

GB

Page 1 of 15  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 27.07.2016 / 0013  
Replacing version dated / version: 23.10.2015 / 0012  
Valid from: 27.07.2016  
PDF print date: 29.11.2016  
Klimafresh 150 mL  
Art.: 4065

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

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

#### 1.1 Product identifier

**Klimafresh 150 mL**  
**Art.: 4065**

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

**Relevant identified uses of the substance or mixture:**

Odour inhibitor

**Uses advised against:**

No information available at present.

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

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LIQUI MOLY GmbH, Jerg-Wieland-Str. 4, 89081 Ulm-Lehr, Germany  
Phone:(+49) 0731-1420-0, Fax:(+49) 0731-1420-88

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 (LMR)

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Hazard class	Hazard category	Hazard statement
Aerosol	3	H229-Pressurised container: May burst if heated.

#### 2.2 Label elements

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

Warning

H229-Pressurised container: May burst if heated.

P102-Keep out of reach of children.

P210-Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P251-Do not pierce or burn, even after use.

P410+P412-Protect from sunlight. Do not expose to temperatures exceeding 50 °C.

33,25 % by mass of the contents are flammable.

#### 2.3 Other hazards

GB

Page 2 of 15  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 27.07.2016 / 0013  
 Replacing version dated / version: 23.10.2015 / 0012  
 Valid from: 27.07.2016  
 PDF print date: 29.11.2016  
 Klimafresh 150 mL  
 Art.: 4065

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 %).

### SECTION 3: Composition/information on ingredients

Aerosol

#### 3.1 Substance

n.a.

#### 3.2 Mixture

Ethanol	Substance with specific conc. limit(s) acc. to REACH-registration
Registration number (REACH)	01-2119457610-43-XXXX
Index	603-002-00-5
EINECS, ELINCS, NLP	200-578-6
CAS	64-17-5
content %	20-40
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 2, H225 Eye Irrit. 2, H319

Dimethyl ether	Substance for which an EU exposure limit value applies.
Registration number (REACH)	01-2119472128-37-XXXX
Index	603-019-00-8
EINECS, ELINCS, NLP	204-065-8
CAS	115-10-6
content %	1-5
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Gas 1, H220

Carbon dioxide	Substance for which an EU exposure limit value applies.
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	204-696-9
CAS	124-38-9
content %	1-2,5
Classification according to Regulation (EC) 1272/2008 (CLP)	---

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 3.1/3.2 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

##### 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

Remove contact lenses.

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

##### Ingestion

Typically no exposure pathway.

Rinse the mouth thoroughly with water.

GB

Page 3 of 15  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 27.07.2016 / 0013  
Replacing version dated / version: 23.10.2015 / 0012  
Valid from: 27.07.2016  
PDF print date: 29.11.2016  
Klimafresh 150 mL  
Art.: 4065

Give copious water to drink - 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.  
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**

n.c.

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

#### **5.1 Extinguishing media**

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

CO2  
Dry extinguisher  
Water jet spray

##### **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  
Hydrofluoric acid  
Toxic pyrolysis products.  
Danger of bursting (explosion) when heated

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

In case of fire and/or explosion do not breathe fumes.  
Protective respirator with independent air supply.  
According to size of fire  
Full protection, if necessary.  
Cool container at risk with water.  
Dispose of contaminated extinction water according to official regulations.

### **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 contact with eyes or skin.  
If applicable, caution - risk of slipping.

#### **6.2 Environmental precautions**

Prevent surface and ground-water infiltration, as well as ground penetration.  
Prevent penetration into drains, cellars, working pits or other places in which accumulation could be hazardous.  
If accidental entry into drainage system occurs, inform responsible authorities.

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

If spray or gas escapes, ensure ample fresh air is available.  
Without adequate ventilation, formation of explosive mixtures may be possible.  
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.

