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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 06.08.2019 / 0015  
Replacing version dated / version: 21.11.2018 / 0014  
Valid from: 06.08.2019  
PDF print date: 06.08.2019  
ROST-ES 400 ML  
Art.: 9027397

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**Safety data sheet**  
**according to Regulation (EC) No 1907/2006, Annex II**

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

**1.1 Product identifier**

**ROST-ES 400 ML**  
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**1.2 Relevant identified uses of the substance or mixture and uses advised against**  
**Relevant identified uses of the substance or mixture:**

Rust remover  
Sector of use [SU]:  
SU 0 - Other  
SU 1 - Agriculture, forestry, fishery  
SU19 - Building and construction work  
SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)  
Chemical product category [PC]:  
PC24 - Lubricants, greases, release products  
Process category [PROC]:  
PROC11 - Non industrial spraying  
**Uses advised against:**  
No information available at present.

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



BTI Befestigungstechnik GmbH & Co. KG, Salzstr. 51, 74653 Ingelfingen, Germany  
Phone:+49 7940 141 141, Fax:+49 7940 141 9141  
info@bti.de, www.bti.de

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

**1.4 Emergency telephone number**

**Emergency information services / official advisory body:**

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**Telephone number of the company in case of emergencies:**

+49 (0) 700 / 24 112 112 (BRC)

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**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) 1272/2008 (CLP)**

<b>Hazard class</b>	<b>Hazard category</b>	<b>Hazard statement</b>
Eye Irrit.	2	H319-Causes serious eye irritation.
Skin Irrit.	2	H315-Causes skin irritation.
Aquatic Chronic	4	H413-May cause long lasting harmful effects to aquatic life.



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

## 2.2 Label elements

### Labeling according to Regulation (EC) 1272/2008 (CLP)



Danger

H319-Causes serious eye irritation. H315-Causes skin irritation. H413-May cause long lasting harmful effects to aquatic life. H222-Extremely flammable aerosol. H229-Pressurised container: May burst if heated.

P101-If medical advice is needed, have product container or label at hand. 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. P273-Avoid release to the environment. P280-Wear protective gloves / eye protection / face protection. P314-Get medical advice / attention if you feel unwell. P405-Store locked up. P410+P412-Protect from sunlight. Do not expose to temperatures exceeding 50 °C. P501-Dispose of contents / container to an approved waste disposal facility.

Without adequate ventilation, formation of explosive mixtures may be possible.

### 2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

Hazardous to drinking water, on escape of even small quantities.

## SECTION 3: Composition/information on ingredients

Aerosol

### 3.1 Substance

n.a.

### 3.2 Mixture

<b>Hydrocarbons, C11-C12, isoalkanes, &lt;2% aromatics</b>	
<b>Registration number (REACH)</b>	01-2119472146-39-XXXX
<b>Index</b>	---
<b>EINECS, ELINCS, NLP</b>	918-167-1 (REACH-IT List-No.)
<b>CAS</b>	---
<b>content %</b>	20-40



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<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Asp. Tox. 1, H304 Aquatic Chronic 4, H413
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<b>2-(2-butoxyethoxy)ethanol</b>	<b>Substance for which an EU exposure limit value applies.</b>
<b>Registration number (REACH)</b>	---
<b>Index</b>	603-096-00-8
<b>EINECS, ELINCS, NLP</b>	203-961-6
<b>CAS</b>	112-34-5
<b>content %</b>	10-25
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Eye Irrit. 2, H319

<b>(2-methoxymethylethoxy)propanol</b>	<b>Substance for which an EU exposure limit value applies.</b>
<b>Registration number (REACH)</b>	---
<b>Index</b>	---
<b>EINECS, ELINCS, NLP</b>	252-104-2
<b>CAS</b>	34590-94-8
<b>content %</b>	10-20
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	---

<b>2-butoxyethanol</b>	<b>Substance for which an EU exposure limit value applies.</b>
<b>Registration number (REACH)</b>	---
<b>Index</b>	603-014-00-0
<b>EINECS, ELINCS, NLP</b>	203-905-0
<b>CAS</b>	111-76-2
<b>content %</b>	5-20
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Acute Tox. 4, H302 Eye Irrit. 2, H319 Skin Irrit. 2, H315 Acute Tox. 4, H312 Acute Tox. 4, H332

