

## 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

**Marderspray**  
**Marten Spray**

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

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

Biocide

**Uses advised against:**

No information available at present.

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

LIQUI MOLY GmbH  
Jerg-Wieland-Str. 4  
89081 Ulm-Lehr  
Tel.: (+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      | 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)**

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Danger

H222-Extremely flammable aerosol. 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. 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.

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 %).

Possible build up of explosive/highly flammable vapour/air mixture.

Danger of bursting (explosion) when heated

## SECTION 3: Composition/information on ingredients

Aerosol

### 3.1 Substances

n.a.

### 3.2 Mixtures

| 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, REACH-IT List-No.                                 | 204-065-8   |
| CAS  | 115-10-6  |
| content %  | 30-50   |
| Classification according to Regulation (EC) 1272/2008 (CLP), M-factors | Flam. Gas 1A, H220                                      |

| 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, REACH-IT List-No.                                 | 200-578-6  |
| CAS  | 64-17-5  |
| content %  | 10-30  |
| Classification according to Regulation (EC) 1272/2008 (CLP), M-factors | Flam. Liq. 2, H225<br>Eye Irrit. 2, H319                           |

| 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran |                       |
|--|-----------------------|
| Registration number (REACH)                                    | 01-2119488227-29-XXXX |
| Index  | 603-212-00-7          |
| EINECS, ELINCS, NLP, REACH-IT List-No.                         | 214-946-9             |
| CAS  | 1222-05-5             |

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|   |  |
|---|--|
| <b>content %</b>  | 0,1-<0,25  |
| <b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b> | Aquatic Acute 1, H400 (M=1)<br>Aquatic Chronic 1, H410 (M=1) |

|   |   |
|---|---|
| <b>Geraniol</b>   |   |
| <b>Registration number (REACH)</b>  | ---   |
| <b>Index</b>  | 603-241-00-5  |
| <b>EINECS, ELINCS, NLP, REACH-IT List-No.</b>                                 | 203-377-1   |
| <b>CAS</b>  | 106-24-1  |
| <b>content %</b>  | 0,03  |
| <b>Classification according to Regulation (EC) 1272/2008 (CLP), M-factors</b> | Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317 |

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

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.  
 Do not induce vomiting - 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

Symptomatic treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media

CO2  
 Dry extinguisher  
 Water jet spray  
 Alcohol resistant 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  
 Toxic gases

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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.  
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.  
Keep away from sources of ignition - Do not smoke.  
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.  
Store product closed and only in original packing.  
Not to be stored in gangways or stair wells.  
Do not store with oxidizing agents.  
Observe special regulations for aerosols!  
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)

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No information available at present.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

| Chemical Name  | Dimethyl ether                                   | Content %:             |
|--|--|------------------------|
| 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                               | Ethanol  | Content %:             |
|---|--|------------------------|
| WEL-TWA: 1000 ppm (1920 mg/m <sup>3</sup> ) | WEL-STEL: ---  | ---                    |
| Monitoring procedures:                      | - Draeger - Alcohol 25/a Ethanol (81 01 631)<br>- Compur - KITA-104 SA (549 210)<br>DFG (D) (Loesungsmittelgemische), Methode Nr. 6 DFG (E) (Solvent mixtures) - 2013,<br>2002 - EU project BC/CEN/ENTR/000/2002-16 card 63-2 (2004)<br>DFG Meth. Nr. 2 (D) (Loesungsmittelgemische) - 2013 - EU project<br>BC/CEN/ENTR/000/2002-16 card 63-2 (2004)<br>DFG Meth. Nr. 3 (D) (Loesungsmittelgemische) - 2013 - EU project<br>BC/CEN/ENTR/000/2002-16 card 63-2 (2004) |                        |
| BMGV: ---                                   |  | Other information: --- |