### **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**

Ensure good ventilation.  
Avoid inhalation of the vapours.  
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

GB

Page 4 of 15  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 27.07.2016 / 0013  
 Replacing version dated / version: 23.10.2015 / 0012  
 Valid from: 27.07.2016  
 PDF print date: 29.11.2016  
 Klimafresh 150 mL  
 Art.: 4065

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.  
 Store product closed and only in original packing.  
 Not to be stored in gangways or stair wells.  
 Observe special regulations for aerosols!  
 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

Chemical Name	Ethanol	Content %:20-40
WEL-TWA: 1000 ppm (1920 mg/m <sup>3</sup> )	WEL-STEL: ---	---
Monitoring procedures:	<ul style="list-style-type: none"> <li>- Compur - KITA-104 SA (549 210)</li> <li>- Draeger - Alcohol 25/a Ethanol (81 01 631)</li> <li>- DFG (D) (Lösungsmittelgemische), Methode Nr. 6 DFG (E) (Solvent mixtures) - 1998,</li> <li>- 2002 - EU project BC/CEN/ENTR/000/2002-16 card 63-2 (2004)</li> <li>- Draeger - Alcohol 100/a (CH 29 701)</li> </ul>	
BMGV: ---	Other information: ---	
Chemical Name	Dimethyl ether	Content %:1-5
WEL-TWA: 400 ppm (766 mg/m <sup>3</sup> ) (WEL), 1000 ppm (1920 mg/m <sup>3</sup> ) (EU)	WEL-STEL: 500 ppm (958 mg/m <sup>3</sup> ) (WEL)	---
Monitoring procedures:	- Compur - KITA-123 S (549 129)	
BMGV: ---	Other information: ---	
Chemical Name	Carbon dioxide	Content %:1-2,5
WEL-TWA: 5000 ppm (9150 mg/m <sup>3</sup> ) (WEL), 5000 ppm (9000 mg/m <sup>3</sup> ) (EU)	WEL-STEL: 15000 ppm (27400 mg/m <sup>3</sup> ) (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> <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: ---	

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period). | 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.

GB

Page 5 of 15  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 27.07.2016 / 0013  
 Replacing version dated / version: 23.10.2015 / 0012  
 Valid from: 27.07.2016  
 PDF print date: 29.11.2016  
 Klimafresh 150 mL  
 Art.: 4065

Ethanol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,96	mg/l	
	Environment - marine		PNEC	0,79	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	2,75	mg/l	
	Environment - sewage treatment plant		PNEC	580	mg/l	
	Environment - sediment, freshwater		PNEC	3,6	mg/kg	
	Environment - soil		PNEC	0,63	mg/kg dry weight	
	Environment - oral (animal feed)		PNEC	0,72	mg/kg feed	
	Environment - sediment, marine		PNEC	2,9	mg/kg dry weight	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	950	mg/m3	
Consumer	Human - dermal	Short term, local effects	DNEL	950	mg/m3	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	114	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	87	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	206	mg/kg bw/d	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	1900	mg/m3	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	950	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	343	mg/kg bw/d	

Dimethyl ether						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,155	mg/l	
	Environment - sediment, freshwater		PNEC	0,681	mg/kg	
	Environment - soil		PNEC	0,045	mg/kg	
	Environment - sewage treatment plant		PNEC	160	mg/l	
	Environment - marine		PNEC	0,016	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	1,549	mg/l	
	Environment - sediment, marine		PNEC	0,069	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	471	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	1894	mg/m3	

trans-1,3,3,3-tetrafluoroprop-1-ene						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,1	mg/l	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	3902	mg/m3	

GB

Page 6 of 15  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 27.07.2016 / 0013  
 Replacing version dated / version: 23.10.2015 / 0012  
 Valid from: 27.07.2016  
 PDF print date: 29.11.2016  
 Klimafresh 150 mL  
 Art.: 4065

Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	830	mg/m3	
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## 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. EN 14042.  
 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

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:  
 Chemical resistant protective gloves (EN 374).  
 Recommended  
 Protective nitrile gloves (EN 374)  
 Minimum layer thickness in mm:  
 0,5  
 Permeation time (penetration time) in minutes:  
 >=  
 Protective hand cream recommended.  
 The breakthrough times determined in accordance with EN 374 Part 3 were not obtained under practical conditions.  
 The recommended maximum wearing time is 50% of breakthrough time.

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  
 In case of emergency:  
 Respiratory protection appliance (insulation device) (e.g. EN 137 or EN 138)

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 a 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.