<b>Hydrocarbons, C11-C13, isoalkanes, &lt;2% aromatics</b>	
<b>Registration number (REACH)</b>	01-2119456810-40-XXXX
<b>Index</b>	---
<b>EINECS, ELINCS, NLP</b>	920-901-0 (REACH-IT List-No.)
<b>CAS</b>	(90622-58-5)
<b>content %</b>	5-20
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Asp. Tox. 1, H304

<b>Hydrocarbons, C11-C14, isoalkanes, cyclics, &lt;2% aromatics</b>	
<b>Registration number (REACH)</b>	01-2119480162-45-XXXX
<b>Index</b>	---
<b>EINECS, ELINCS, NLP</b>	927-285-2 (REACH-IT List-No.)
<b>CAS</b>	---



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<b>content %</b>	5-20
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	Asp. Tox. 1, H304

<b>Carbon dioxide</b>	<b>Substance for which an EU exposure limit value applies.</b>
<b>Registration number (REACH)</b>	---
<b>Index</b>	---
<b>EINECS, ELINCS, NLP</b>	204-696-9
<b>CAS</b>	124-38-9
<b>content %</b>	1-5
<b>Classification according to Regulation (EC) 1272/2008 (CLP)</b>	---

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.  
 The substances named in this section are given with their actual, appropriate classification!  
 For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

First-aiders should ensure they are protected!  
 Never pour anything into the mouth of an unconscious person!

#### Inhalation

Remove person from danger area.  
 Supply person with fresh air and consult doctor according to symptoms.  
 If the person is unconscious, place in a stable side position and consult a doctor.

#### Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

#### Eye contact

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

#### Ingestion

Rinse the mouth thoroughly with water.  
 Do not induce vomiting. Consult doctor immediately.

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

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

Inhalation:

Irritation of the respiratory tract  
 Headaches  
 Dizziness  
 Nausea  
 Effects/damages the central nervous system  
 Unconsciousness

Liver and kidney damage

Skin contact:

Product removes fat.  
 Drying of the skin.  
 Dermatitis (skin inflammation)



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Skin resorption

Ingestion:

Irritation of the mouth and throat

Gastrointestinal disturbances

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

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

Symptomatic treatment.

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### **SECTION 5: Firefighting measures**

#### **5.1 Extinguishing media**

##### **Suitable extinguishing media**

CO<sub>2</sub>

Extinction powder

Water mist

Foam

##### **Unsuitable extinguishing media**

High volume water jet

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

In case of fire the following can develop:

Oxides of carbon

Hydrocarbons

Toxic gases

Danger of bursting (explosion) when heated

Explosive vapour/air or gas/air mixtures.

Dangerous vapours heavier than air.

In case of spreading near the ground, flashback to distance sources of ignition is possible.

#### **5.3 Advice for firefighters**

In case of fire and/or explosion do not breathe fumes.

Protective respirator with independent air supply.

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

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### **SECTION 6: Accidental release measures**

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

Remove possible causes of ignition - do not smoke.

Ensure sufficient supply of air.

Avoid inhalation, and contact with eyes or skin.

#### **6.2 Environmental precautions**

Prevent penetration into drains, cellars, working pits or other places in which accumulation could be hazardous.

Prevent surface and ground-water infiltration, as well as ground penetration.

#### **6.3 Methods and material for containment and cleaning up**

If spray or gas escapes, ensure ample fresh air is available.

Active substance:

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.

#### **6.4 Reference to other sections**

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

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## SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

### 7.1 Precautions for safe handling

#### 7.1.1 General recommendations

Avoid inhalation of the vapours.  
 Ensure good ventilation.  
 Keep away from sources of ignition - Do not smoke.  
 Take measures against electrostatic charging, if appropriate.  
 Do not use on hot surfaces.  
 Avoid contact with eyes or skin.  
 Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.  
 Observe directions on label and instructions for use.  
 Use working methods according to operating instructions.

#### 7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.  
 Wash hands before breaks and at end of work.  
 Keep away from food, drink and animal feedingstuffs.  
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

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

Keep out of access to unauthorised individuals.  
 Not to be stored in gangways or stair wells.  
 Observe special regulations for aerosols!  
 Do not store with flammable or self-igniting materials.  
 Observe special storage conditions.  
 Keep protected from direct sunlight and temperatures over 50°C.  
 Store in a well ventilated place.



