

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

Printing date 28.03.2017

Version number 1

Revision: 28.03.2017

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

- **1.1 Product identifier**
- **Trade name:** Gefäßfüller
- **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** Anticorrosion additive
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Fermit GmbH
Zur Heide 4,
D- 53560 Vettelschoß
www.fermit.de
- **Informing department:**
Tel.: +49 (0) 2645-2207
Fax: +49 (0) 2645-3113
Email: info@fermit.de
- **1.4 Emergency telephone number:** Tel.: +49 (0) 2645-2207

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02

- **Signal word** Danger
- **Hazard statements**
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
- **Precautionary statements**
 - 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.
 - P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
- **Information pertaining to particular dangers for man and environment**
Contains a fluorinated hydrocarbon which is subject to EU regulation 517/2014 on fluorinated greenhouse gases.

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- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.2 Chemical characterisation: Mixtures**
- **Description:** Mixture of the substances listed below including additives not requiring identification.

- **Dangerous components:**

CAS: 75-28-5 EINECS: 200-857-2 Reg.nr.: 01-2119485395-27-X	isobutane ⚠ Flam. Gas 1, H220; Press. Gas C, H280	25 - 50%
CAS: 811-97-2 EINECS: 212-377-0 Reg.nr.: 01-2119459374-33-X	1,1,1,2-tetrafluoroethane ⚠ Press. Gas L, H280	25 - 50%
CAS: 74-98-6 EINECS: 200-827-9 Reg.nr.: 01-2119486944-21-X	propane ⚠ Flam. Gas 1, H220; Press. Gas C, H280	10 - 25%
CAS: 67-63-0 EINECS: 200-661-7 Reg.nr.: 01-2119457558-25-X	propan-2-ol ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	2.5-<10%

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

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **After inhalation**
Supply fresh air.
In case of persistent symptoms consult doctor.
- **After skin contact**
Wash with water and soap.
In cases of freeze burns, rinse with plenty of water. Do not remove clothing.
- **After eye contact**
Rinse opened eye for several minutes under running water.
In case of permanent aches and pains please go and see the doctor.
- **After swallowing** Swallowing is not considered to be a possible way of exposure.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.
- **Information for doctor**

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fire with alcohol-resistant foam.
- **For safety reasons unsuitable extinguishing agents** Water with a full water jet.
- **5.2 Special hazards arising from the substance or mixture**
During incomplete combustion carbon monoxide can be formed.
Pressure build-up and risk of bursting when heated.
Vapours are heavier than air and may travel long distances along ground, ignite and flash back to source.

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- **5.3 Advice for firefighters**
- **Protective equipment:**
Do not inhale explosion gases or combustion gases.
In case of fire wear breathing equipment being independent of ambient air and suit provided full protection against chemicals.
- **Additional information**
Cool endangered containers with water spray.
Remove goods in stock from incendiary zone, if possible.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Keep away from sources of ignition - No smoking.
- **6.2 Environmental precautions:** Damp down gases/fumes/haze with water spray jet.
- **6.3 Methods and material for containment and cleaning up:** 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 information on disposal.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Keep away from heat and direct sunlight.
Keep empty containers away from heat and ignition sources.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Beware: Container is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use.
Do not spray on flames or red-hot objects.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and containers:**
Observe official regulations on storing packagings with pressurised containers.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Store in cool, dry conditions in well sealed containers.
Protect from heat and direct sunlight.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:**
WEL: workplace exposure limit

811-97-2 1,1,1,2-tetrafluoroethane	
WEL (Great Britain)	Long-term value: 4240 mg/m ³ , 1000 ppm
67-63-0 propan-2-ol	
WEL (Great Britain)	Short-term value: 1250 mg/m ³ , 500 ppm Long-term value: 999 mg/m ³ , 400 ppm

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· DNELs**811-97-2 1,1,1,2-tetrafluoroethane**

Inhalative	DNEL (worker, long-term, systemic)	13936 mg/m ³ (human)
	DNEL (consumer, long-term, systemic)	2476 mg/m ³ (human)

· PNECs**811-97-2 1,1,1,2-tetrafluoroethane**

PNEC aqua (freshwater)	0.1 mg/L (.)
PNEC aqua (marine water)	0.01 mg/L (.)
PNEC STP	73 mg/L (.)
PNEC sediment (freshwater)	0.75 mg/kg sedim. dw (.)
PNEC aqua (intermittent releases)	1 mg/L (.)

· **Additional information:** The lists that were valid during the compilation were used as basis.

· 8.2 Exposure controls**· Personal protective equipment****· General protective and hygienic measures**

Do not eat, drink or smoke while working.
 Wash hands during breaks and at the end of the work.
 Do not inhale gases / fumes / aerosols.

· Breathing equipment:

Not necessary if room is well-ventilated.
 Use breathing protection in case of insufficient ventilation.
 Filter AX.

· Protection of hands:

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

Fluorocarbon rubber (Viton)
 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

In case of a layer thickness of 0.7 mm the penetration time is longer than 480 minutes.
 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 safety glasses.

