

# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
Safety data sheet according to Regulation (EC) 2020/878

Revision date 16/06/2023

Revision Number 2.11

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

### 1.1. Product identifier

**Product Name** RS Pro Anti-Static Spray  
**Product Code(s)** 514-486, ZP, ERAS250  
**Safety data sheet number** 00942  
**Pure substance/mixture** Mixture

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

**Recommended use** Cleaning agent  
**Uses advised against** No specific uses advised against are identified

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

#### Supplier

RS Components Ltd  
Birchington Road  
Corby  
Northants  
NN17 9RS  
+44 (0) 845 850 9900  
RCustomerServicesUK@rs-components.com

RS Components Ltd  
Glenview Industrial Estate  
Herberton Road  
Rialto  
Dublin 12  
+353 (0) 1 415 3100  
enquiries.ie@rs-components.com

For further information, please contact

**E-mail address** RCustomerServicesUK@rs-components.com

### 1.4. Emergency telephone number

**Emergency Telephone** POISON INFORMATION CENTRE (Beaumont Hospital, Republic of Ireland only) +353 (0)1 809 2166 (08:00 - 22:00)

**Emergency Telephone -**  
**+44 1235 239670 (24hr)**

+44 (0) 1865 407333 (24hr)

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture**

Regulation (EC) No 1272/2008

|                                 |                     |
|---------------------------------|---------------------|
| <b>Acute aquatic toxicity</b>   | Category 1 - (H400) |
| <b>Chronic aquatic toxicity</b> | Category 2 - (H411) |

**2.2. Label elements****Signal word**

Warning

**Hazard statements**

H400 - Very toxic to aquatic life

H411 - Toxic to aquatic life with long lasting effects

EUH208 - Contains nitrate amine salt of N-[3- dimethylaminopropyl]- C14-C20 amides, saturated, reaction products with ethylene oxide May produce an allergic reaction.

**Precautionary Statements - EU (§28, 1272/2008)**

P273 - Avoid release to the environment

P391 - Collect spillage

P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

**Additional information**

Detergent labelling &lt;5% perfumes.

**2.3. Other hazards**

Causes mild skin irritation.

This mixture contains no substance considered to be persistent, bioaccumulating or toxic (PBT). This mixture contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors.

**SECTION 3: Composition/information on ingredients****3.1 Substances**

Not applicable

**3.2 Mixtures**

| Chemical name | Weight-% | REACH registration | EC No (EU | Classification according | Specific | M-Factor | M-Factor |
|---------------|----------|--------------------|-----------|--------------------------|----------|----------|----------|
|---------------|----------|--------------------|-----------|--------------------------|----------|----------|----------|

|  |       | number                    | Index No) | to Regulation (EC) No.<br>1272/2008 [CLP]  | concentration<br>limit (SCL) |     | (long-term) |
|--|-------|---------------------------|-----------|--|------------------------------|-----|-------------|
| 2-Butoxyethanol<br>111-76-2  | 1-5   | 01-2119475108-36-00<br>00 | 203-905-0 | Acute Tox. 4 (H332)<br>Eye Irrit. 2 (H319)<br>Acute Tox. 4 (H302)<br>Skin Irrit. 2 (H315)  | -                            | -   | -           |
| nitrate amine salt of<br>N-[3-<br>dimethylaminopropy<br>l]- C14-C20 amides,<br>saturated, reaction<br>products with<br>ethylene oxide<br>- | 0.1-1 | No data available         | 946-436-3 | Aquatic Chronic 1<br>(H410)<br>Aquatic Acute 1 (H400)<br>Acute Tox. 4 (H302)<br>Skin Sens. 1B (H317)<br>Eye Dam. 1 (H318)                          | -                            | 100 | -           |
| Propan-2-ol<br>67-63-0   | 0.1-1 | 01-2119457558-25-00<br>00 | 200-661-7 | Eye Irrit. 2 (H319)<br>STOT SE 3 (H336)<br>Flam. Liq. 2 (H225)   | -                            | -   | -           |
| d-Limonene<br>5989-27-5  | <0.1  | No data available         | 227-813-5 | Asp. Tox. 1 (H304)<br>Flam. Liq. 3 (H226)<br>Skin Sens. 1 (H317)<br>Aquatic Chronic 1<br>(H410)<br>Aquatic Acute 1 (H400)<br>Skin Irrit. 2 (H315)  | -                            | 1   | 1           |
| Pin-2(3)-ene<br>80-56-8  | <0.1  | No data available         | 201-291-9 | Asp. Tox. 1 (H304)<br>Flam. Liq. 3 (H226)<br>Aquatic Chronic 1<br>(H410)<br>Aquatic Acute 1 (H400)<br>Skin Irrit. 2 (H315)<br>Skin Sens. 1B (H317) | -                            | -   | -           |
| Camphene<br>79-92-5  | <0.1  | No data available         | 201-234-8 | Aquatic Chronic 1<br>(H410)<br>Eye Irrit. 2 (H319)<br>Aquatic Acute 1 (H400)<br>Flam. Sol. 2 (H228)  | -                            | -   | -           |
| Citral<br>5392-40-5  | <0.1  | No data available         | 226-394-6 | Skin Sens. 1 (H317)<br>Skin Irrit. 2 (H315)  | -                            | -   | -           |
| p-Mentha-1,4-diene<br>99-85-4  | <0.1  | No data available         | 202-794-6 | Asp. Tox. 1 (H304)<br>Flam. Liq. 3 (H226)  | -                            | -   | -           |
| p-Mentha-1,3-diene<br>99-86-5  | <0.1  | No data available         | 202-795-1 | Aquatic Chronic 2<br>(H411)<br>Asp. Tox. 1 (H304)<br>Flam. Liq. 3 (H226)<br>Skin Sens. 1 (H317)<br>Acute Tox. 4 (H302)                             | -                            | -   | -           |
| Pin-2(10)-ene<br>127-91-3  | <0.1  | No data available         | 204-872-5 | Asp. Tox. 1 (H304)<br>Flam. Liq. 3 (H226)<br>Aquatic Chronic 1<br>(H410)<br>Aquatic Acute 1 (H400)<br>Skin Irrit. 2 (H315)<br>Skin Sens. 1B (H317) | -                            | -   | -           |
| 7-Methyl-3-methylen<br>eocta-1,6-diene<br>123-35-3   | <0.1  | No data available         | 204-622-5 | Asp. Tox. 1 (H304)<br>Flam. Liq. 3 (H226)<br>Eye Irrit. 2 (H319)<br>Skin Irrit. 2 (H315)   | -                            | -   | -           |
| 2,6-Di-tert-butyl-p-cr<br>esol   | <0.1  | No data available         | 204-881-4 | Aquatic Chronic 1<br>(H410)  | -                            | -   | -           |

|          |  |  |  |                        |  |  |
|----------|--|--|--|------------------------|--|--|
| 128-37-0 |  |  |  | Aquatic Acute 1 (H400) |  |  |
|----------|--|--|--|------------------------|--|--|

**Full text of H- and EUH-phrases: see section 16**Acute Toxicity Estimate

If LD50/LC50 data is not available or does not correspond to the classification category, then the appropriate conversion value from CLP Annex I, Table 3.1.2, is used to calculate the acute toxicity estimate (ATE<sub>mix</sub>) for classifying a mixture based on its components

| Chemical name                                      | Oral LD50 mg/kg | Dermal LD50 mg/kg | Inhalation LC50 - 4 hour - dust/mist - mg/L | Inhalation LC50 - 4 hour - vapour - mg/L | Inhalation LC50 - 4 hour - gas - ppm |
|--|-----------------|-------------------|---|--|--------------------------------------|
| 2-Butoxyethanol<br>111-76-2                        | 1200+<br>470    | 435               | No data available                           | 3+<br>2.1749<br>2.3489                   | No data available                    |
| Propan-2-ol<br>67-63-0                             | 1870            | 4059              | No data available                           | 30.1002                                  | No data available                    |
| d-Limonene<br>5989-27-5                            | 5200<br>4400    | 5000              | No data available                           | No data available                        | No data available                    |
| Pin-2(3)-ene<br>80-56-8                            | 3700            | 5000              | No data available                           | No data available                        | No data available                    |
| Camphene<br>79-92-5                                | 5000            | 2500              | No data available                           | No data available                        | No data available                    |
| Citral<br>5392-40-5                                | 4960            | 2250              | No data available                           | No data available                        | No data available                    |
| p-Mentha-1,4-diene<br>99-85-4                      | 3650            | 2000              | No data available                           | No data available                        | No data available                    |
| p-Mentha-1,3-diene<br>99-86-5                      | 1680+<br>1680   | No data available | No data available                           | No data available                        | No data available                    |
| Pin-2(10)-ene<br>127-91-3                          | 5000            | 5000              | No data available                           | No data available                        | No data available                    |
| 7-Methyl-3-methyleneoct<br>a-1,6-diene<br>123-35-3 | 5000            | 5000              | No data available                           | No data available                        | No data available                    |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0             | 2930            | 2000              | No data available                           | No data available                        | No data available                    |