### 7.3 Specific end use(s)

No information available at present.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Workplace exposure limit (WEL) of the total hydrocarbon solvent content of the mixture (RCP method according to EH40):  
 1000 mg/m<sup>3</sup>

 Chemical Name	Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	Content %:20-40
WEL-TWA: 1200 mg/m <sup>3</sup> (>=C7 normal and branched chain alkanes)	WEL-STEL: ---	---
Monitoring procedures:	<ul style="list-style-type: none"> <li>- Draeger - Hydrocarbons 2/a (81 03 581)</li> <li>- Draeger - Hydrocarbons 0,1%/c (81 03 571)</li> <li>- Compur - KITA-187 S (551 174)</li> </ul>	
BMGV: ---	Other information: ---	
 Chemical Name	2-(2-butoxyethoxy)ethanol	Content %:10-25

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WEL-TWA: 10 ppm (67,5 mg/m3) (WEL, EU)	WEL-STEL: 15 ppm (101,2 mg/m3) (WEL, EU)	---
Monitoring procedures: ---		
BMGV: ---	Other information: ---	
<b>Chemical Name</b>	(2-methoxymethylethoxy)propanol	Content %:10-20
WEL-TWA: 50 ppm (308 mg/m3) (WEL, EU)	WEL-STEL: ---	---
Monitoring procedures: ---		
BMGV: ---	Other information: Sk (WEL)	
<b>Chemical Name</b>	2-butoxyethanol	Content %:5-20
WEL-TWA: 25 ppm (123 mg/m3) (WEL), 20 ppm (98 mg/m3) (EU)	WEL-STEL: 50 ppm (246 mg/m3) (WEL, EU)	---
Monitoring procedures: <ul style="list-style-type: none"> <li>- Compur - KITA-190 U(C) (548 873)</li> <li>- DFG (D) (Lösungsmittelgemische 3), DFG (E) (Solvent mixtures 3) - 1998, 2002 - EU project BC/CEN/ENTR/000/2002-16 card 32-2 (2004)</li> </ul>		
BMGV: 240 mmol butoxyacetic acid/mol creatinine in urine, post shift (BMGV)	Other information: Sk (WEL)	
<b>Chemical Name</b>	Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	Content %:5-20
WEL-TWA: 1200 mg/m3 (>=C7 normal and branched chain alkanes)	WEL-STEL: ---	---
Monitoring procedures: <ul style="list-style-type: none"> <li>- Draeger - Hydrocarbons 2/a (81 03 581)</li> <li>- Draeger - Hydrocarbons 0,1%/c (81 03 571)</li> <li>- Compur - KITA-187 S (551 174)</li> </ul>		
BMGV: ---	Other information: ---	
<b>Chemical Name</b>	Hydrocarbons, C11-C14, isoalkanes, cyclics, <2% aromatics	Content %:5-20
WEL-TWA: 800 mg/m3	WEL-STEL: ---	---
Monitoring procedures: <ul style="list-style-type: none"> <li>- Draeger - Hydrocarbons 2/a (81 03 581)</li> <li>- Draeger - Hydrocarbons 0,1%/c (81 03 571)</li> <li>- Compur - KITA-187 S (551 174)</li> </ul>		
BMGV: ---	Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40)	
<b>Chemical Name</b>	Carbon dioxide	Content %:1-5
WEL-TWA: 5000 ppm (9150 mg/m3) (WEL), 5000 ppm (9000 mg/m3) (EU)	WEL-STEL: 15000 ppm (27400 mg/m3) (WEL)	---
Monitoring procedures: <ul style="list-style-type: none"> <li>- Compur - KITA-126 B (549 475)</li> <li>- Compur - KITA-126 SA (549 467)</li> <li>- Compur - KITA-126 SB (548 816)</li> <li>- Compur - KITA-126 SF (549 491)</li> <li>- Compur - KITA-126 SG (550 210)</li> <li>- Compur - KITA-126 SH (549 509)</li> <li>- Compur - KITA-126 UH (549 517)</li> <li>- Draeger - Carbon Dioxide 100/a (81 01 811)</li> <li>- Draeger - Carbon Dioxide 0,1%/a (CH 23 501)</li> </ul>		