## SECTION 9: Physical and chemical properties

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 27.07.2016 / 0013  
 Replacing version dated / version: 23.10.2015 / 0012  
 Valid from: 27.07.2016  
 PDF print date: 29.11.2016  
 Klimafresh 150 mL  
 Art.: 4065

## 9.1 Information on basic physical and chemical properties

Physical state:	Aerosol. Active substance: liquid.
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	Not determined
pH-value:	9-10
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	n.a.
Flash point:	>65 °C
Evaporation rate:	n.a.
Flammability (solid, gas):	n.a.
Lower explosive limit:	3,5 Vol-%
Upper explosive limit:	15 Vol-%
Vapour pressure:	7800 hPa (20°C)
Vapour density (air = 1):	Not determined
Density:	0,94 g/cm <sup>3</sup> (20°C)
Bulk density:	Not determined
Solubility(ies):	Not determined
Water solubility:	Not miscible
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	425 °C (Ignition temperature )
Auto-ignition temperature:	No
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:	No

## 9.2 Other information

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

## 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.

### 10.5 Incompatible materials

Avoid contact with strong oxidizing agents.

### 10.6 Hazardous decomposition products

No decomposition when used as directed.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

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

Klimafresh 150 mL

Art.: 4065

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.



GB

Page 8 of 15  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 27.07.2016 / 0013  
 Replacing version dated / version: 23.10.2015 / 0012  
 Valid from: 27.07.2016  
 PDF print date: 29.11.2016  
 Klimafresh 150 mL  
 Art.: 4065

Acute toxicity, by inhalation:						n.d.a.
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.

Ethanol						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	10470	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	95,6-125	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Mild irritant
Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	Not sensitising
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Carcinogenicity:	NOAEL	>3000	mg/kg	Rat	OECD 451 (Carcinogenicity Studies)	24 mon
Reproductive toxicity:	NOAEL	5200	mg/kg bw/d	Rat		
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	1730	mg/kg/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Female
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAL	>20	mg/l	Rat	OECD 403 (Acute Inhalation Toxicity)	Male
Aspiration hazard:				Human being		No indications of such an effect.
Symptoms:						respiratory distress, drowsiness, unconsciousness, drop in blood pressure, vomiting, coughing, headaches, intoxication, drowsiness, mucous membrane irritation, dizziness, nausea



GB

Page 9 of 15  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 27.07.2016 / 0013  
 Replacing version dated / version: 23.10.2015 / 0012  
 Valid from: 27.07.2016  
 PDF print date: 29.11.2016  
 Klimafresh 150 mL  
 Art.: 4065

Experiences in humans:						Excessive alcohol consumption during pregnancy induces the foetus alcohol syndrome (reduced weight at birth, physical and mental disorders)., There is no sign that this syndrome is also caused by dermal or inhalative absorption.
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Dimethyl ether						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC50	164	mg/l/4h	Rat		
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 477 (Genetic Toxicology - Sex-Linked Recessive Lethal Test in Drosophila melanogaster)	Negative
Carcinogenicity:						Negative
Reproductive toxicity:						Negative
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEC	47106		Rat	OECD 452 (Chronic Toxicity Studies)	Negative(2 a)
Symptoms:						unconsciousness , headaches, mucous membrane irritation, dizziness, nausea and vomiting.

Carbon dioxide						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Symptoms:						unconsciousness , blisters by skin-contact, vomiting, frostbite, annoyance, palpitations, itching, headaches, cramps, ear noises, dizziness

**SECTION 12: Ecological information**

GB

Page 10 of 15  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 27.07.2016 / 0013  
 Replacing version dated / version: 23.10.2015 / 0012  
 Valid from: 27.07.2016  
 PDF print date: 29.11.2016  
 Klimafresh 150 mL  
 Art.: 4065

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

<b>Klimafresh 150 mL</b>							
<b>Art.: 4065</b>							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
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:							Product is slightly volatile.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Other adverse effects:							n.d.a.