+ This value is the harmonised acute toxicity estimate (ATE) listed in CLP Annex VI, Part 3. This harmonised ATE value must be used when calculating the acute toxicity estimate (ATE<sub>mix</sub>) for classifying a mixture containing the listed substance

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (Regulation (EC) No. 1907/2006 (REACH), Article 59)

**SECTION 4: First aid measures****4.1. Description of first aid measures**

|                     |  |
|---------------------|--|
| <b>Inhalation</b>   | Remove to fresh air.   |
| <b>Eye contact</b>  | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. |
| <b>Skin contact</b> | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.  |
| <b>Ingestion</b>    | Rinse mouth.   |

**Self-protection of the first aider** Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information.

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

**Symptoms** Prolonged contact may cause redness and irritation.

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

**Note to doctors** Treat symptomatically.

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

#### **5.1. Extinguishing media**

**Suitable Extinguishing Media** Dry chemical. Carbon dioxide (CO<sub>2</sub>). Water spray. Alcohol resistant foam.

**Large Fire** CAUTION: Use of water spray when fighting fire may be inefficient.

**Unsuitable extinguishing media** Do not scatter spilled material with high pressure water streams.

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

**Specific hazards arising from the chemical** Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

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

**Special protective equipment and precautions for fire-fighters** Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

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

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

**Personal precautions** Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

**Other information** Ventilate the area.

**For emergency responders** Use personal protection recommended in Section 8.

#### **6.2. Environmental precautions**

**Environmental precautions** Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

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

**Methods for containment** Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand

or other non-combustible material and transfer to containers for later disposal.

- Methods for cleaning up** Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.
- Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

#### 6.4. Reference to other sections

- Reference to other sections** See section 8 for more information. See section 13 for more information.

## **SECTION 7: Handling and storage**

### 7.1. Precautions for safe handling

- Advice on safe handling** Use personal protection equipment. Avoid contact with skin and eyes. Avoid breathing vapours or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions.
- General hygiene considerations** Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

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

- Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Store in accordance with the particular national regulations. Store in accordance with local regulations.

- Storage class (TRGS 510)** LGK 3.

### 7.3. Specific end use(s)

- Risk Management Methods (RMM)** The information required is contained in this Safety Data Sheet.

## **SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

#### **Exposure Limits**

| Chemical name               | European Union   | Austria   | Belgium   | Bulgaria  | Croatia  |
|-----------------------------|--|---|---|---|--|
| 2-Butoxyethanol<br>111-76-2 | TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>* | TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>STEL 40 ppm<br>STEL 200 mg/m <sup>3</sup><br>H* | TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>D* | STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>K* | TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>* |
| Propan-2-ol<br>67-63-0      | -  | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup><br>STEL 800 ppm<br>STEL 2000 mg/m <sup>3</sup>   | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup><br>STEL: 400 ppm<br>STEL: 1000 mg/m <sup>3</sup>   | STEL: 1225.0 mg/m <sup>3</sup><br>TWA: 980.0 mg/m <sup>3</sup>                                | TWA: 400 ppm<br>TWA: 999 mg/m <sup>3</sup><br>STEL: 500 ppm<br>STEL: 1250 mg/m <sup>3</sup>  |