· Body protection:

Wear antistatic clothing made from natural fibres (cotton) or heat-resistant synthetic fibres.

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SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

Form:	Aerosol
Colour:	yellowish clear
Odour:	Characteristic
Odour threshold:	Not determined.

· pH-value: Not determined.

· Change in condition

Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not applicable, as aerosol

· Flash point: max. -80 °C

· Inflammability (solid, gaseous) Not applicable.

· Ignition temperature:

Decomposition temperature: Not determined.

· Explosive properties: Not determined.

· Critical values for explosion:

Lower:	1.4 Vol %
Upper:	10.8 Vol %

· Vapour pressure: Not determined.

· Density 0.806 g/cm³

· 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:

· Organic solvents:

VOC EU	410 g/l
VOC EU	50.77 %

· 9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity

· 10.1 Reactivity No further relevant information available.

· 10.2 Chemical stability

· Thermal decomposition / conditions to be avoided:

Avoid direct sunlight, heat and ignition sources.

· 10.3 Possibility of hazardous reactions

Danger of containers bursting because of high vapour pressure

· 10.4 Conditions to avoid No further relevant information available.

· 10.5 Incompatible materials: Strong oxidizing agents

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- **10.6 Hazardous decomposition products:**
None in case of intended use and storage in compliance with instructions.

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
 - **Acute toxicity** Based on available data, the classification criteria are not met.
 - **LD/LC50 values that are relevant for classification:**
- | | | |
|--------------------------|------|----------------------|
| 75-28-5 isobutane | | |
| Inhalative | LC50 | 1237 mg/l/2h (mouse) |
- **Primary irritant effect:**
 - **Skin corrosion/irritation** Contact with liquified product can cause frostbite.
 - **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
 - **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
 - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
 - **Carcinogenicity** Based on available data, the classification criteria are not met.
 - **Reproductive toxicity** Based on available data, the classification criteria are not met.
 - **STOT-single exposure** Based on available data, the classification criteria are not met.
 - **STOT-repeated exposure** Based on available data, the classification criteria are not met.
 - **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
 - **Aquatic toxicity:**
- | | | |
|---|---|--|
| 811-97-2 1,1,1,2-tetrafluoroethane | | |
| EC50 (static) | 980 mg/l/48h (Daphnia magna) (EU C.2) | |
| LC50 | 450 mg/l/96h (Oncorhynchus mykiss) (EU C.1) | |
- **12.2 Persistence and degradability** No further relevant information available.
 - **Other information:** There are no data available about the preparation.
 - **12.3 Bioaccumulative potential** No further relevant information available.
 - **12.4 Mobility in soil** No further relevant information available.
 - **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 bodies or sewage system.
 - **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**
Proceed according to local, official regulations.
The waste code numbers mentioned are recommendations based on the probable use of the product.

- **European waste catalogue**

16 00 00	WASTES NOT OTHERWISE SPECIFIED IN THE LIST
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16 05 00	gases in pressure containers and discarded chemicals
16 05 04*	gases in pressure containers (including halons) containing hazardous substances
14 00 00	WASTE ORGANIC SOLVENTS, REFRIGERANTS AND PROPELLANTS (EXCEPT 07 AND 08)
14 06 00	waste organic solvents, refrigerants and foam/aerosol propellants
14 06 03*	other solvents and solvent mixtures

· **Uncleaned packagings:**· **Recommendation:**

After use the packaging shall be discharged completely.

Dispose of packaging according to regulations on the disposal of packagings.

SECTION 14: Transport information

· **14.1 UN-Number**· **ADR, IMDG, IATA**

UN1950

· **14.2 UN proper shipping name**· **ADR**

1950 AEROSOLS

· **IMDG**

AEROSOLS

· **IATA**

AEROSOLS, flammable

· **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

· **14.6 Special precautions for user**

Warning: Gases.

· **Kemler Number:**

23

· **EMS Number:**

F-D,S-U

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

Not applicable.

· **Transport/Additional information:**· **ADR**· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E0

Not permitted as Excepted Quantity

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· Transport category	2
· Tunnel restriction code	D
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· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
· 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**
- **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS02

- **Signal word** Danger
- **Hazard statements**
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
- **Precautionary statements**
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.
P410+P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category** P3a FLAMMABLE AEROSOLS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 150 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **Substances of very high concern (SVHC) according to REACH, Article 57**
None of the ingredients is contained.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they 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.
H225 Highly flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H319 Causes serious eye irritation.

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H336 May cause drowsiness or dizziness.

· Department issuing data specification sheet:

This Material Safety Data Sheet has been drawn up in cooperation with:

DEKRA Assurance Services GmbH, Hanomagstr. 12, D-30449 Hanover, Germany,

phone: (+49) 511 42079 - 0, reach@dekra.com.

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· 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)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

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 – Category 1

Aerosol 1: Aerosols – Category 1

Press. Gas C: Gases under pressure – Compressed gas

Press. Gas L: Gases under pressure – Liquefied gas

Flam. Liq. 2: Flammable liquids – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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