<b>Ethanol</b>							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	13000	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	LC50	48h	12340	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	275	mg/l	Chlorella vulgaris	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:			97	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	
12.3. Bioaccumulative potential:	Log Pow		-0,32				Bioaccumulation is unlikely (LogPow < 1).
12.3. Bioaccumulative potential:	BCF		0,66 - 3,2				
12.4. Mobility in soil:	H (Henry)		0,000138				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:			440	mg/l			
Other organisms:	NOEC/NOEL		280	mg/l	Lemna gibba	OECD 201 (Alga, Growth Inhibition Test)	

<b>Dimethyl ether</b>							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	2695	mg/l	Pimephales promelas		
12.1. Toxicity to fish:	LC50	96h	3082	mg/l	Salmo gairdneri		
12.1. Toxicity to fish:	LC50	96h	>4000	mg/l	Poecilia reticulata		
12.1. Toxicity to daphnia:	EC50	48h	>4000	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC0	96h	154,9	mg/l	Chlorella vulgaris	QSAR	
12.2. Persistence and degradability:		28d	5	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Not readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		-0,07				Bioaccumulation is unlikely (LogPow < 1). 25°C (pH 7)

GB

Page 11 of 15  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 27.07.2016 / 0013  
 Replacing version dated / version: 23.10.2015 / 0012  
 Valid from: 27.07.2016  
 PDF print date: 29.11.2016  
 Klimafresh 150 mL  
 Art.: 4065

12.4. Mobility in soil:	H (Henry)		518,6	Pa*m3/mol			No adsorption in soil.
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC10		>1600	mg/l	Pseudomonas putida		
Water solubility:			45,60	mg/l			25°C

Carbon dioxide							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	35	mg/l	Salmo gairdneri		
12.6. Other adverse effects:							Greenhouse effect
Other information:	Log Kow		0,83				

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### 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

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.

15 01 04 metallic packaging

15 01 10 packaging containing residues of or contaminated by hazardous substances

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): 2.2

14.4. Packing group: -

Classification code: 5A

LQ (ADR 2015): 1 L

14.5. Environmental hazards: Not applicable

Tunnel restriction code: E

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

14.2. UN proper shipping name:

AEROSOLS

14.3. Transport hazard class(es): 2.2

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:



(GB)

Page 12 of 15  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 27.07.2016 / 0013  
 Replacing version dated / version: 23.10.2015 / 0012  
 Valid from: 27.07.2016  
 PDF print date: 29.11.2016  
 Klimafresh 150 mL  
 Art.: 4065

Aerosols, non-flammable  
 14.3. Transport hazard class(es): 2.2  
 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.  
 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 trade association/occupational health regulations.

Directive 2010/75/EU (VOC): 35,5 %

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

less than 5 %  
 halogenated hydrocarbons

perfumes  
 LAURYLAMINE DIPROPYLENEDIAMINE  
 BENZISOTHIAZOLINONE  
 METHYLISOTHIAZOLINONE

Observe incident regulations.

Observe youth employment law (German regulation).

**15.2 Chemical safety assessment**

A chemical safety assessment is not provided for mixtures.

**SECTION 16: Other information**

Revised sections: 8  
 These details refer to the product as it is delivered.  
 Employee instruction/training in handling hazardous materials is required.  
 Employee training in handling dangerous goods is required.

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

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Aerosol 3, H229	Classification according to calculation procedure.

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).  
 H225 Highly flammable liquid and vapour.  
 ----  
 H319 Causes serious eye irritation.  
 H220 Extremely flammable gas.

Page 13 of 15  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 27.07.2016 / 0013  
 Replacing version dated / version: 23.10.2015 / 0012  
 Valid from: 27.07.2016  
 PDF print date: 29.11.2016  
 Klimafresh 150 mL  
 Art.: 4065

Aerosol — Aerosols  
 Flam. Liq. — Flammable liquid  
 Eye Irrit. — Eye irritation  
 Flam. Gas — Flammable gases (including chemically unstable gases)