|  |  |   |  |   |   |
|--|--|---|--|---|---|
| Pin-2(3)-ene<br>80-56-8                | -  | -   | TWA: 20 ppm  | -   | -   |
| Citral<br>5392-40-5                    | -  | -   | TWA: 5 ppm<br>TWA: 32 mg/m <sup>3</sup><br>D*  | -   | -   |
| Pin-2(10)-ene<br>127-91-3              | -  | -   | TWA: 20 ppm  | -   | -   |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0 | -  | TWA: 10 mg/m <sup>3</sup>   | TWA: 2 mg/m <sup>3</sup>   | STEL: 50 mg/m <sup>3</sup><br>TWA: 10 mg/m <sup>3</sup>   | TWA: 10 mg/m <sup>3</sup>   |
| <b>Chemical name</b>                   | <b>Cyprus</b>  | <b>Czech Republic</b>   | <b>Denmark</b>   | <b>Estonia</b>  | <b>Finland</b>  |
| 2-Butoxyethanol<br>111-76-2            | *<br>STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup> | TWA: 100 mg/m <sup>3</sup><br>Ceiling: 200 mg/m <sup>3</sup><br>D*  | TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>H*   | S+<br>TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>A* | TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 250 mg/m <sup>3</sup><br>iho* |
| Propan-2-ol<br>67-63-0                 | -  | TWA: 500 mg/m <sup>3</sup><br>Ceiling: 1000 mg/m <sup>3</sup><br>D* | TWA: 200 ppm<br>TWA: 490 mg/m <sup>3</sup>   | TWA: 150 ppm<br>TWA: 350 mg/m <sup>3</sup><br>STEL: 250 ppm<br>STEL: 600 mg/m <sup>3</sup>          | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup><br>STEL: 250 ppm<br>STEL: 620 mg/m <sup>3</sup>      |
| d-Limonene<br>5989-27-5                | -  | -   | -  | TWA: 25 ppm<br>TWA: 150 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 300 mg/m <sup>3</sup>            | TWA: 25 ppm<br>TWA: 140 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 280 mg/m <sup>3</sup>        |
| Pin-2(3)-ene<br>80-56-8                | -  | -   | -  | TWA: 25 ppm<br>TWA: 150 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 300 mg/m <sup>3</sup>            | -   |
| Pin-2(10)-ene<br>127-91-3              | -  | -   | -  | TWA: 25 ppm<br>TWA: 150 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 300 mg/m <sup>3</sup>            | -   |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0 | -  | -   | TWA: 10 mg/m <sup>3</sup>  | -   | TWA: 10 mg/m <sup>3</sup><br>STEL: 20 mg/m <sup>3</sup>   |
| <b>Chemical name</b>                   | <b>France</b>  | <b>Germany TRGS</b>   | <b>Germany DFG</b>   | <b>Greece</b>   | <b>Hungary</b>  |
| 2-Butoxyethanol<br>111-76-2            | TWA: 10 ppm<br>TWA: 49 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>* | TWA: 10 ppm<br>TWA: 49 mg/m <sup>3</sup><br>H*                      | TWA: 10 ppm<br>TWA: 49 mg/m <sup>3</sup><br>Peak: 20 ppm<br>Peak: 98 mg/m <sup>3</sup><br>*                    | TWA: 25 ppm<br>TWA: 120 mg/m <sup>3</sup><br>*  | TWA: 98 mg/m <sup>3</sup><br>STEL: 246 mg/m <sup>3</sup><br>b*                                  |
| Propan-2-ol<br>67-63-0                 | STEL: 400 ppm<br>STEL: 980 mg/m <sup>3</sup>   | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup>                          | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup><br>Peak: 400 ppm<br>Peak: 1000 mg/m <sup>3</sup>                    | TWA: 400 ppm<br>TWA: 980 mg/m <sup>3</sup><br>STEL: 500 ppm<br>STEL: 1225 mg/m <sup>3</sup>         | TWA: 500 mg/m <sup>3</sup><br>STEL: 1000 mg/m <sup>3</sup><br>b*                                |
| d-Limonene<br>5989-27-5                | TWA: 1000 mg/m <sup>3</sup><br>STEL: 1500 mg/m <sup>3</sup>                                  | TWA: 5 ppm<br>TWA: 28 mg/m <sup>3</sup><br>Sh+<br>H*                | TWA: 5 ppm<br>TWA: 28 mg/m <sup>3</sup><br>Peak: 20 ppm<br>Peak: 112 mg/m <sup>3</sup><br>*<br>skin sensitizer | -   | -   |
| Pin-2(3)-ene<br>80-56-8                | TWA: 1000 mg/m <sup>3</sup><br>STEL: 1500 mg/m <sup>3</sup>                                  | -   | -  | -   | -   |
| Camphene<br>79-92-5                    | TWA: 1000 mg/m <sup>3</sup><br>STEL: 1500 mg/m <sup>3</sup>                                  | -   | -  | -   | -   |
| p-Mentha-1,4-diene<br>99-85-4          | TWA: 1000 mg/m <sup>3</sup><br>STEL: 1500 mg/m <sup>3</sup>                                  | -   | -  | -   | -   |
| p-Mentha-1,3-diene<br>99-86-5          | TWA: 1000 mg/m <sup>3</sup><br>STEL: 1500 mg/m <sup>3</sup>                                  | -   | -  | -   | -   |
| Pin-2(10)-ene                          | TWA: 1000 mg/m <sup>3</sup>  | -   | -  | -   | -   |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| 127-91-3                                       | STEL: 1500 mg/m <sup>3</sup>   |  |  |  |  |
| 7-Methyl-3-methyleneocta-1,6-diene<br>123-35-3 | TWA: 1000 mg/m <sup>3</sup><br>STEL: 1500 mg/m <sup>3</sup>                                      | -  | -  | -  | -  |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0         | TWA: 10 mg/m <sup>3</sup>  | TWA: 10 mg/m <sup>3</sup>  | TWA: 10 mg/m <sup>3</sup><br>Peak: 40 mg/m <sup>3</sup>                                    | TWA: 10 mg/m <sup>3</sup>  | -  |
| <b>Chemical name</b>                           | <b>Ireland</b>   | <b>Italy MDLPS</b>   | <b>Italy AIDII</b>   | <b>Latvia</b>  | <b>Lithuania</b>   |
| 2-Butoxyethanol<br>111-76-2                    | TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>Sk*   | TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>cute* | TWA: 20 ppm<br>TWA: 97 mg/m <sup>3</sup>   | TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>Ada*  | STEL: 20 ppm<br>STEL: 100 mg/m <sup>3</sup><br>TWA: 10 ppm<br>TWA: 50 mg/m <sup>3</sup><br>O*  |
| Propan-2-ol<br>67-63-0                         | TWA: 200 ppm<br>STEL: 400 ppm<br>Sk*   | -  | TWA: 200 ppm<br>TWA: 492 mg/m <sup>3</sup><br>STEL: 400 ppm<br>STEL: 983 mg/m <sup>3</sup> | TWA: 350 mg/m <sup>3</sup><br>STEL: 600 mg/m <sup>3</sup>  | STEL: 250 ppm<br>STEL: 600 mg/m <sup>3</sup><br>TWA: 150 ppm<br>TWA: 350 mg/m <sup>3</sup>     |
| d-Limonene<br>5989-27-5                        | -  | -  | -  | -  | STEL: 50 ppm<br>STEL: 300 mg/m <sup>3</sup><br>J+<br>TWA: 25 ppm<br>TWA: 150 mg/m <sup>3</sup> |
| Pin-2(3)-ene<br>80-56-8                        | -  | -  | TWA: 20 ppm<br>TWA: 111 mg/m <sup>3</sup><br>senD+   | -  | STEL: 50 ppm<br>STEL: 300 mg/m <sup>3</sup><br>TWA: 25 ppm<br>TWA: 150 mg/m <sup>3</sup>       |
| Citral<br>5392-40-5                            | TWA: 5 ppm<br>STEL: 15 ppm   | -  | TWA: 5 ppm<br>TWA: 31 mg/m <sup>3</sup><br>senD+<br>cute*                                  | -  | -  |
| Pin-2(10)-ene<br>127-91-3                      | -  | -  | TWA: 20 ppm<br>TWA: 111 mg/m <sup>3</sup><br>senD+   | -  | STEL: 50 ppm<br>STEL: 300 mg/m <sup>3</sup><br>TWA: 25 ppm<br>TWA: 150 mg/m <sup>3</sup>       |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0         | TWA: 2 mg/m <sup>3</sup><br>STEL: 6 mg/m <sup>3</sup>  | -  | TWA: 2 mg/m <sup>3</sup>   | -  | -  |
| <b>Chemical name</b>                           | <b>Luxembourg</b>  | <b>Malta</b>   | <b>Netherlands</b>   | <b>Norway</b>  | <b>Poland</b>  |
| 2-Butoxyethanol<br>111-76-2                    | STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>Peau* | STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>skin*<br>TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup> | TWA: 100 mg/m <sup>3</sup><br>STEL: 246 mg/m <sup>3</sup><br>H*                            | TWA: 10 ppm<br>TWA: 50 mg/m <sup>3</sup><br>STEL: 20 ppm<br>STEL: 75 mg/m <sup>3</sup><br>H*     | STEL: 200 mg/m <sup>3</sup><br>TWA: 98 mg/m <sup>3</sup><br>skóra*                             |
| Propan-2-ol<br>67-63-0                         | -  | -  | -  | TWA: 100 ppm<br>TWA: 245 mg/m <sup>3</sup><br>STEL: 150 ppm<br>STEL: 306.25 mg/m <sup>3</sup>    | STEL: 1200 mg/m <sup>3</sup><br>TWA: 900 mg/m <sup>3</sup><br>skóra*                           |
| d-Limonene<br>5989-27-5                        | -  | -  | -  | TWA: 25 ppm<br>TWA: 140 mg/m <sup>3</sup><br>A+<br>STEL: 37.5 ppm<br>STEL: 175 mg/m <sup>3</sup> | -  |
| Pin-2(3)-ene<br>80-56-8                        | -  | -  | -  | TWA: 25 ppm<br>TWA: 140 mg/m <sup>3</sup><br>STEL: 37.5 ppm<br>STEL: 175 mg/m <sup>3</sup><br>H* | -  |
| Citral<br>5392-40-5                            | -  | -  | -  | -  | STEL: 54 mg/m <sup>3</sup><br>TWA: 27 mg/m <sup>3</sup>  |
| Pin-2(10)-ene<br>127-91-3                      | -  | -  | -  | TWA: 25 ppm<br>TWA: 140 mg/m <sup>3</sup>  | -  |



|  |  |   |  |   |   |
|--|--|---|--|---|---|
|  |  |   |  | STEL: 37.5 ppm<br>STEL: 175 mg/m <sup>3</sup>   |   |
| 7-Methyl-3-methyleneoct<br>a-1,6-diene<br>123-35-3 | -  | -   | -  | TWA: 40 ppm<br>TWA: 275 mg/m <sup>3</sup><br>STEL: 60 ppm<br>STEL: 343.75 mg/m <sup>3</sup>     | -   |
| <b>Chemical name</b>                               | <b>Portugal</b>  | <b>Romania</b>  | <b>Slovakia</b>  | <b>Slovenia</b>   | <b>Spain</b>  |
| 2-Butoxyethanol<br>111-76-2                        | TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>Cutânea*                | TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>P* | TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>K*<br>Ceiling: 246 mg/m <sup>3</sup>             | TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>K*   | TWA: 20 ppm<br>TWA: 98 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 245 mg/m <sup>3</sup><br>vía dérmica* |
| Propan-2-ol<br>67-63-0                             | TWA: 200 ppm<br>STEL: 400 ppm  | TWA: 81 ppm<br>TWA: 200 mg/m <sup>3</sup><br>STEL: 203 ppm<br>STEL: 500 mg/m <sup>3</sup>     | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup><br>Ceiling: 1000 mg/m <sup>3</sup>                | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup><br>STEL: 400 ppm<br>STEL: 1000 mg/m <sup>3</sup>     | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup><br>STEL: 400 ppm<br>STEL: 1000 mg/m <sup>3</sup>             |
| d-Limonene<br>5989-27-5                            | -  | -   | -  | TWA: 28 mg/m <sup>3</sup><br>TWA: 5 ppm<br>STEL: 20 ppm<br>STEL: 112 mg/m <sup>3</sup><br>K*    | TWA: 30 ppm<br>TWA: 168 mg/m <sup>3</sup><br>vía dérmica*<br>Sen+                                       |
| Pin-2(3)-ene<br>80-56-8                            | TWA: 20 ppm<br>Sensitizer dermal<br>Turpentine and<br>selected<br>Monoterpenes                                     | -   | -  | -   | TWA: 20 ppm<br>TWA: 113 mg/m <sup>3</sup><br>Sen+   |
| Citral<br>5392-40-5                                | TWA: 5 ppm<br>Cutânea*<br>Sensitizer dermal  | -   | -  | -   | TWA: 5 ppm<br>vía dérmica*<br>Sen+  |
| Pin-2(10)-ene<br>127-91-3                          | TWA: 20 ppm<br>Sensitizer dermal<br>Turpentine and<br>selected<br>Monoterpenes                                     | -   | -  | -   | TWA: 20 ppm<br>TWA: 113 mg/m <sup>3</sup><br>Sen+   |
| 7-Methyl-3-methyleneoct<br>a-1,6-diene<br>123-35-3 | -  | TWA: 700 mg/m <sup>3</sup><br>STEL: 1000 mg/m <sup>3</sup>                                    | -  | -   | -   |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0             | TWA: 2 mg/m <sup>3</sup>   | -   | -  | TWA: 10 mg/m <sup>3</sup><br>STEL: 40 mg/m <sup>3</sup>   | TWA: 10 mg/m <sup>3</sup>   |
| <b>Chemical name</b>                               | <b>Sweden</b>  |   | <b>Switzerland</b>   | <b>United Kingdom</b>   |   |
| 2-Butoxyethanol<br>111-76-2                        | Bindande KGV: 50 ppm<br>Bindande KGV: 246 mg/m <sup>3</sup><br>NGV: 10 ppm<br>NGV: 50 mg/m <sup>3</sup><br>H*      |   | TWA: 10 ppm<br>TWA: 49 mg/m <sup>3</sup><br>STEL: 20 ppm<br>STEL: 98 mg/m <sup>3</sup><br>H* | TWA: 25 ppm<br>TWA: 123 mg/m <sup>3</sup><br>STEL: 50 ppm<br>STEL: 246 mg/m <sup>3</sup><br>Sk* |   |
| Propan-2-ol<br>67-63-0                             | Vägledande KGV: 250 ppm<br>Vägledande KGV: 600 mg/m <sup>3</sup><br>NGV: 150 ppm<br>NGV: 350 mg/m <sup>3</sup>     |   | TWA: 200 ppm<br>TWA: 500 mg/m <sup>3</sup><br>STEL: 400 ppm<br>STEL: 1000 mg/m <sup>3</sup>  | TWA: 400 ppm<br>TWA: 999 mg/m <sup>3</sup><br>STEL: 500 ppm<br>STEL: 1250 mg/m <sup>3</sup>     |   |
| d-Limonene<br>5989-27-5                            | S+<br>NGV: 25 ppm<br>NGV: 150 mg/m <sup>3</sup>  |   | S+<br>TWA: 7 ppm<br>TWA: 40 mg/m <sup>3</sup><br>STEL: 14 ppm<br>STEL: 80 mg/m <sup>3</sup>  | -   |   |
| Pin-2(3)-ene<br>80-56-8                            | Vägledande KGV: 50 ppm<br>Vägledande KGV: 300 mg/m <sup>3</sup><br>S+<br>NGV: 25 ppm<br>NGV: 150 mg/m <sup>3</sup> |   | -  | -   |   |