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	<ul style="list-style-type: none"> <li>- Draeger - Carbon Dioxide 0,5%/a (CH 31 401)</li> <li>- Draeger - Carbon Dioxide 1%/a (CH 25 101)</li> <li>- Draeger - Carbon Dioxide 5%/A (CH 20 301)</li> <li>- OSHA ID-172 (Carbon dioxide in workplace atmospheres) - 1990</li> <li>- NIOSH 6603 (Carbon dioxide) - 1994</li> </ul>
BMGV: ---	Other information: ---

<b>2-(2-butoxyethoxy)ethanol</b>						
<b>Area of application</b>	<b>Exposure route / Environmental compartment</b>	<b>Effect on health</b>	<b>Descriptor</b>	<b>Value</b>	<b>Unit</b>	<b>Note</b>
	Environment - freshwater		PNEC	1,1	mg/l	
	Environment - marine		PNEC	0,11	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	11	mg/l	
	Environment - sediment, freshwater		PNEC	4,4	mg/kg	
	Environment - sediment, marine		PNEC	0,44	mg/kg	
	Environment - soil		PNEC	0,32	mg/kg	
	Environment - sewage treatment plant		PNEC	200	mg/l	
Consumer	Human - inhalation	Short term, local effects	DNEL	60,7	mg/m <sup>3</sup>	
Consumer	Human - dermal	Long term, systemic effects	DNEL	50	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	40,5	mg/m <sup>3</sup>	
Consumer	Human - oral	Long term, systemic effects	DNEL	5	mg/kg bw/d	
Consumer	Human - inhalation	Long term, local effects	DNEL	40,5	mg/m <sup>3</sup>	
Workers / employees	Human - oral	Long term, local effects	DNEL	67,5	mg/m <sup>3</sup>	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	89	mg/kg bw/d	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	83	mg/kg bw/d	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	101,2	mg/m <sup>3</sup>	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	67,5	mg/m <sup>3</sup>	

<b>2-butoxyethanol</b>
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Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	8,8	mg/l	
	Environment - marine		PNEC	0,88	mg/l	
	Environment - sediment, freshwater		PNEC	34,6	mg/kg dw	
	Environment - soil		PNEC	2,8	mg/kg dw	
	Environment - sewage treatment plant		PNEC	463	mg/l	
	Environment - sediment, marine		PNEC	3,46	mg/kg dw	
	Environment - sporadic (intermittent) release		PNEC	9,1	mg/l	
Consumer	Human - dermal	Short term, systemic effects	DNEL	44,5	mg/kg bw/d	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	426	mg/m <sup>3</sup>	
Consumer	Human - oral	Short term, systemic effects	DNEL	13,4	mg/kg bw/d	
Consumer	Human - inhalation	Short term, local effects	DNEL	123	mg/m <sup>3</sup>	
Consumer	Human - dermal	Long term, systemic effects	DNEL	38	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	49	mg/m <sup>3</sup>	
Consumer	Human - oral	Long term, systemic effects	DNEL	3,2	mg/kg bw/d	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	89	mg/kg bw/d	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	663	mg/m <sup>3</sup>	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	246	mg/m <sup>3</sup>	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	75	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	98	mg/m <sup>3</sup>	

<b>(2-methoxymethylethoxy)propanol</b>						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	19	mg/l	
	Environment - marine		PNEC	1,9	mg/l	



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	Environment - periodic release		PNEC	190	mg/l	
	Environment - sewage treatment plant		PNEC	4168	mg/l	
	Environment - sediment, marine		PNEC	7,02	mg/kg dry weight	
	Environment - sediment, freshwater		PNEC	70,2	mg/kg dry weight	
	Environment - soil		PNEC	2,74	mg/kg dry weight	
Consumer	Human - dermal	Long term, systemic effects	DNEL	15	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	37,2	mg/m <sup>3</sup>	
Consumer	Human - oral	Long term, systemic effects	DNEL	1,67	mg/kg	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	283	mg/kg	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	308	mg/m <sup>3</sup>	

Ⓔ WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage. \*\* = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

## 8.2 Exposure controls

### 8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.

Applies only if maximum permissible exposure values are listed here.

Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.

These are specified by e.g. BS EN 14042.

BS EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

### 8.2.2 Individual protection measures, such as personal protective equipment



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General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Solvent resistant protective gloves (EN 374).

Recommended

Protective nitrile gloves (EN 374).

Minimum layer thickness in mm:

$\geq 0,4$

Permeation time (penetration time) in minutes:

$\geq 480$

The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.