  

| Chemical Name   | Propane-1,2-diol                      | Content %:             |
|---|---------------------------------------|------------------------|
| WEL-TWA: 150 ppm (474 mg/m <sup>3</sup> ) (total, vapour and particulates), 10 mg/m <sup>3</sup> (particulates) | WEL-STEL: ---                         | ---                    |
| Monitoring procedures:  | - Draeger - Alcohol 100/a (CH 29 701) |                        |
| BMGV: ---   |                                       | Other information: --- |

| 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/m <sup>3</sup> |      |
| Workers / employees | Human - inhalation                                   | Long term, systemic effects | DNEL       | 1894  | mg/m <sup>3</sup> |      |

| 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 |      |

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|                     |                                      |                             |      |      |                   |  |
|---------------------|--------------------------------------|-----------------------------|------|------|-------------------|--|
|                     | 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 | 0,38 | g/kg feed         |  |
|                     | Environment - sediment, marine       |                             | PNEC | 2,9  | mg/kg dry weight  |  |
| Consumer            | Human - dermal                       | Short term, local effects   | DNEL | 950  | mg/m <sup>3</sup> |  |
| Consumer            | Human - inhalation                   | Long term, systemic effects | DNEL | 114  | mg/m <sup>3</sup> |  |
| Consumer            | Human - oral                         | Long term, systemic effects | DNEL | 87   | mg/kg             |  |
| Consumer            | Human - dermal                       | Long term, systemic effects | DNEL | 206  | mg/kg bw/d        |  |
| Consumer            | Human - inhalation                   | Short term, local effects   | DNEL | 950  | mg/m <sup>3</sup> |  |
| Workers / employees | Human - dermal                       | Long term, systemic effects | DNEL | 343  | mg/kg bw/d        |  |
| Workers / employees | Human - inhalation                   | Long term, systemic effects | DNEL | 950  | mg/m <sup>3</sup> |  |
| Workers / employees | Human - inhalation                   | Short term, local effects   | DNEL | 1900 | mg/m <sup>3</sup> |  |

**1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran**

| Area of application | Exposure route / Environmental compartment           | Effect on health            | Descriptor | Value | Unit              | Note |
|---------------------|--|-----------------------------|------------|-------|-------------------|------|
|                     | Environment - freshwater                             |                             | PNEC       | 4,4   | µg/l              |      |
|                     | Environment - marine                                 |                             | PNEC       | 0,44  | µg/l              |      |
|                     | Environment - water, sporadic (intermittent) release |                             | PNEC       | 47    | µg/l              |      |
|                     | Environment - sewage treatment plant                 |                             | PNEC       | 1     | mg/l              |      |
|                     | Environment - sediment, freshwater                   |                             | PNEC       | 2     | mg/kg             |      |
|                     | Environment - sediment, marine                       |                             | PNEC       | 0,394 | mg/kg             |      |
|                     | Environment - soil                                   |                             | PNEC       | 0,31  | mg/kg             |      |
|                     | Environment - oral (animal feed)                     |                             | PNEC       | 3,3   | mg/kg             |      |
| Consumer            | Human - inhalation                                   | Long term, systemic effects | DNEL       | 1,3   | mg/m <sup>3</sup> |      |
| Consumer            | Human - dermal                                       | Long term, systemic effects | DNEL       | 14,43 | mg/kg bw/d        |      |
| Consumer            | Human - oral   | Long term, systemic effects | DNEL       | 0,75  | mg/kg bw/d        |      |
| Workers / employees | Human - inhalation                                   | Long term, systemic effects | DNEL       | 5,29  | mg/m <sup>3</sup> |      |
| Workers / employees | Human - dermal                                       | Long term, systemic effects | DNEL       | 28,85 | mg/kg bw/d        |      |

**Geraniol**

| Area of application | Exposure route / Environmental compartment | Effect on health | Descriptor | Value | Unit | Note |
|---------------------|--|------------------|------------|-------|------|------|
|---------------------|--|------------------|------------|-------|------|------|