|  |  |   |   |
|--|--|---|---|
| Pin-2(10)-ene<br>127-91-3              | Vägledande KGV: 50 ppm<br>Vägledande KGV: 300 mg/m <sup>3</sup><br>S+<br>NGV: 25 ppm<br>NGV: 150 mg/m <sup>3</sup> | -   | -   |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0 | -  | TWA: 10 mg/m <sup>3</sup><br>STEL: 40 mg/m <sup>3</sup> | TWA: 10 mg/m <sup>3</sup><br>STEL: 30 mg/m <sup>3</sup> |

**Biological occupational exposure limits**

| Chemical name               | European Union | Austria | Bulgaria | Croatia   | Czech Republic  |
|-----------------------------|----------------|---------|----------|---|---|
| 2-Butoxyethanol<br>111-76-2 | -              | -       | -        | -   | 200 mg/g Creatinine (urine - Butoxyacetic acid end of shift at end of workweek)<br>0.17 mmol/mmol Creatinine (urine - Butoxyacetic acid end of shift at end of workweek)  |
| Propan-2-ol<br>67-63-0      | -              | -       | -        | 50 mg/L - blood (Acetone) - at the end of the work shift<br>50 mg/L - urine (Acetone) - at the end of the work shift  | -   |
| Chemical name               | Denmark        | Finland | France   | Germany DFG   | Germany TRGS  |
| 2-Butoxyethanol<br>111-76-2 | -              | -       | -        | 150 mg/g Creatinine (urine - Butoxyacetic acid (after hydrolysis) for long-term exposures: at the end of the shift after several shifts)<br>150 mg/g Creatinine (urine - Butoxyacetic acid (after hydrolysis) end of shift)<br>150 mg/g Creatinine - BAT (for long-term exposures: at the end of the shift after several shifts) urine<br>150 mg/g Creatinine - BAT (end of exposure or end of shift) urine | 150 mg/g Creatinine (urine - Butoxyacetic acid (after hydrolysis) for long-term exposures: at the end of the shift after several shifts)<br>150 mg/g Creatinine (urine - Butoxyacetic acid (after hydrolysis) end of shift) |
| Propan-2-ol<br>67-63-0      | -              | -       | -        | 25 mg/L (whole blood - Acetone end of shift)<br>25 mg/L (urine - Acetone end of shift)<br>25 mg/L - BAT (end of exposure or end of shift) urine<br>25 mg/L - BAT (end of exposure or end  | 25 mg/L (whole blood - Acetone end of shift)<br>25 mg/L (urine - Acetone end of shift)  |

|  |   |   |  |   |   |
|--|---|---|--|---|---|
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0 | -   | -   | -  | of shift) blood<br>7 µg/L - BAR (end of<br>exposure or end of<br>shift) urine             | - |
| <b>Chemical name</b>                   | <b>Hungary</b>  | <b>Ireland</b>  | <b>Italy MDLPS</b>   | <b>Italy AIDII</b>  |   |
| 2-Butoxyethanol<br>111-76-2            | -   | 200 mg/g Creatinine<br>(urine - end of shift)   | -  | 200 mg/g Creatinine -<br>urine (Butoxyacetic acid<br>(with hydrolysis)) - end of<br>shift |   |
| Propan-2-ol<br>67-63-0                 | -   | 40 mg/L (urine - Acetone<br>end of shift at end of<br>workweek)                         | -  | 40 mg/L - urine (Acetone)<br>- end of shift at end of<br>workweek                         |   |
| <b>Chemical name</b>                   | <b>Latvia</b>   | <b>Luxembourg</b>   | <b>Romania</b>   | <b>Slovakia</b>   |   |
| Propan-2-ol<br>67-63-0                 | -   | -   | 50 mg/L - urine (Acetone)<br>- end of shift  | -   |   |
| <b>Chemical name</b>                   | <b>Slovenia</b>   | <b>Spain</b>  | <b>Switzerland</b>   | <b>United Kingdom</b>   |   |
| 2-Butoxyethanol<br>111-76-2            | 150 mg/g Creatinine -<br>urine (Butoxyacetic acid<br>(after hydrolysis)) - at the<br>end of the work shift; for<br>long-term exposure: at the<br>end of the work shift after<br>several consecutive<br>workdays | 200 mg/g Creatinine<br>(urine - Butoxyacetic acid<br>(with hydrolysis) end of<br>shift) | 150 mg/g creatinine (urine<br>- 2-Butoxyacetic acid<br>(after hydrolysis) end of<br>shift, and after several<br>shifts (for long-term<br>exposures))   | 240 mmol/mol creatinine -<br>urine (Butoxyacetic acid)<br>- post shift                    |   |
| Propan-2-ol<br>67-63-0                 | 25 mg/L - blood (Acetone)<br>- at the end of the work<br>shift<br>25 mg/L - urine (Acetone)<br>- at the end of the work<br>shift  | 40 mg/L (urine - Acetone<br>end of workweek)  | 25 mg/L (urine - Acetone<br>end of shift)<br>0.4 mmol/L (urine -<br>Acetone end of shift)<br>25 mg/L (whole blood -<br>Acetone end of shift)<br>0.4 mmol/L (whole blood -<br>Acetone end of shift) | -   |   |