The recommended maximum wearing time is 50% of breakthrough time.

Protective hand cream recommended.

Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:

Normally not necessary.

If OES or MEL is exceeded.

Filter A2 P2 (EN 14387), code colour brown, white

Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:

Not applicable

Additional information on hand protection - No tests have been performed.

In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.

Selection of materials derived from glove manufacturer's indications.

Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.

Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.

In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.

The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

### **8.2.3 Environmental exposure controls**

No information available at present.

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## **SECTION 9: Physical and chemical properties**



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### 9.1 Information on basic physical and chemical properties

Physical state:	Aerosol. Active substance: liquid.
Colour:	Clear
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	Not determined
Flash point:	62 °C (DIN 53213 (Pensky-Martens, closed cup))
Evaporation rate:	Not determined
Flammability (solid, gas):	Not determined
Lower explosive limit:	0,9 Vol-%
Upper explosive limit:	Not determined
Vapour pressure:	1,3 hPa (20°C)
Vapour density (air = 1):	Not determined
Density:	0,866 g/cm <sup>3</sup> (20°C, DIN 51757)
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Insoluble
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	No
Auto-ignition temperature:	230 °C (Ignition temperature )
Decomposition temperature:	Not determined
Viscosity:	Not determined
Explosive properties:	Product is not explosive. Possible build up of explosive/highly flammable vapour/air mixture.
Oxidising properties:	Not determined

### 9.2 Other information

Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The product has not been tested.

### 10.2 Chemical stability

Stable with proper storage and handling.

### 10.3 Possibility of hazardous reactions

No dangerous reactions are known.

### 10.4 Conditions to avoid

Heating, open flame, ignition sources

Pressure increase will result in danger of bursting.

Electrostatic charge

### 10.5 Incompatible materials

Avoid contact with strong oxidizing agents.

### 10.6 Hazardous decomposition products

No decomposition when used as directed.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Possibly more information on health effects, see Section 2.1 (classification).

<b>ROST-ES 400 ML</b>						
<b>Art.: 9027397</b>						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	>2000	mg/kg			calculated value
Acute toxicity, by dermal route:	ATE	>2000	mg/kg			calculated value
Acute toxicity, by inhalation:	ATE	>20	mg/l/4h			calculated value, Vapours
Acute toxicity, by inhalation:	ATE	>5	mg/l/4h			calculated value, Aerosol
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

<b>Hydrocarbons, C11-C12, isoalkanes, &lt;2% aromatics</b>						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	Analogous conclusion
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	Analogous conclusion
Acute toxicity, by inhalation:	LC50	>5000	mg/m <sup>3</sup>	Rat	OECD 403 (Acute Inhalation Toxicity)	Analogous conclusion

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Skin corrosion/irritation:					OECD 404 (Acute Dermal Irritation/Corrosion)	Repeated exposure may cause skin dryness or cracking., Not irritant
Serious eye damage/irritation:					OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:						Not sensitising (Analogous conclusion)
Germ cell mutagenicity:						Analogous conclusion, Negative
Carcinogenicity:					OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Analogous conclusion, Negative
Specific target organ toxicity - repeated exposure (STOT-RE):						Analogous conclusion, No
Aspiration hazard:						Yes
Symptoms:						drowsiness, unconsciousness, headaches, dizziness

#### 2-(2-butoxyethoxy)ethanol

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	2764	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)

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Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 475 (Mammalian Bone Marrow Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Reproductive toxicity:				Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative, Analogous conclusion
Aspiration hazard:						No
Symptoms:						breathing difficulties, respiratory distress, diarrhoea, coughing, mucous membrane irritation, dizziness, watering eyes, nausea

<b>(2-methoxymethylethoxy)propanol</b>						
<b>Toxicity / effect</b>	<b>Endpoint</b>	<b>Value</b>	<b>Unit</b>	<b>Organism</b>	<b>Test method</b>	<b>Notes</b>
Acute toxicity, by oral route:	LD50	7500	mg/kg	Dog		
Acute toxicity, by oral route:	LD50	5130	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	19000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC50	55-60	mg/l/4h	Rat		
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Drying of the skin., Not irritant
Serious eye damage/irritation:						Mild irritant



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Respiratory or skin sensitisation:				Human being		No (skin contact)
Symptoms:						may cause headaches and vertigo., dizziness, drowsiness