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

AC Article Categories  
 acc., acc. to according, according to  
 ACGIH American Conference of Governmental Industrial Hygienists  
 ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 AOEL Acceptable Operator Exposure Level  
 AOX Adsorbable organic halogen compounds  
 approx. approximately  
 Art., Art. no. Article number  
 ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)  
 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)  
 BCF Bioconcentration factor  
 BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)  
 BHT Butylhydroxytoluol (= 2,6-Di-*t*-butyl-4-methyl-phenol)  
 BMGV Biological monitoring guidance value (EH40, UK)  
 BOD Biochemical oxygen demand  
 BSEF Bromine Science and Environmental Forum  
 bw body weight  
 CAS Chemical Abstracts Service  
 CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids  
 CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques  
 CIPAC Collaborative International Pesticides Analytical Council  
 CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)  
 CMR carcinogenic, mutagenic, reproductive toxic  
 COD Chemical oxygen demand  
 CTFA Cosmetic, Toiletry, and Fragrance Association  
 DMEL Derived Minimum Effect Level  
 DNEL Derived No Effect Level  
 DOC Dissolved organic carbon  
 DT50 Dwell Time - 50% reduction of start concentration  
 DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)  
 dw dry weight  
 e.g. for example (abbreviation of Latin 'exempli gratia'), for instance  
 EC European Community  
 ECHA European Chemicals Agency  
 EEA European Economic Area  
 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)  
 ERC Environmental Release Categories  
 ES Exposure scenario  
 etc. et cetera  
 EU European Union  
 EWC European Waste Catalogue  
 Fax. Fax number  
 gen. general  
 GHS Globally Harmonized System of Classification and Labelling of Chemicals  
 GWP Global warming potential  
 HET-CAM Hen's Egg Test - Chorionallantoic Membrane  
 HGWP Halocarbon Global Warming Potential

Page 14 of 15  
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
 Revision date / version: 27.07.2016 / 0013  
 Replacing version dated / version: 23.10.2015 / 0012  
 Valid from: 27.07.2016  
 PDF print date: 29.11.2016  
 Klimafresh 150 mL  
 Art.: 4065

IARC International Agency for Research on Cancer  
 IATA International Air Transport Association  
 IBC Intermediate Bulk Container  
 IBC (Code) International Bulk Chemical (Code)  
 IC Inhibitory concentration  
 IMDG-code International Maritime Code for Dangerous Goods  
 incl. including, inclusive  
 IUCLID International Uniform Chemical Information Database  
 LC lethal concentration  
 LC50 lethal concentration 50 percent kill  
 LCLo lowest published lethal concentration  
 LD Lethal Dose of a chemical  
 LD50 Lethal Dose, 50% kill  
 LDLo Lethal Dose Low  
 LOAEL Lowest Observed Adverse Effect Level  
 LOEC Lowest Observed Effect Concentration  
 LOEL Lowest Observed Effect Level  
 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  
 NIOSH National Institute of Occupational Safety and Health (United States of America)  
 NOAEC No Observed Adverse Effective Concentration  
 NOAEL No Observed Adverse Effect Level  
 NOEC No Observed Effect Concentration  
 NOEL No Observed Effect Level  
 ODP Ozone Depletion Potential  
 OECD Organisation for Economic Co-operation and Development  
 org. organic  
 PAH polycyclic aromatic hydrocarbon  
 PBT persistent, bioaccumulative and toxic  
 PC Chemical product category  
 PE Polyethylene  
 PNEC Predicted No Effect Concentration  
 POCP Photochemical ozone creation potential  
 ppm parts per million  
 PROC Process category  
 PTFE Polytetrafluorethylene  
 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)  
 SADT Self-Accelerating Decomposition Temperature  
 SAR Structure Activity Relationship  
 SU Sector of use  
 SVHC Substances of Very High Concern  
 Tel. Telephone  
 ThOD Theoretical oxygen demand  
 TOC Total organic carbon  
 TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)  
 UN RTDG United Nations Recommendations on the Transport of Dangerous Goods  
 VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))  
 VOC Volatile organic compounds  
 vPvB very persistent and very bioaccumulative  
 WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).  
 WHO World Health Organization  
 wwt wet weight

GB

Page 15 of 15  
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II  
Revision date / version: 27.07.2016 / 0013  
Replacing version dated / version: 23.10.2015 / 0012  
Valid from: 27.07.2016  
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Klimafresh 150 mL  
Art.: 4065

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.

These statements were made by:

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