**Derived No Effect Level (DNEL) - Workers**

| Chemical name                             | Oral | Dermal   | Inhalation  |
|---|------|--|---|
| 2-Butoxyethanol<br>111-76-2               | -    | 125 mg/kg bw/day [4] [6]<br>89 mg/kg bw/day [4] [7]  | 98 mg/m <sup>3</sup> [4] [6]<br>1091 mg/m <sup>3</sup> [4] [7]<br>246 mg/m <sup>3</sup> [5] [7] |
| Propan-2-ol<br>67-63-0                    | -    | 888 mg/kg bw/day [4] [6]   | 500 mg/m <sup>3</sup> [4] [6]   |
| Tetrapotassium pyrophosphate<br>7320-34-5 | -    | -  | 17.63 mg/m <sup>3</sup> [4] [6]   |
| Pin-2(3)-ene<br>80-56-8                   | -    | 0.542 mg/kg bw/day [4] [6]   | 3.8 mg/m <sup>3</sup> [4] [6]   |
| Linalool<br>78-70-6                       | -    | 2.5 mg/kg bw/day [4] [6]<br>5 mg/kg bw/day [4] [7]<br>3 mg/cm <sup>2</sup> [5] [6]<br>3 mg/cm <sup>2</sup> [5] [7] | 2.8 mg/m <sup>3</sup> [4] [6]<br>16.5 mg/m <sup>3</sup> [4] [7]                                 |
| Camphene<br>79-92-5                       | -    | 0.21 mg/kg bw/day [4] [6]<br>1.25 mg/kg bw/day [4] [7]   | 110.19 mg/m <sup>3</sup> [4] [6]<br>110.19 mg/m <sup>3</sup> [4] [7]                            |
| Citronellol<br>106-22-9                   | -    | 327.4 mg/kg bw/day [4] [6]<br>2950 µg/cm <sup>2</sup> [5] [7]  | 161.6 mg/m <sup>3</sup> [4] [6]<br>10 mg/m <sup>3</sup> [5] [6]<br>10 mg/m <sup>3</sup> [5] [7] |
| Geranyl acetate<br>105-87-3               | -    | 35.5 mg/kg bw/day [4] [6]  | 62.59 mg/m <sup>3</sup> [4] [6]   |
| Linalyl acetate                           | -    | 2.5 mg/kg bw/day [4] [6]   | 2.75 mg/m <sup>3</sup> [4] [6]  |

| Chemical name                          | Oral | Dermal  | Inhalation   |
|--|------|---|--|
| 115-95-7                               |      | 236.2 µg/cm <sup>2</sup> [5] [6]<br>236.2 µg/cm <sup>2</sup> [5] [7]  |  |
| Citral<br>5392-40-5                    | -    | 1.7 mg/kg bw/day [4] [6]<br>140 µg/cm <sup>2</sup> [5] [6]  | 9 mg/m <sup>3</sup> [4] [6]  |
| p-Mentha-1,4-diene<br>99-85-4          | -    | 0.833 mg/kg bw/day [4] [6]  | 2.939 mg/m <sup>3</sup> [4] [6]  |
| p-Mentha-1,3-diene<br>99-86-5          | -    | 0.833333 mg/kg bw/day [4] [6]   | 2.938596 mg/m <sup>3</sup> [4] [6]   |
| Octanal<br>124-13-0                    | -    | 0.37 mg/kg bw/day [4] [6]   | 1.3 mg/m <sup>3</sup> [4] [6]  |
| Nonanal<br>124-19-6                    | -    | 7 mg/kg bw/day [4] [6]  | 24.9 mg/m <sup>3</sup> [4] [6]   |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0 | -    | 0.5 mg/kg bw/day [4] [6]  | 3.5 mg/m <sup>3</sup> [4] [6]  |
| Geraniol<br>106-24-1                   | -    | 12.5 mg/kg bw/day [4] [6]<br>11800 µg/cm <sup>2</sup> [5] [6]   | 161.6 mg/m <sup>3</sup> [4] [6]  |
| 2-Methylundecanal<br>110-41-8          | -    | 10.46 mg/kg bw/day [4] [6]<br>100 mg/kg bw/day [4] [7]<br>35.7 mg/cm <sup>2</sup> [5] [6]<br>71.43 mg/cm <sup>2</sup> [5] [7] | 36.89 mg/m <sup>3</sup> [4] [6]<br>352.63 mg/m <sup>3</sup> [4] [7]<br>92.21 mg/m <sup>3</sup> [5] [6]<br>881.58 mg/m <sup>3</sup> [5] [7] |

- [4] Systemic health effects.  
 [5] Local health effects.  
 [6] Long term.  
 [7] Short term.

#### Derived No Effect Level (DNEL) - General Public

| Chemical name                             | Oral   | Dermal   | Inhalation   |
|---|--|--|--|
| 2-Butoxyethanol<br>111-76-2               | 6.3 mg/kg bw/day [4] [6]<br>26.7 mg/kg bw/day [4] [7]  | 89 mg/kg bw/day [4] [6]<br>89 mg/kg bw/day [4] [7]   | 59 mg/m <sup>3</sup> [4] [6]<br>426 mg/m <sup>3</sup> [4] [7]<br>147 mg/m <sup>3</sup> [5] [7] |
| Propan-2-ol<br>67-63-0                    | 26 mg/kg bw/day [4] [6]                                | -  | 89 mg/m <sup>3</sup> [4] [6]   |
| Tetrapotassium pyrophosphate<br>7320-34-5 | -  | -  | 4.35 mg/m <sup>3</sup> [4] [6]   |
| Pin-2(3)-ene<br>80-56-8                   | 0.225 mg/kg bw/day [4] [6]                             | -  | 0.674 mg/m <sup>3</sup> [4] [6]  |
| Linalool<br>78-70-6                       | 0.2 mg/kg bw/day [4] [6]<br>1.2 mg/kg bw/day [4] [7]   | 2.5 mg/kg bw/day [4] [6]<br>2.5 mg/kg bw/day [4] [7]<br>1.5 mg/cm <sup>2</sup> [5] [6]<br>1.5 mg/cm <sup>2</sup> [5] [7] | 0.7 mg/m <sup>3</sup> [4] [6]<br>4.1 mg/m <sup>3</sup> [4] [7]                                 |
| Camphene<br>79-92-5                       | 0.1 mg/kg bw/day [4] [6]<br>0.625 mg/kg bw/day [4] [7] | 0.625 mg/kg bw/day [4] [6]<br>0.625 mg/kg bw/day [4] [7]   | 54.3 mg/m <sup>3</sup> [4] [6]<br>54.3 mg/m <sup>3</sup> [4] [7]                               |
| Citronellol<br>106-22-9                   | 13.8 mg/kg bw/day [4] [6]                              | 2950 µg/cm <sup>2</sup> [5] [7]  | 47.8 mg/m <sup>3</sup> [4] [6]<br>10 mg/m <sup>3</sup> [5] [6]<br>10 mg/m <sup>3</sup> [5] [7] |
| Geranyl acetate<br>105-87-3               | 8.9 mg/kg bw/day [4] [6]                               | -  | 15.4 mg/m <sup>3</sup> [4] [6]   |
| Linalyl acetate<br>115-95-7               | 0.2 mg/kg bw/day [4] [6]                               | 236.2 µg/cm <sup>2</sup> [5] [6]<br>236.2 µg/cm <sup>2</sup> [5] [7]   | 0.68 mg/m <sup>3</sup> [4] [6]   |
| Citral<br>5392-40-5                       | 0.6 mg/kg bw/day [4] [6]                               | 140 µg/cm <sup>2</sup> [5] [6]   | 2.7 mg/m <sup>3</sup> [4] [6]  |
| p-Mentha-1,4-diene<br>99-85-4             | 0.417 mg/kg bw/day [4] [6]                             | -  | 0.725 mg/m <sup>3</sup> [4] [6]  |
| p-Mentha-1,3-diene                        | 0.4166666 mg/kg bw/day [4]                             | -  | 0.724638 mg/m <sup>3</sup> [4] [6]   |

| Chemical name                          | Oral   | Dermal   | Inhalation  |
|--|--|--|---|
| 99-86-5                                | [6]  |  |   |
| Octanal<br>124-13-0                    | 0.19 mg/kg bw/day [4] [6]                            | -  | 0.32 mg/m <sup>3</sup> [4] [6]  |
| Nonanal<br>124-19-6                    | 3.5 mg/kg bw/day [4] [6]                             | -  | 6.1 mg/m <sup>3</sup> [4] [6]   |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0 | -  | -  | 0.86 mg/m <sup>3</sup> [4] [6]  |
| Geraniol<br>106-24-1                   | 13.75 mg/kg bw/day [4] [6]                           | 11800 µg/cm <sup>2</sup> [5] [6]   | 47.8 mg/m <sup>3</sup> [4] [6]  |
| 2-Methylundecanal<br>110-41-8          | 5.23 mg/kg bw/day [4] [6]<br>25 mg/kg bw/day [4] [7] | 50 mg/kg bw/day [4] [6]<br>50 mg/kg bw/day [4] [7]<br>17.86 mg/cm <sup>2</sup> [5] [6]<br>35.71 mg/cm <sup>2</sup> [5] [7] | 9.1 mg/m <sup>3</sup> [4] [6]<br>86.96 mg/m <sup>3</sup> [4] [7]<br>22.74 mg/m <sup>3</sup> [5] [6]<br>217.39 mg/m <sup>3</sup> [5] [7] |

- [4] Systemic health effects.  
 [5] Local health effects.  
 [6] Long term.  
 [7] Short term.