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|                     |                    |                             |      |       |              |  |
|---------------------|--------------------|-----------------------------|------|-------|--------------|--|
| Consumer            | Human - dermal     | Long term, systemic effects | DNEL | 7,5   | mg/kg bw/d   |  |
| Consumer            | Human - oral       | Long term, systemic effects | DNEL | 13,75 | mg/kg        |  |
| Consumer            | Human - inhalation | Long term, systemic effects | DNEL | 47,8  | mg/m3        |  |
| Consumer            | Human - dermal     | Long term, local effects    | DNEL | 11,8  | mg/cm2       |  |
| Workers / employees | Human - dermal     | Long term, local effects    | DNEL | 11,8  | mg/cm2       |  |
| Workers / employees | Human - dermal     | Long term, systemic effects | DNEL | 12,5  | mg/kg bw/day |  |
| Workers / employees | Human - inhalation | Long term, systemic effects | DNEL | 161   | mg/m3        |  |

| Propane-1,2-diol    |  |                             |            |       |       |      |
|---------------------|--|-----------------------------|------------|-------|-------|------|
| Area of application | Exposure route / Environmental compartment           | Effect on health            | Descriptor | Value | Unit  | Note |
|                     | Environment - freshwater                             |                             | PNEC       | 260   | mg/l  |      |
|                     | Environment - marine                                 |                             | PNEC       | 26    | mg/l  |      |
|                     | Environment - sewage treatment plant                 |                             | PNEC       | 20000 | mg/l  |      |
|                     | Environment - sediment, freshwater                   |                             | PNEC       | 572   | mg/kg |      |
|                     | Environment - sediment, marine                       |                             | PNEC       | 57,2  | mg/kg |      |
|                     | Environment - soil                                   |                             | PNEC       | 50    | mg/kg |      |
|                     | Environment - water, sporadic (intermittent) release |                             | PNEC       | 183   | mg/l  |      |
| Consumer            | Human - dermal                                       | Long term, systemic effects | DNEL       | 213   | mg/kg |      |
| Consumer            | Human - inhalation                                   | Long term, systemic effects | DNEL       | 50    | mg/m3 |      |
| Consumer            | Human - oral   | Long term, systemic effects | DNEL       | 85    | mg/kg |      |
| Consumer            | Human - inhalation                                   | Long term, local effects    | DNEL       | 10    | mg/m3 |      |
| Workers / employees | Human - inhalation                                   | Long term, systemic effects | DNEL       | 168   | mg/m3 |      |
| Workers / employees | Human - inhalation                                   | Long term, local effects    | DNEL       | 10    | mg/m3 |      |

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 (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (11) = Inhalable fraction (Directive 2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (Directive 2004/37/CE). | 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.  
 (13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14) = The substance can cause sensitisation of the skin (Directive 2004/37/CE).

## 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.

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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 gloves made of fluorocarbon rubber (EN 374).

Minimum layer thickness in mm:

$\geq 0,4$

Permeation time (penetration time) in minutes:

$\leq 480$

Protective hand cream recommended.

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.

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)

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.

# SECTION 9: Physical and chemical properties

## 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:                                | Not determined                     |
| Melting point/freezing point:            | Not determined                     |
| Initial boiling point and boiling range: | n.a.                               |
| Flash point:                             | n.a.                               |



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|--|---|
| Evaporation rate:                        | n.a.  |
| Flammability (solid, gas):               | n.a.  |
| Lower explosive limit:                   | 2,4 Vol-%   |
| Upper explosive limit:                   | 18,6 Vol-%  |
| Vapour pressure:                         | 5000 hPa (20°C)   |
| Vapour density (air = 1):                | Not determined  |
| Density:                                 | 0,81 g/cm <sup>3</sup> (20°C)   |
| Bulk density:                            | n.a.  |
| Solubility(ies):                         | Not determined  |
| Water solubility:                        | Not miscible  |
| Partition coefficient (n-octanol/water): | Not determined  |
| Auto-ignition temperature:               | 235 °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  |
| <b>9.2 Other information</b>             |   |
| 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).

| Marderspray<br>Marten Spray        |          |       |      |          |             |        |
|------------------------------------|----------|-------|------|----------|-------------|--------|
| 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. |
| 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. |