<b>2-butoxyethanol</b>						
<b>Toxicity / effect</b>	<b>Endpoint</b>	<b>Value</b>	<b>Unit</b>	<b>Organism</b>	<b>Test method</b>	<b>Notes</b>
Acute toxicity, by oral route:	LD50	1746	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by oral route:	LD50	1300	mg/kg	Guinea pig		
Acute toxicity, by dermal route:	LD50	1060	mg/kg	Rabbit		
Acute toxicity, by dermal route:	LD50	2275	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	Does not conform with EU classification
Acute toxicity, by inhalation:	LC50	2-20	mg/l	Rat		
Skin corrosion/irritation:				Rabbit	Regulation (EC) 440/2008 B.4 (DERMAL IRRITATION/CORROSION)	Skin Irrit. 2, Product removes fat.
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitizing
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Carcinogenicity:				Rat	OECD 451 (Carcinogenicity Studies)	Negative
Carcinogenicity:	NOAEC	125	ppm	Mouse	OECD 451 (Carcinogenicity Studies)	Negative
Aspiration hazard:						No



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Symptoms:						acidosis, ataxia, breathing difficulties, respiratory distress, drowsiness, unconsciousness, annoyance, coughing, headaches, gastrointestinal disturbances, insomnia, mucous membrane irritation, dizziness
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	<69	mg/kg bw/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	
Specific target organ toxicity - repeated exposure (STOT-RE), dermal:	NOAEL	>150	mg/kg bw/d	Rabbit	OECD 411 (Subchronic Dermal Toxicity - 90-day Study)	

<b>Hydrocarbons, C11-C13, isoalkanes, &lt;2% aromatics</b>						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	24h
Acute toxicity, by inhalation:	LC50	>5000	mg/m <sup>3</sup> /8h	Rat	OECD 403 (Acute Inhalation Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant, Repeated exposure may cause skin dryness or cracking.
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant

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Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitising
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:				Rat	OECD 478 (Genetic Toxicology - Rodent dominant Lethal Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Carcinogenicity:				Rat	OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)	Negative
Specific target organ toxicity - repeated exposure (STOT-RE):						Analogous conclusion, Negative
Aspiration hazard:						Yes
Symptoms:						headaches, dizziness

<b>Hydrocarbons, C11-C14, isoalkanes, cyclics, &lt;2% aromatics</b>						
<b>Toxicity / effect</b>	<b>Endpoint</b>	<b>Value</b>	<b>Unit</b>	<b>Organism</b>	<b>Test method</b>	<b>Notes</b>
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>5000	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	>4951	mg/m <sup>3</sup> /4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Maximum achievable concentration
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant, Repeated exposure may cause skin dryness or cracking.



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Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitising
Aspiration hazard:						Yes
Symptoms:						headaches, dizziness

## SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

<b>ROST-ES 400 ML</b>							
<b>Art.: 9027397</b>							
<b>Toxicity / effect</b>	<b>Endpoint</b>	<b>Time</b>	<b>Value</b>	<b>Unit</b>	<b>Organism</b>	<b>Test method</b>	<b>Notes</b>
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							n.d.a.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Other adverse effects:							n.d.a.

<b>Hydrocarbons, C11-C12, isoalkanes, &lt;2% aromatics</b>							
<b>Toxicity / effect</b>	<b>Endpoint</b>	<b>Time</b>	<b>Value</b>	<b>Unit</b>	<b>Organism</b>	<b>Test method</b>	<b>Notes</b>
12.1. Toxicity to fish:	LL0	96h	1000	mg/l	Oncorhynchus mykiss		Analogous conclusion
12.1. Toxicity to daphnia:	EL0	48h	1000	mg/l	Daphnia magna		Analogous conclusion
12.1. Toxicity to algae:	EL0	72h	1000	mg/l	Pseudokirchneriella subcapitata		Analogous conclusion
12.2. Persistence and degradability:		28d	31,3	%			Analogous conclusion



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12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
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2-(2-butoxyethoxy)ethanol							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to algae:	NOEC/NOEL	96h	>100	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	48h	>=100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
Toxicity to bacteria:	EC10	30min	>1995	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
12.3. Bioaccumulative potential:	Log Pow		1			OECD 117 (Partition Coefficient (n-octanol/water) - HPLC method)	
12.1. Toxicity to fish:	LC50	96h	1300	mg/l	Lepomis macrochirus	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.2. Persistence and degradability:		28d	76	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	
12.2. Persistence and degradability:		28d	100	%	activated sludge	OECD 302 B (Inherent Biodegradability - Zahn-Wellens/EMPA Test)	



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12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Other information:							Does not contain any organically bound halogens which can contribute to the AOX value in waste water.