#### Predicted No Effect Concentration (PNEC)

| Chemical name                          | Freshwater    | Freshwater<br>(intermittent release) | Marine water   | Marine water<br>(intermittent release) | Air |
|--|---------------|--------------------------------------|----------------|--|-----|
| 2-Butoxyethanol<br>111-76-2            | 8.8 mg/L      | 26.4 mg/L                            | 0.88 mg/L      | -                                      | -   |
| Propan-2-ol<br>67-63-0                 | 140.9 mg/L    | 140.9 mg/L                           | 140.9 mg/L     | -                                      | -   |
| Pin-2(3)-ene<br>80-56-8                | 0.606 µg/L    | 3.03 µg/L                            | 0.0606 µg/L    | 0.303 µg/L                             | -   |
| Linalool<br>78-70-6                    | 0.2 mg/L      | 2 mg/L                               | 0.02 mg/L      | -                                      | -   |
| Citronellol<br>106-22-9                | 0.0024 mg/L   | 0.024 mg/L                           | 0.00024 mg/L   | -                                      | -   |
| Geranyl acetate<br>105-87-3            | 3.72 µg/L     | 37.2 µg/L                            | 0.372 µg/L     | -                                      | -   |
| Linalyl acetate<br>115-95-7            | 0.011 mg/L    | 0.11 mg/L                            | 0.0011 mg/L    | -                                      | -   |
| Citral<br>5392-40-5                    | 0.00678 mg/L  | 0.0678 mg/L                          | 0.000678 mg/L  | -                                      | -   |
| p-Menth-1-en-8-ol<br>98-55-5           | 68 µg/L       | -                                    | 6.8 µg/L       | -                                      | -   |
| p-Mentha-1,4-diene<br>99-85-4          | 0.002792 mg/L | -                                    | 0.0002792 mg/L | -                                      | -   |
| p-Mentha-1,3-diene<br>99-86-5          | 0.0017 mg/L   | 0.017 mg/L                           | 0.00017 mg/L   | 0.017 mg/L                             | -   |
| Octanal<br>124-13-0                    | 0.00154 mg/L  | -                                    | 0.000154 mg/L  | -                                      | -   |
| Nonanal<br>124-19-6                    | 1.45 µg/L     | 14.5 µg/L                            | 0.145 µg/L     | -                                      | -   |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0 | 0.199 µg/L    | 1.99 µg/L                            | 0.0199 µg/L    | -                                      | -   |
| Geraniol<br>106-24-1                   | 0.0108 mg/L   | 0.108 mg/L                           | 0.00108 mg/L   | -                                      | -   |
| 2-Methylundecanal<br>110-41-8          | 0.66 µg/L     | 1.8 µg/L                             | 66 ng/L        | 0.18 µg/L                              | -   |

| Chemical name                          | Freshwater sediment           | Marine sediment                | Sewage treatment | Soil                      | Food chain        |
|--|-------------------------------|--------------------------------|------------------|---------------------------|-------------------|
| 2-Butoxyethanol<br>111-76-2            | 34.6 mg/kg sediment dw        | 3.46 mg/kg sediment dw         | 463 mg/L         | 2.33 mg/kg soil dw        | 0.02 g/kg food    |
| Propan-2-ol<br>67-63-0                 | 552 mg/kg sediment dw         | 552 mg/kg sediment dw          | 2251 mg/L        | 28 mg/kg soil dw          | 160 mg/kg food    |
| Pin-2(3)-ene<br>80-56-8                | 157 µg/kg sediment dw         | 15.7 µg/kg sediment dw         | 0.2 mg/L         | 31.7 µg/kg soil dw        | 8.76 mg/kg food   |
| Linalool<br>78-70-6                    | 2.22 mg/kg sediment dw        | 0.222 mg/kg sediment dw        | 10 mg/L          | 0.327 mg/kg soil dw       | 7.8 mg/kg food    |
| Citronellol<br>106-22-9                | 0.0256 mg/kg sediment dw      | 0.00256 mg/kg sediment dw      | 580 mg/L         | 0.00371 mg/kg soil dw     | -                 |
| Geranyl acetate<br>105-87-3            | 0.442 mg/kg sediment dw       | 0.0442 mg/kg sediment dw       | 8 mg/L           | 0.0859 mg/kg soil dw      | -                 |
| Linalyl acetate<br>115-95-7            | 0.609 mg/kg sediment dw       | 0.0609 mg/kg sediment dw       | 1 mg/L           | 0.115 mg/kg soil dw       | -                 |
| Citral<br>5392-40-5                    | 0.125 mg/kg sediment dw       | 0.0125 mg/kg sediment dw       | 1.6 mg/L         | 0.0209 mg/kg soil dw      | -                 |
| p-Menth-1-en-8-ol<br>98-55-5           | 1.85 mg/kg sediment dw        | 0.185 mg/kg sediment dw        | 2.6 mg/L         | 0.329 mg/kg soil dw       | -                 |
| p-Mentha-1,4-diene<br>99-85-4          | 0.490056696 mg/kg sediment dw | 0.0490056696 mg/kg sediment dw | 10 mg/L          | 0.422765624 mg/kg soil dw | -                 |
| p-Mentha-1,3-diene<br>99-86-5          | 0.19618 mg/kg sediment dw     | 0.01962 mg/kg sediment dw      | 0.1 mg/L         | 0.02271 mg/kg soil dw     | 8.3333 mg/kg food |
| Octanal<br>124-13-0                    | 0.07146 mg/kg sediment dw     | 0.00715 mg/kg sediment dw      | 3.16 mg/L        | 0.01339 mg/kg soil dw     | -                 |
| Nonanal<br>124-19-6                    | 0.1056 mg/kg sediment dw      | 10.56 µg/kg sediment dw        | 3.16 mg/L        | 20.22 µg/kg soil dw       | 313 mg/kg food    |
| 2,6-Di-tert-butyl-p-cresol<br>128-37-0 | 99.6 µg/kg sediment dw        | 9.96 µg/kg sediment dw         | 0.17 mg/L        | 47.69 µg/kg soil dw       | 8.33 mg/kg food   |
| Geraniol<br>106-24-1                   | 0.115 mg/kg sediment dw       | 0.0115 mg/kg sediment dw       | 0.7 mg/L         | 0.0167 mg/kg soil dw      | -                 |
| 2-Methylundecanal<br>110-41-8          | 0.265 mg/kg sediment dw       | 26.5 µg/kg sediment dw         | 10 mg/L          | 52.6 µg/kg soil dw        | 116 mg/kg food    |

## 8.2. Exposure controls

### Engineering controls

Ensure adequate ventilation, especially in confined areas.

### Personal protective equipment

#### Eye/face protection

Tight sealing safety goggles.

#### Hand protection

Wear suitable gloves. Impervious gloves.

#### Skin and body protection

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

#### Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

#### General hygiene considerations

Do not eat, drink or smoke when using this product. Contaminated work clothing should not

be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

**Environmental exposure controls** No information available.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

|                        |                          |
|------------------------|--------------------------|
| <b>Physical state</b>  | Liquid                   |
| <b>Appearance</b>      | Liquid                   |
| <b>Colour</b>          | Colourless               |
| <b>Odour</b>           | Lemon.                   |
| <b>Odour threshold</b> | No information available |

| <u>Property</u>                                | <u>Values</u>            | <u>Remarks • Method</u>         |
|--|--------------------------|---------------------------------|
| <b>Melting point / freezing point</b>          | No data available        | None known                      |
| <b>Initial boiling point and boiling range</b> | No data available        | None known                      |
| <b>Flammability</b>                            | No data available        | None known                      |
| <b>Flammability Limit in Air</b>               |                          | None known                      |
| <b>Upper flammability or explosive limits</b>  | No data available        |                                 |
| <b>Lower flammability or explosive limits</b>  | No data available        |                                 |
| <b>Flash point</b>                             | > 60 °C                  | Closed cup                      |
| <b>Autoignition temperature</b>                | No data available        | None known                      |
| <b>Decomposition temperature</b>               |                          | None known                      |
| <b>pH</b>                                      | No data available        | pH (concentrated solution): 7-8 |
| <b>pH (as aqueous solution)</b>                | No data available        | None known                      |
| <b>Kinematic viscosity</b>                     | No data available        | None known                      |
| <b>Dynamic viscosity</b>                       | No data available        | None known                      |
| <b>Water solubility</b>                        | No data available        | None known                      |
| <b>Solubility(ies)</b>                         | No data available        | None known                      |
| <b>Partition coefficient</b>                   | No data available        | None known                      |
| <b>Vapour pressure</b>                         | No data available        | None known                      |
| <b>Relative density</b>                        | No data available        | None known                      |
| <b>Bulk density</b>                            | 0.995 kg/l               |                                 |
| <b>Liquid Density</b>                          | No data available        |                                 |
| <b>Relative vapour density</b>                 | No data available        | None known                      |
| <b>Particle characteristics</b>                |                          |                                 |
| <b>Particle Size</b>                           | No information available |                                 |
| <b>Particle Size Distribution</b>              | No information available |                                 |

### 9.2. Other information

9.2.1. Information with regards to physical hazard classes

Not applicable

Explosive properties

Not considered to be explosive

**Oxidising properties**

Does not meet the criteria for classification as oxidising

9.2.2. Other safety characteristics

No information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity** No information available.