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|   |  |  |  |  |  |        |
|---|--|--|--|--|--|--------|
| 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. |

| Dimethyl ether  |          |       |         |          |   |  |
|---|----------|-------|---------|----------|---|--|
| Toxicity / effect   | Endpoint | Value | Unit    | Organism | Test method   | Notes  |
| Acute toxicity, by inhalation:                                | LC50     | 164   | mg/l/4h | Rat      |   |  |
| Skin corrosion/irritation:                                    |          |       |         |          |   | Not irritant   |
| Serious eye damage/irritation:                                |          |       |         |          |   | Not irritant   |
| Respiratory or skin sensitisation:                            |          |       |         |          |   | No (skin contact)  |
| 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:  | NOAEC    | 47000 | mg/m3   | Rat      | OECD 453 (Combined Chronic Toxicity/Carcinogenicity Studies)                                | Negative   |
| Reproductive toxicity:  | NOAEL    | 5000  | ppm     | Rat      | OECD 414 (Prenatal Developmental Toxicity Study)  |  |
| Specific target organ toxicity - repeated exposure (STOT-RE): | NOAEC    | 47106 | mg/kg   | Rat      | OECD 452 (Chronic Toxicity Studies)   | Negative(2 a)  |
| Aspiration hazard:  |          |       |         |          |   | No   |
| Symptoms:   |          |       |         |          |   | unconsciousness , headaches, mucous membrane irritation, dizziness, nausea and vomiting., frostbite, gastrointestinal disturbances, respiratory distress, circulatory collapse |

| 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     | 124,7 | mg/l/4h | Rat      | OECD 403 (Acute Inhalation Toxicity)         | Vapours      |
| Skin corrosion/irritation:       |          |       |         | Rabbit   | OECD 404 (Acute Dermal Irritation/Corrosion) | Not irritant |

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|                                    |  |  |  |                        |   |   |
|------------------------------------|--|--|--|------------------------|---|---|
| Serious eye damage/irritation:     |  |  |  | Rabbit                 | OECD 405 (Acute Eye Irritation/Corrosion)                   | Irritant  |
| Respiratory or skin sensitisation: |  |  |  | Mouse                  | OECD 429 (Skin Sensitisation - Local Lymph Node Assay)      | No (skin contact)   |
| Germ cell mutagenicity:            |  |  |  | Salmonella typhimurium | OECD 471 (Bacterial Reverse Mutation Test)                  | Negative  |
| Germ cell mutagenicity:            |  |  |  | Mouse                  | OECD 476 (In Vitro Mammalian Cell Gene 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  |
| 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   |
| Other information:                 |  |  |  |                        |   | 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., Experiences on persons. |

**1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran**

| Toxicity / effect              | Endpoint | Value  | Unit  | Organism | Test method                    | Notes |
|--------------------------------|----------|--------|-------|----------|--------------------------------|-------|
| Acute toxicity, by oral route: | LD50     | > 4640 | mg/kg | Rat      | OECD 401 (Acute Oral Toxicity) |       |

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|   |       |        |       |            |  |                                   |
|---|-------|--------|-------|------------|--|-----------------------------------|
| Acute toxicity, by dermal route:                                    | LD50  | > 6500 | mg/kg | Rat        | 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)                      | Not irritant                      |
| Respiratory or skin sensitisation:                                  |       |        |       | Guinea pig | OECD 406 (Skin Sensitisation)                                  | No (skin contact)                 |
| Germ cell mutagenicity:   |       |        |       |            | OECD 473 (In Vitro Mammalian Chromosome Aberration Test)       | Negative                          |
| Reproductive toxicity:  |       |        |       |            | OECD 426 (Developmental Neurotoxicity Study)                   | No indications of such an effect. |
| Specific target organ toxicity - repeated exposure (STOT-RE), oral: | NOAEL | 150    | mg/kg | Rat        | OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |                                   |

| Geraniol                           |          |       |       |           |   |  |
|------------------------------------|----------|-------|-------|-----------|---|--|
| Toxicity / effect                  | Endpoint | Value | Unit  | Organism  | Test method   | Notes  |
| Acute toxicity, by oral route:     | LD50     | 3600  | mg/kg | Rat       | OECD 423 (Acute Oral Toxicity - Acute Toxic Class Method) |  |
| Acute toxicity, by dermal route:   | LD50     | >5000 | mg/kg | Rabbit    |   |  |
| Skin corrosion/irritation:         |          |       |       | Rabbit    | OECD 404 (Acute Dermal Irritation/Corrosion)              | Skin Irrit. 2  |
| Serious eye damage/irritation:     |          |       |       | Rabbit    | OECD 405 (Acute Eye Irritation/Corrosion)                 | Eye Dam. 1   |
| Respiratory or skin sensitisation: |          |       |       | Mouse     | OECD 429 (Skin Sensitisation - Local Lymph Node Assay)    | Skin Sens. 1   |
| Germ cell mutagenicity:            |          |       |       |           | OECD 471 (Bacterial Reverse Mutation Test)                | Negative   |
| Germ cell mutagenicity:            |          |       |       | Mammalian | OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)     | Negative Chinese hamster                                   |
| Germ cell mutagenicity:            |          |       |       | Mouse     | OECD 474 (Mammalian Erythrocyte Micronucleus Test)        | Negative male  |
| Symptoms:                          |          |       |       |           |   | respiratory distress, coughing, mucous membrane irritation |