<b>(2-methoxymethylethoxy)propanol</b>							
<b>Toxicity / effect</b>	<b>Endpoint</b>	<b>Time</b>	<b>Value</b>	<b>Unit</b>	<b>Organism</b>	<b>Test method</b>	<b>Notes</b>
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
12.1. Toxicity to fish:	LC50	96h	>1000	mg/l	Poecilia reticulata	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	22d	>0,5	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to daphnia:	EC50	48h	1919	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	ErC50	96h	>969	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	>70	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable



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12.3. Bioaccumulative potential:	Log Pow		1,01			OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method)	
12.3. Bioaccumulative potential:	BCF		<100				
12.4. Mobility in soil:	Koc		0,28				
Toxicity to bacteria:	EC10	18h	4168	mg/l	Pseudomonas putida		

#### 2-butoxyethanol

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	1474	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOEC/NOEL	21d	>100	mg/l	Brachydanio rerio	OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study)	
12.1. Toxicity to daphnia:	EC50	48h	1550	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	100	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EC50	72h	1840	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	286	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	

12.2. Persistence and degradability:		28d	95	%		OECD 301 E (Ready Biodegradability - Modified OECD Screening Test)	Readily biodegradable
12.2. Persistence and degradability:		28d	>99	%		OECD 302 B (Inherent Biodegradability - Zahn-Wellens/EMP A Test)	Readily biodegradable
12.3. Bioaccumulative potential:	BCF		3,2				
12.3. Bioaccumulative potential:	Log Pow		0,83				Negative
12.4. Mobility in soil:	H (Henry)		0,0000016	atm*m 3/mol			
12.4. Mobility in soil:	Koc		67				Expert judgement
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC0	16h	700	mg/l	Pseudomonas putida	DIN 38412 T.8	

<b>Hydrocarbons, C11-C13, isoalkanes, &lt;2% aromatics</b>							
<b>Toxicity / effect</b>	<b>Endpoint</b>	<b>Time</b>	<b>Value</b>	<b>Unit</b>	<b>Organism</b>	<b>Test method</b>	<b>Notes</b>
12.1. Toxicity to fish:	LL50	96h	>1000	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOELR	28d	0,32	mg/l	Oncorhynchus mykiss	QSAR	
12.1. Toxicity to daphnia:	EL50	48h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOELR	21d	1	mg/l	Daphnia magna		
12.1. Toxicity to algae:	ErL50	72h	>1000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	



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12.1. Toxicity to algae:	NOELR	72h	1000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	31	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Not readily but inherent biodegradable.
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Water solubility:							Insoluble

Hydrocarbons, C11-C14, isoalkanes, cyclics, <2% aromatics							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>1000	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion
12.1. Toxicity to daphnia:	EC50	48h	>1000	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to daphnia:	NOELR	21d	1	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	Analogous conclusion
12.1. Toxicity to algae:	EL50	72h	>1000	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	Analogous conclusion
12.2. Persistence and degradability:		28d	77,6	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods





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**For the substance / mixture / residual amounts**

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.

Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)

16 05 04 gases in pressure containers (including halons) containing hazardous substances

14 06 03 other solvents and solvent mixtures

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

Take full aerosol cans to problem waste collection.

Take emptied aerosol cans to valuable material collection.

**For contaminated packing material**

Pay attention to local and national official regulations.

Recommendation:

Do not perforate, cut up or weld uncleaned container.

**SECTION 14: Transport information**


**General statements**

14.1. UN number: 1950

**Transport by road/by rail (ADR/RID)**

14.2. UN proper shipping name:

UN 1950 AEROSOLS

14.3. Transport hazard class(es): 2.1 

14.4. Packing group: -

Classification code: 5F

LQ: 1 L


14.5. Environmental hazards: Not applicable

Tunnel restriction code: D

**Transport by sea (IMDG-code)**

14.2. UN proper shipping name:

AEROSOLS

14.3. Transport hazard class(es): 2.1 

14.4. Packing group: -

EmS: F-D, S-U


Marine Pollutant: n.a

14.5. Environmental hazards: Not applicable

**Transport by air (IATA)**

14.2. UN proper shipping name:

Aerosols, flammable

14.3. Transport hazard class(es): 2.1 

14.4. Packing group: -

14.5. Environmental hazards: Not applicable

**14.6. Special precautions for user**

Persons employed in transporting dangerous goods must be trained.

