

# GRÜN Flat Roof Foam 1010 S

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

### 1.1 Product identifier

Trade name: GRÜN Flat Roof Foam 1010 S

### 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

PU - foam adhesive for flat roofs - (B1)

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

GRÜN GmbH  
Siegener Straße 81 - 83  
57234 Wilnsdorf-Niederdielfen / Deutschland  
Phone: 00 49 (0) 271 - 39 88-0  
Fax: 00 49 (0) 271 - 39 88-159

### 1.4 Emergency telephone number:

In case of emergency, consult physician.

## 2. Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008

Flam. Aerosol 1	H222-H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
Resp. Sens. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Carc. 2	H351	Suspected of causing cancer.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.
Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects.
Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
STOT SE 3	H335	May cause respiratory irritation.
Lact.	H362	May cause harm to breast-fed children.

#### 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.

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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.

## 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, isomeres 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 spray.
- 28 After contact with skin, wash immediately with plenty of soap and water.
- 36/37 Wear suitable protective clothing and gloves.
- 46 If swallowed, seek medical advice immediately and show this container or label.
- 51 Use only in well-ventilated areas.

### Special labelling of certain preparations:

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.

Do not spray on a naked flame or any incandescent material. Keep away from sources of ignition - No smoking. Keep out of the reach of children.

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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.

## 2.3 Other hazards

### Results of PBT and vPvB assessment

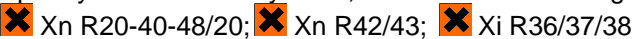

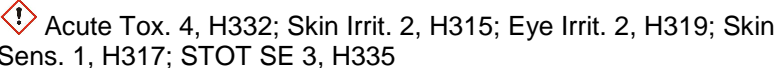
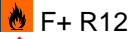
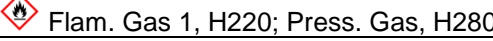
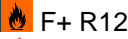
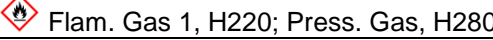


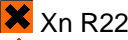

**PBT:** Not applicable.

**vPvB:** Not applicable.

## 3. Composition/information on ingredients

### 3.1 Chemical characterization: Mixtures

**Description:** Mixture of substances listed below with nonhazardous additions.

Dangerous components:		
CAS: 9016-87-9	diphenylmethanediisocyanate, isomeres and homologues  Carc. Cat. 3  	40-50%
CAS: 13674-84-5	tris(2-chlorisopropyl)-phosphate R52/53 Aquatic Chronic 3, H412	10-15%
CAS: 115-10-6 EINECS: 204-065-8	dimethyl ether  	1-10%
CAS: 75-28-5 EINECS: 200-857-2	isobutane  	1-10%
CAS: 85535-85-9 EINECS: 287-477-0	alkanes, C14-17, chloro  R64-66 	1-5%
CAS: 86675-46-9	Halogenated polyetherpolyol  	1-5%

### 3.2 Additional information:

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:

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

#### After inhalation:

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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:**

Call for a doctor immediately.

**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  
CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

**For safety reasons unsuitable extinguishing agents:**

Water with full jet

**5.2 Special hazards arising from the substance or mixture**

Carbon monoxide (CO)  
Nitrogen oxides (NO<sub>x</sub>)  
Hydrogen cyanide (HCN)

**5.3 Advice for firefighters****Protective equipment:**

Mouth respiratory protective device.

**Additional information**

Cool endangered receptacles with water spray.

## 6. Accidental release measures

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

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

**6.2 Environmental precautions:**

Do not allow product to reach sewage system or any water course.  
Inform respective authorities in case of seepage into water course or sewage system.  
Do not allow to enter sewers/ surface or ground water.

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## 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.  
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

## 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 Handling:

#### Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.  
 Open and handle receptacle with care.

#### 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 in a cool location.  
 Observe official regulations on storing packagings with pressurized containers.

#### Information about storage in one common storage facility:

Store away from oxidizing agents.  
 Do not store together with acids.  
 Do not store together with alkalis (caustic solutions).

#### Further information about storage conditions:

Store in dry conditions.  
 Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.  
 Keep container tightly sealed.  
 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, isomeres and homologues</b>	
WEL	Short-term value: 0.07 mg/m <sup>3</sup>

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	Long-term value: 0.02 mg/m <sup>3</sup>
<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.

#### 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.

#### Protection of hands:



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

#### Eye protection:



Tightly sealed goggles

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### General Information

##### Appearance:

**Form:** Aerosol  
**Colour:** According to product specification

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<b>Odour:</b>	Characteristic
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Undetermined.
<b>Boiling point/Boiling range:</b>	Undetermined.
<b>Flash point:</b>	Not applicable.
<b>Ignition temperature:</b>	199 °C
<b>Self-igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Heating may cause an explosion.
<b>Density:</b>	Not determined.
<b>Solubility in / Miscibility with water:</b>	Insoluble.
<b>Solvent content:</b>	
<b>VOC (EC)</b>	15.8 %

**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:

Carbon monoxide

Nitrogen oxides (NO<sub>x</sub>)

Hydrogen cyanide (prussic acid)

## 11. Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity:

#### LD/LC50 values relevant for classification:

**13674-84-5 tris(2-chlorisopropyl)-phosphate**

Oral	LD50	3600 mg/kg (rat)
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### 11.2 Primary irritant effect:

#### on the skin:

Irritant to skin and mucous membranes.

#### on the eye:

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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:**

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 1 (German Regulation) (Self-assessment): slightly hazardous for water

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

### 12.6 Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

### 12.7 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.

**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 IMDG IATA	1950 AEROSOLS AEROSOLS AEROSOLS, flammable
14.3 Transport hazard class(es) ADR Class Label  IMDG, IATA Class Label	2 5F Gases. 2.1  2.1 2.1
14.4 Packing group ADR, IMDG, IATA	Void
14.5 Environmental hazards: Marine pollutant: Special marking (ADR):	No Symbol (fish and tree)
14.6 Special precautions for user EMS Number:	Warning: Gases. F-D,S-U
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code  Transport/Additional information: ADR Limited quantities (LQ) UN "Model Regulation":	Not applicable.   11 UN1950, AEROSOLS, 2.1

## 15. Regulatory information

15.1 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.

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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.
H412	Harmful 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.
R52/53	Harmful 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.