**10.2. Chemical stability**

**Stability** Stable under normal conditions.

**Explosion data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** Yes.

**10.3. Possibility of hazardous reactions**

**Possibility of hazardous reactions** None under normal processing.

**10.4. Conditions to avoid**

**Conditions to avoid** Heat, flames and sparks.

**10.5. Incompatible materials**

**Incompatible materials** None known based on information supplied.

**10.6. Hazardous decomposition products**

**Hazardous decomposition products** None known based on information supplied.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Information on likely routes of exposure****Product Information**

**Inhalation** Specific test data for the substance or mixture is not available.

**Eye contact** Specific test data for the substance or mixture is not available.

**Skin contact** Specific test data for the substance or mixture is not available. Causes mild skin irritation.

**Ingestion** Specific test data for the substance or mixture is not available.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Prolonged contact may cause redness and irritation.

**Acute toxicity****Numerical measures of toxicity**

The following values are calculated based on chapter 3.1 of the GHS document

**ATEmix (oral)** 20,408.20 mg/kg

**ATEmix (dermal)** 17,755.10 mg/kg

**ATEmix (inhalation-gas)** 183,673.50 ppm

**ATEmix (inhalation-vapour)** 449.00 mg/l

**ATEmix (inhalation-dust/mist)** 61.20 mg/l

**Component Information**

| Chemical name   | Oral LD50           | Dermal LD50            | Inhalation LC50       |
|-----------------|---------------------|------------------------|-----------------------|
| 2-Butoxyethanol | = 470 mg/kg ( Rat ) | = 435 mg/kg ( Rabbit ) | = 450 ppm ( Rat ) 4 h |



|                                    |  |                         |  |
|------------------------------------|--|-------------------------|--|
|                                    |  |                         | = 486 ppm ( Rat ) 4 h<br>> 10000 ppm ( Rat ) 6 h |
| Propan-2-ol                        | = 1870 mg/kg ( Rat )                         | = 4059 mg/kg ( Rabbit ) |  |
| d-Limonene                         | = 5200 mg/kg ( Rat )<br>= 4400 mg/kg ( Rat ) | > 5 g/kg ( Rabbit )     | -  |
| Pin-2(3)-ene                       | = 3700 mg/kg ( Rat )                         | > 5000 mg/kg ( Rat )    | -  |
| Camphene                           | > 5 g/kg ( Rat )                             | > 2500 mg/kg ( Rabbit ) | -  |
| Citral                             | = 4960 mg/kg ( Rat )                         | = 2250 mg/kg ( Rabbit ) | -  |
| p-Mentha-1,4-diene                 | = 3650 mg/kg ( Rat )                         | > 2000 mg/kg ( Rat )    | -  |
| p-Mentha-1,3-diene                 | = 1680 mg/kg ( Rat )                         | -                       | -  |
| Pin-2(10)-ene                      | > 5000 mg/kg ( Rat )                         | > 5000 mg/kg ( Rabbit ) | -  |
| 7-Methyl-3-methyleneocta-1,6-diene | > 5 g/kg ( Rat )                             | > 5 g/kg ( Rabbit )     | -  |
| 2,6-Di-tert-butyl-p-cresol         | > 2930 mg/kg ( Rat )                         | > 2000 mg/kg ( Rat )    | -  |

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

|  |  |
|--|--|
| <b>Skin corrosion/irritation</b>         | Classification based on data available for ingredients. Causes mild skin irritation. |
| <b>Serious eye damage/eye irritation</b> | Based on available data, the classification criteria are not met.                    |
| <b>Respiratory or skin sensitisation</b> | Based on available data, the classification criteria are not met.                    |
| <b>Germ cell mutagenicity</b>            | Based on available data, the classification criteria are not met.                    |
| <b>Carcinogenicity</b>                   | Based on available data, the classification criteria are not met.                    |
| <b>Reproductive toxicity</b>             | Based on available data, the classification criteria are not met.                    |
| <b>STOT - single exposure</b>            | Based on available data, the classification criteria are not met.                    |
| <b>STOT - repeated exposure</b>          | Based on available data, the classification criteria are not met.                    |
| <b>Aspiration hazard</b>                 | Based on available data, the classification criteria are not met.                    |

#### 11.2. Information on other hazards

##### 11.2.1. Endocrine disrupting properties

**Endocrine disrupting properties** The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 11.2.2. Other information

**Other adverse effects** No information available.

## SECTION 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

| Chemical name              | Algae/aquatic plants  | Fish   | Toxicity to microorganisms | Crustacea                                     |
|----------------------------|---|--|----------------------------|---|
| 2-Butoxyethanol            | -   | LC50: =1490mg/L (96h, <i>Lepomis macrochirus</i> )<br>LC50: =2950mg/L (96h, <i>Lepomis macrochirus</i> )   | -                          | EC50: >1000mg/L (48h, <i>Daphnia magna</i> )  |
| Propan-2-ol                | EC50: >1000mg/L (96h, <i>Desmodesmus subspicatus</i> )<br>EC50: >1000mg/L (72h, <i>Desmodesmus subspicatus</i> )      | LC50: =9640mg/L (96h, <i>Pimephales promelas</i> )<br>LC50: =11130mg/L (96h, <i>Pimephales promelas</i> )<br>LC50: >1400000µg/L (96h, <i>Lepomis macrochirus</i> ) | -                          | EC50: =13299mg/L (48h, <i>Daphnia magna</i> ) |
| d-Limonene                 | -   | LC50: 0.619 - 0.796mg/L (96h, <i>Pimephales promelas</i> )<br>LC50: =35mg/L (96h, <i>Oncorhynchus mykiss</i> )   | -                          | -   |
| Pin-2(3)-ene               | -   | LC50: =0.28mg/L (96h, <i>Pimephales promelas</i> )   | -                          | LC50: =41mg/L (48h, <i>Daphnia magna</i> )    |
| Camphene                   | EC50: >1000mg/L (72h, <i>Desmodesmus subspicatus</i> )  | LC50: =0.72mg/L (96h, <i>Brachydanio rerio</i> )<br>LC50: =150mg/L (96h, <i>Brachydanio rerio</i> )  | -                          | EC50: =22mg/L (48h, <i>Daphnia magna</i> )    |
| Citral                     | EC50: =16mg/L (72h, <i>Desmodesmus subspicatus</i> )<br>EC50: =19mg/L (96h, <i>Desmodesmus subspicatus</i> )          | -  | -                          | EC50: =7mg/L (48h, <i>Daphnia magna</i> )     |
| 2,6-Di-tert-butyl-p-cresol | EC50: =6mg/L (72h, <i>Pseudokirchneriella subcapitata</i> )<br>EC50: >0.42mg/L (72h, <i>Desmodesmus subspicatus</i> ) | -  | -                          | -   |

### 12.2. Persistence and degradability

**Persistence and degradability** No information available.

### 12.3. Bioaccumulative potential

**Bioaccumulation**

**Component Information**

| Chemical name                      | Partition coefficient |
|------------------------------------|-----------------------|
| 2-Butoxyethanol                    | 0.81                  |
| Propan-2-ol                        | 0.05                  |
| d-Limonene                         | 4.38                  |
| Pin-2(3)-ene                       | 4.1                   |
| Camphene                           | 4.22                  |
| Citral                             | 2.76                  |
| p-Mentha-1,4-diene                 | 5.4                   |
| p-Mentha-1,3-diene                 | 5.3                   |
| 7-Methyl-3-methyleneocta-1,6-diene | 4.82                  |
| 2,6-Di-tert-butyl-p-cresol         | 5.1                   |

**12.4. Mobility in soil**

**Mobility in soil** No information available.

**12.5. Results of PBT and vPvB assessment**

**PBT and vPvB assessment** The product does not contain any substance(s) classified as PBT or vPvB above the threshold of declaration.