All persons involved in transporting must observe safety regulations.

Precautions must be taken to prevent damage.

**14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code**

Freighted as packaged goods rather than in bulk, therefore not applicable.



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Minimum amount regulations have not been taken into account.  
Danger code and packing code on request.  
Comply with special provisions.

## SECTION 15: Regulatory information

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

Observe restrictions:

Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!

Regulation (EC) No 1907/2006, Annex XVII

2-(2-butoxyethoxy)ethanol

Comply with national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)!

Comply with trade association/occupational health regulations.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered according to storage, handling etc.):

Hazard categories	Notes to Annex I	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Upper-tier requirements
P3a	11.1	150 (netto)	500 (netto)

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2010/75/EU (VOC): 94,6 %

**REGULATION (EC) No 648/2004**

30 % and more

aliphatic hydrocarbons

Observe incident regulations.

### 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

Revised sections:

8

Employee training in handling dangerous goods is required.

These details refer to the product as it is delivered.

Employee instruction/training in handling hazardous materials is required.

**Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):**



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Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Eye Irrit. 2, H319	Classification according to calculation procedure.
Skin Irrit. 2, H315	Classification according to calculation procedure.
Aquatic Chronic 4, H413	Classification according to calculation procedure.
Aerosol 1, H222	Classification according to calculation procedure.
Aerosol 1, H229	Classification based on the form or physical state.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H312 Harmful in contact with skin.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H413 May cause long lasting harmful effects to aquatic life.

Eye Irrit. — Eye irritation

Skin Irrit. — Skin irritation

Aquatic Chronic — Hazardous to the aquatic environment - chronic

Aerosol — Aerosols

Asp. Tox. — Aspiration hazard

Acute Tox. — Acute toxicity - oral

Acute Tox. — Acute toxicity - dermal

Acute Tox. — Acute toxicity - inhalation

#### Any abbreviations and acronyms used in this document:

acc., acc. to according, according to

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOX Adsorbable organic halogen compounds

approx. approximately

Art., Art. no. Article number

ASTM ASTM International (American Society for Testing and Materials)

BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)

BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)

BSEF The International Bromine Council

bw body weight

CAS Chemical Abstracts Service

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR carcinogenic, mutagenic, reproductive toxic

DMEL Derived Minimum Effect Level

DNEL Derived No Effect Level

dw dry weight



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e.g. for example (abbreviation of Latin 'exempli gratia'), for instance  
EC European Community  
ECHA European Chemicals Agency  
EEC European Economic Community  
EINECS European Inventory of Existing Commercial Chemical Substances  
ELINCS European List of Notified Chemical Substances  
EN European Norms  
EPA United States Environmental Protection Agency (United States of America)  
etc. et cetera  
EU European Union  
EVAL Ethylene-vinyl alcohol copolymer  
Fax. Fax number  
gen. general  
GHS Globally Harmonized System of Classification and Labelling of Chemicals  
GWP Global warming potential  
IARC International Agency for Research on Cancer  
IATA International Air Transport Association  
IBC (Code) International Bulk Chemical (Code)  
IMDG-code International Maritime Code for Dangerous Goods  
incl. including, inclusive  
IUCLID International Uniform Chemical Information Database  
LQ Limited Quantities  
MARPOL International Convention for the Prevention of Marine Pollution from Ships  
n.a. not applicable  
n.av. not available  
n.c. not checked  
n.d.a. no data available  
OECD Organisation for Economic Co-operation and Development  
org. organic  
PBT persistent, bioaccumulative and toxic  
PE Polyethylene  
PNEC Predicted No Effect Concentration  
ppm parts per million  
PVC Polyvinylchloride  
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)  
REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.  
RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)  
SVHC Substances of Very High Concern  
Tel. Telephone  
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods  
VOC Volatile organic compounds  
vPvB very persistent and very bioaccumulative  
wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.  
No responsibility.