| Propane-1,2-diol                   |          |        |         |            |  |                 |
|------------------------------------|----------|--------|---------|------------|--|-----------------|
| Toxicity / effect                  | Endpoint | Value  | Unit    | Organism   | Test method                                  | Notes           |
| Acute toxicity, by oral route:     | LD50     | >20000 | mg/kg   | Rat        |  |                 |
| Acute toxicity, by dermal route:   | LD50     | >2000  | mg/kg   | Rabbit     |  |                 |
| Acute toxicity, by inhalation:     | LC50     | >20    | mg/l/4h | Rabbit     |  | Vapours         |
| Skin corrosion/irritation:         |          |        |         | Rabbit     | OECD 404 (Acute Dermal Irritation/Corrosion) | Not irritant    |
| 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 |
| Germ cell mutagenicity:            |          |        |         |            | in vitro                                     | Negative        |

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## SECTION 12: Ecological information

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

| <b>Marderspray<br/>Marten Spray</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:                  |          |      |       |      |          |             | n.d.a. |
| 12.5. Results of PBT and vPvB assessment |          |      |       |      |          |             | n.d.a. |
| 12.6. Other adverse effects:             |          |      |       |      |          |             | n.d.a. |

| <b>Dimethyl ether</b>                    |           |      |       |           |                     |  |  |
|--|-----------|------|-------|-----------|---------------------|--|--|
| Toxicity / effect                        | Endpoint  | Time | Value | Unit      | Organism            | Test method  | Notes  |
| 12.1. Toxicity to fish:                  | LC0       | 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  | >4,1  | mg/l      | Poecilia reticulata |  |  |
| 12.1. Toxicity to daphnia:               | EC50      | 48h  | >4,4  | mg/l      | Daphnia magna       |  |  |
| 12.1. Toxicity to algae:                 | EC50      | 96h  | 154,9 | mg/l      | Chlorella vulgaris  |  |  |
| 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)  |
| 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  |  |  |
| Other information:                       |           |      |       |           |                     |  | Does not contain any organically bound halogens which can contribute to the AOX value in waste water.DIN EN 1485 |
| Water solubility:                        |           |      | 45,60 | mg/l      |                     |  | 25°C   |

| <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 fish: | NOEC/NOEL | 120h | 250   | mg/l | Brachydanio rerio   | OECD 212 (Fish, Short- term Toxicity Test on Embryo and Sac-fry Stages) |       |

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|  |           |     |            |      |                    |  |   |
|--|-----------|-----|------------|------|--------------------|--|---|
| 12.1. Toxicity to daphnia:               | EC50      | 48h | 5414       | mg/l | Daphnia magna      | OECD 202 (Daphnia sp. Acute Immobilisation Test)   |   |
| 12.1. Toxicity to daphnia:               | NOEC/NOEL | 10d | 9,6        | mg/l | Ceriodaphnia spec. |  | References                                |
| 12.1. Toxicity to algae:                 | EC50      | 72h | 275        | mg/l | Chlorella vulgaris | OECD 201 (Alga, Growth Inhibition Test)  |   |
| 12.2. Persistence and degradability:     |           | 28d | 97         | %    |                    | OECD 301 B (Ready Biodegradability - Co2 Evolution Test)                                 | Readily biodegradable                     |
| 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   |      |                    |  |   |
| 12.4. Mobility in soil:                  | Koc       |     | 1,0        |      |                    |  | Highestimated                             |
| 12.5. Results of PBT and vPvB assessment |           |     |            |      |                    |  | No PBT substance, No vPvB substance       |
| Toxicity to bacteria:                    | IC50      | 3h  | >1000      | mg/l | activated sludge   | OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)) | Analogous conclusion                      |
| Other organisms:                         | NOEC/NOEL |     | 280        | mg/l | Lemna gibba        | OECD 201 (Alga, Growth Inhibition Test)  |   |