| Chemical name                      | PBT and vPvB assessment                                       |
|------------------------------------|---|
| 2-Butoxyethanol                    | The substance is not PBT / vPvB                               |
| Propan-2-ol                        | The substance is not PBT / vPvB                               |
| d-Limonene                         | The substance is not PBT / vPvB PBT assessment does not apply |
| Pin-2(3)-ene                       | The substance is not PBT / vPvB PBT assessment does not apply |
| Camphene                           | The substance is not PBT / vPvB                               |
| Citral                             | The substance is not PBT / vPvB                               |
| p-Mentha-1,4-diene                 | The substance is not PBT / vPvB                               |
| p-Mentha-1,3-diene                 | The substance is not PBT / vPvB                               |
| Pin-2(10)-ene                      | The substance is not PBT / vPvB                               |
| 7-Methyl-3-methyleneocta-1,6-diene | The substance is not PBT / vPvB                               |
| 2,6-Di-tert-butyl-p-cresol         | The substance is not PBT / vPvB                               |

**12.6. Endocrine disrupting properties**

**Endocrine disrupting properties** The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**12.7. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

**Waste from residues/unused products** Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

**SECTION 14: Transport information****IATA**

|                                   |   |
|-----------------------------------|---|
| 14.1 UN number or ID number       | UN3082  |
| 14.2 UN proper shipping name      | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS nitrate amine salt of N-[3- dimethylaminopropyl]- C14-C20 amides, saturated, reaction products with ethylene oxide, d-Limonene) |
| 14.3 Transport hazard class(es)   | 9   |
| 14.4 Packing group                | III   |
| 14.5 Environmental hazards        | Yes   |
| 14.6 Special precautions for user |   |

**IMDG**

|  |   |
|--|---|
| 14.1 UN number or ID number                                  | UN3082  |
| 14.2 UN proper shipping name                                 | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS nitrate amine salt of N-[3- dimethylaminopropyl]- C14-C20 amides, saturated, reaction products with ethylene oxide, d-Limonene) |
| 14.3 Transport hazard class(es)                              | 9   |
| 14.4 Packing group   | III   |
| 14.5 Environmental hazards                                   | Yes   |
| 14.6 Special precautions for user                            |   |
| EmS-No   | F-A, S-F  |
| 14.7 Maritime transport in bulk according to IMO instruments | No information available  |

**RID**

|                                   |   |
|-----------------------------------|---|
| 14.1 UN number or ID number       | UN3082  |
| 14.2 UN proper shipping name      | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS nitrate amine salt of N-[3- dimethylaminopropyl]- C14-C20 amides, saturated, reaction products with ethylene oxide, d-Limonene) |
| 14.3 Transport hazard class(es)   | 9   |
| 14.4 Packing group                | III   |
| 14.5 Environmental hazards        | Yes   |
| 14.6 Special precautions for user |   |

**ADR**

|                                   |   |
|-----------------------------------|---|
| 14.1 UN number or ID number       | UN3082  |
| 14.2 UN proper shipping name      | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CONTAINS nitrate amine salt of N-[3- dimethylaminopropyl]- C14-C20 amides, saturated, reaction products with ethylene oxide, d-Limonene) |
| 14.3 Transport hazard class(es)   | 9   |
| 14.4 Packing group                | III   |
| 14.5 Environmental hazards        | Yes   |
| 14.6 Special precautions for user |   |
| Tunnel restriction code           | (-)   |

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****France****Occupational Illnesses (R-463-3, France)**

| Chemical name              | French RG number |
|----------------------------|------------------|
| 2-Butoxyethanol - 111-76-2 | RG 84            |

|                        |       |
|------------------------|-------|
| Propan-2-ol - 67-63-0  | RG 84 |
| d-Limonene - 5989-27-5 | RG 84 |

**Germany**

**Water hazard class (WGK)** non-hazardous to water (nwg)

**European Union**

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

**Authorisations and/or restrictions on use:**

This product contains one or more substance(s) subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

| Chemical name                | Restricted substance per REACH Annex XVII | Substance subject to authorisation per REACH Annex XIV |
|------------------------------|---|--|
| 2-Butoxyethanol - 111-76-2   | Use restricted. See item 75.              | -  |
| Propan-2-ol - 67-63-0        | Use restricted. See item 75.              | -  |
| d-Limonene - 5989-27-5       | Use restricted. See item 75.              | -  |
| Citral - 5392-40-5           | Use restricted. See item 75.              | -  |
| p-Mentha-1,3-diene - 99-86-5 | Use restricted. See item 75.              | -  |

**Persistent Organic Pollutants**

Not applicable

**Dangerous substance category per Seveso Directive (2012/18/EU)**

P5a - FLAMMABLE LIQUIDS

P5b - FLAMMABLE LIQUIDS

P5c - FLAMMABLE LIQUIDS

E1 - Hazardous to the Aquatic Environment in Category Acute 1 or Chronic 1

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not applicable

**EU - Plant Protection Products (1107/2009/EC)**

| Chemical name                | EU - Plant Protection Products (1107/2009/EC) |
|------------------------------|---|
| d-Limonene - 5989-27-5       | Plant protection agent                        |
| p-Mentha-1,4-diene - 99-85-4 | Plant protection agent                        |
| p-Mentha-1,3-diene - 99-86-5 | Plant protection agent                        |

**Biocidal Products Regulation (EU) No 528/2012 (BPR)**

| Chemical name         | Biocidal Products Regulation (EU) No 528/2012 (BPR)  |
|-----------------------|--|
| Propan-2-ol - 67-63-0 | Product-type 2: Disinfectants and algaecides not intended for direct application to humans or animals Product-type 4: Food and feed area Product-type 1: Human hygiene |

**International Inventories**

**TSCA**

Contact supplier for inventory compliance status

**DSL/NDL**

Contact supplier for inventory compliance status

**EINECS/ELINCS**

Contact supplier for inventory compliance status

**ENCS**

Contact supplier for inventory compliance status

**IECSC**

Contact supplier for inventory compliance status

**KECL**

Contact supplier for inventory compliance status

**PICCS** Contact supplier for inventory compliance status  
**AIIC** Contact supplier for inventory compliance status  
**NZIoC** Contact supplier for inventory compliance status

**Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing and Evaluated Chemical Substances  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AIIC** - Australian Inventory of Industrial Chemicals  
**NZIoC** - New Zealand Inventory of Chemicals

**15.2. Chemical safety assessment**

**Chemical Safety Report** No information available

**SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H225 - Highly flammable liquid and vapour  
H226 - Flammable liquid and vapour  
H228 - Flammable solid  
H302 - Harmful if swallowed  
H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H317 - May cause an allergic skin reaction  
H318 - Causes serious eye damage  
H319 - Causes serious eye irritation  
H332 - Harmful if inhaled  
H336 - May cause drowsiness or dizziness  
H400 - Very toxic to aquatic life  
H410 - Very toxic to aquatic life with long lasting effects  
H411 - Toxic to aquatic life with long lasting effects

**Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: Exposure controls/personal protection**

TWA TWA (time-weighted average) STEL STEL (Short Term Exposure Limit)  
Ceiling Maximum limit value \* Skin designation  
+ Sensitisers

| Classification procedure  |                    |
|---|--------------------|
| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used        |
| Acute oral toxicity   | Calculation method |
| Acute dermal toxicity   | Calculation method |
| Acute inhalation toxicity - gas                                 | Calculation method |
| Acute inhalation toxicity - vapour                              | Calculation method |
| Acute inhalation toxicity - dust/mist                           | Calculation method |
| Skin corrosion/irritation                                       | Calculation method |
| Serious eye damage/eye irritation                               | Calculation method |
| Respiratory sensitisation                                       | Calculation method |

|                          |                    |
|--------------------------|--------------------|
| Skin sensitisation       | Calculation method |
| Mutagenicity             | Calculation method |
| Carcinogenicity          | Calculation method |
| Reproductive toxicity    | Calculation method |
| STOT - single exposure   | Calculation method |
| STOT - repeated exposure | Calculation method |
| Acute aquatic toxicity   | Calculation method |
| Chronic aquatic toxicity | Calculation method |
| Aspiration hazard        | Calculation method |
| Ozone                    | Calculation method |

#### Key literature references and sources for data used to compile the SDS

Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)  
 European Chemicals Agency (ECHA) (ECHA\_API)  
 EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGl(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 National Institute of Technology and Evaluation (NITE)  
 Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme  
 Organisation for Economic Co-operation and Development Screening Information Data Set  
 World Health Organization

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##### Disclaimer

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**End of Safety Data Sheet**