subacute to chronic toxicity:

#### 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.



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## 12. Ecological information

### 12.1. Toxicity

**Aquatic toxicity: No further relevant information available.**

### 12.2. Persistence and degradability

No further relevant information available

### 12.3. Bioaccumulative potential

No further relevant information available

### 12.4. Mobility in soil

No further relevant information available

### 12.5. Additional ecological information

General notes: Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system

### 12.6. Other adverse effects

No further relevant information available

## 13. Disposal considerations

### Waste treatment methods

#### Recommendation

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

### European waste catalogue

08 05 01*	waste isocyanates
16 05 04*	gases in pressure containers (including halons) containing hazardous substances
15 01 10*	packaging containing residues of or contaminated by hazardous substances

### Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations

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## 14. Transport information

### 14.1 UN-Number

ADR, IMDG, IATA 1950

### 14.2 UN proper shipping name

ADR 1950 AEROSOL  
IMDG, IATA AEROSOLS

### 14.3 Transport hazard class(es)

ADR  
Class 2 5F Gas  
Flammable liquids  
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

### 14.6 Special precautions for user

Warning: Gases  
· Numero EMS: F-D,S-U

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Transport/Additional information:

ADR  
Limited quantities (LQ) 1l

UN "Model Regulation" UN1950, AEROSOL, 2.1

## 15. Regulatory information

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

No further relevant information available

Directive 2012/18/UE

Directive 2011/65/UE on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed

### 15.2. Chemical safety assessment

A Chemical Safety Assessment has not been carried out

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## 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

Flam. Gas 1: Flammable gases – Category 1  
Aerosol 1: Aerosols – Category 1  
Press. Gas (Comp.): Gases under pressure – Compressed gas  
Acute Tox. 4: Acute toxicity - inhalation – Category 4  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
Resp. Sens. 1: Respiratory sensitisation – Category 1  
Skin Sens. 1: Skin sensitisation – Category 1  
Carc. 2: Carcinogenicity – Category 2  
Lact.: Reproductive toxicity – effects on or via lactation  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2  
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1  
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1  
Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4