**1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran**

| Toxicity / effect          | Endpoint  | Time | Value | Unit | Organism            | Test method   | Notes            |
|----------------------------|-----------|------|-------|------|---------------------|---|------------------|
| 12.1. Toxicity to fish:    | LC50      | 21d  | 0,452 | mg/l | Lepomis macrochirus | OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study) |                  |
| 12.1. Toxicity to fish:    | NOEC/NOEL | 21d  | 0,093 | mg/l | Lepomis macrochirus | OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study) | Clinical signs   |
| 12.1. Toxicity to fish:    | NOEC/NOEL | 21d  | 0,182 | mg/l | Lepomis macrochirus | OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study) |                  |
| 12.1. Toxicity to fish:    | LC50      | 96h  | 1,36  | mg/l | Lepomis macrochirus | OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study) | calculated value |
| 12.1. Toxicity to daphnia: | EC50      | 48h  | 0,47  | mg/l | Acartia tonsa       | ISO 14669   |                  |
| 12.1. Toxicity to daphnia: | NOEC/NOEL | 21d  | 111   | µg/l | Daphnia magna       | OECD 211 (Daphnia magna Reproduction Test)              |                  |

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|  |      |     |           |      |                                 |  |                                     |
|--|------|-----|-----------|------|---------------------------------|--|-------------------------------------|
| 12.1. Toxicity to daphnia:               | EC50 | 48h | 0,9       | mg/l | Daphnia magna                   | OECD 202 (Daphnia sp. Acute Immobilisation Test)         | calculated value                    |
| 12.1. Toxicity to algae:                 | EC50 | 72h | > 0,854   | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test)                  |                                     |
| 12.2. Persistence and degradability:     |      | 28d | ~ 2       | %    |                                 | OECD 301 B (Ready Biodegradability - Co2 Evolution Test) | Not readily biodegradable           |
| 12.3. Bioaccumulative potential:         | BCF  |     | 1584-2507 |      | Lepomis macrochirus             | OECD 305 (Bioconcentration - Flow-Through Fish Test)     |                                     |
| 12.5. Results of PBT and vPvB assessment |      |     |           |      |                                 |  | No PBT substance, No vPvB substance |

| Geraniol                             |           |      |       |      |                         |  |                       |
|--------------------------------------|-----------|------|-------|------|-------------------------|--|-----------------------|
| Toxicity / effect                    | Endpoint  | Time | Value | Unit | Organism                | Test method  | Notes                 |
| 12.2. Persistence and degradability: |           | 28d  | 86    | %    |                         | OECD 301 (Ready Biodegradability)                                | Readily biodegradable |
| 12.1. Toxicity to fish:              | LC50      | 96h  | ~ 22  | mg/l | Brachydanio rerio       | OECD 203 (Fish, Acute Toxicity Test)                             |                       |
| 12.1. Toxicity to fish:              | LC50      | 96h  | 22    | mg/l | Oncorhynchus mykiss     |  |                       |
| 12.1. Toxicity to fish:              | NOEC/NOEL | 96h  | 10    | mg/l | Brachydanio rerio       | OECD 203 (Fish, Acute Toxicity Test)                             |                       |
| 12.1. Toxicity to daphnia:           | EC50      | 48h  | 7,75  | mg/l |                         |  |                       |
| 12.1. Toxicity to daphnia:           | EC50      | 48h  | 10,8  | mg/l | Daphnia magna           | OECD 202 (Daphnia sp. Acute Immobilisation Test)                 |                       |
| 12.1. Toxicity to algae:             | EC10      | 72h  | 3,77  | mg/l | Desmodesmus subspicatus | OECD 201 (Alga, Growth Inhibition Test)                          |                       |
| 12.1. Toxicity to algae:             | EC50      | 72h  | 13,1  | mg/l | Desmodesmus subspicatus | OECD 201 (Alga, Growth Inhibition Test)                          |                       |
| 12.2. Persistence and degradability: |           | 28d  | 100   | %    |                         | OECD 301 A (Ready Biodegradability - DOC Die-Away Test)          | Readily biodegradable |
| 12.2. Persistence and degradability: |           | 28d  | 82    | %    |                         | OECD 301 D (Ready Biodegradability - Closed Bottle Test)         | Readily biodegradable |
| 12.3. Bioaccumulative potential:     | Log Pow   |      | 2,6   |      |                         | OECD 117 (Partition Coefficient (n-octanol/water) - HPLC method) | Low25 °C              |
| Toxicity to bacteria:                | EC50      | 96h  | 144   | mg/l |                         | ISO 8192   |                       |

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| Toxicity / effect                    | Endpoint  | Time | Value  | Unit | Organism                        | Test method   | Notes                 |
|--------------------------------------|-----------|------|--------|------|---------------------------------|---|-----------------------|
| 12.3. Bioaccumulative potential:     | Log Pow   |      | -1,07  |      |                                 | OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method) |                       |
| 12.1. Toxicity to fish:              | LC50      | 96h  | 40613  | mg/l | Oncorhynchus mykiss             | OECD 203 (Fish, Acute Toxicity Test)                                    |                       |
| 12.1. Toxicity to daphnia:           | LC50      | 48h  | 18340  | mg/l | Ceriodaphnia spec.              | OECD 202 (Daphnia sp. Acute Immobilisation Test)                        |                       |
| 12.1. Toxicity to daphnia:           | NOEC/NOEL | 7d   | 13020  | mg/l | Ceriodaphnia spec.              |   |                       |
| 12.1. Toxicity to algae:             | EC50      | 48h  | 19000  | mg/l | Pseudokirchneriella subcapitata | OECD 201 (Alga, Growth Inhibition Test)                                 |                       |
| 12.2. Persistence and degradability: |           | 28d  | 81,7   | %    |                                 | OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)      | Readily biodegradable |
| 12.3. Bioaccumulative potential:     | BCF       |      | 0,09   |      |                                 |   | valued                |
| Toxicity to bacteria:                | NOEC/NOEL | 18h  | >20000 | mg/l | Pseudomonas putida              |   |                       |
| Other information:                   | COD       |      | 1585   | mg/g |                                 |   |                       |

## 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): 2.1





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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

Freight 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 national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!  
 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): 98,8 %

#### Additional data acc. to Art. 69 (2), Regulation (EU) No 528/2012 (Biocide products):

The identity of every active substance and its concentration in metric units:

Geraniol  
 0,03 g/100 g

The uses:

Repellent

Biocidal product authorisation number (Regulation (EU) No. 528/2012):

n.d.a.

Observe incident regulations.

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98,8% NK

Observe Regulation (EU) No 528/2012 concerning the placing of biocidal products on the market.

## 15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

## SECTION 16: Other information

Revised sections: 15  
 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):

| Classification in accordance with regulation (EC) No. 1272/2008 (CLP) | Evaluation method used             |
|---|------------------------------------|
| Aerosol 1, H222   | Classification based on test data. |
| Aerosol 1, H229   | Classification based on test data. |

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.  
 H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H318 Causes serious eye damage.  
 H319 Causes serious eye irritation.  
 H400 Very toxic to aquatic life.  
 H410 Very toxic to aquatic life with long lasting effects.  
 H220 Extremely flammable gas.

Aerosol — Aerosols  
 Flam. Gas — Flammable gases - Flammable gas  
 Flam. Liq. — Flammable liquid  
 Eye Irrit. — Eye irritation  
 Aquatic Acute — Hazardous to the aquatic environment - acute  
 Aquatic Chronic — Hazardous to the aquatic environment - chronic  
 Skin Irrit. — Skin irritation  
 Eye Dam. — Serious eye damage  
 Skin Sens. — Skin sensitization

### 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)  
 ATE Acute Toxicity Estimate  
 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

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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  
 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  
 IUPAC International Union for Pure Applied Chemistry  
 LC50 Lethal Concentration to 50 % of a test population  
 LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)  
 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.

These statements were made by:

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