



# SAFETY DATA SHEET

Fungistop

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

### 1.1 Product identifier

**Product name** : Fungistop  
**Code** : 117082  
**Product description** : Not available.  
**Product type** : Liquid.  
**Other means of identification** : Not available.

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

#### Identified uses

Wood preservative with combined effect against fungi and insects

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

**e-mail address of person responsible for this SDS** : berling@berling.gr

#### Supplier

BERLING ABEE  
Thesi Ag.Paraskevi  
32011 Inofita, Viotia-Greece  
Tel: +302262031663 -  
fax: +302262031293  
info@berling.gr  
www.berling.gr

**Hours of operation** : Monday - Friday: 08.00 - 16.00 (CET)

### 1.4 Emergency telephone number

**Emergency telephone number** : +30 210 7793 777(GreeK Poison Center)

National advisory body/Poison Center

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mixture

#### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Flam. Liq. 3, H226

Eye Irrit. 2, H319

Asp. Tox. 1, H304

Aquatic Acute 1, H400

Aquatic Chronic 1, H410

**Ingredients of unknown toxicity** :

**Ingredients of unknown ecotoxicity** :

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 Label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : Flammable liquid and vapor.  
Causes serious eye irritation.  
May be fatal if swallowed and enters airways.  
Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

**General** : Collect spillage. If medical advice is needed, have product container or label at hand.  
Keep out of reach of children.

**Prevention** : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.  
No smoking. Avoid release to the environment. Wear eye protection.

**Response** : Wash hands thoroughly after handling. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. In case of fire: Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam to extinguish.

**Storage** : Store in a well-ventilated place. Store locked up. Keep cool.

**Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Hazardous ingredients** : Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics

**Supplemental label elements** : Contains 3-iodo-2-propynyl butylcarbamate, poly (ethyleneglycol) dimethacrylate, m-phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate and propiconazole (ISO). May produce an allergic reaction. Repeated exposure may cause skin dryness or cracking.

#### Special packaging requirements

**Containers to be fitted with child-resistant fastenings** : Yes, applicable.

**Tactile warning of danger** : Yes, applicable.

### 2.3 Other hazards

**Other hazards which do not result in classification** : None known.

## SECTION 3: Composition/information on ingredients

Substance/mixture : Mixture

| Product/ingredient name   | Identifiers   | %         | <u>Classification</u><br>Regulation (EC) No. 1272/2008 [CLP]  | Type    |
|---|---|-----------|---|---------|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics      | REACH #: 01-2119457273-39<br><br>EC: 918-481-9 (ex 265-150-3)<br>CAS: 64742-48-9<br>Index: 649-327-00-6 | ≥75 - ≤90 | Asp. Tox. 1, H304<br><br>EUH066   | [1] [2] |
| 2-butoxyethanol   | REACH #: 01-2119475108-36<br>EC: 203-905-0<br>CAS: 111-76-2<br>Index: 603-014-00-0                      | ≤10       | Acute Tox. 4, H302<br><br>Acute Tox. 4, H312<br>Acute Tox. 4, H332<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319   | [1] [2] |
| Oxirane, 2-methyl-, polymer with oxirane, mono(2-ethylhexyl) ether        | REACH #: Polymer<br><br>CAS: 64366-70-7   | ≤3        | Acute Tox. 4, H332<br><br>Aquatic Chronic 3, H412   | [1]     |
| 3-iodo-2-propynyl butylcarbamate  | REACH #: Biocide<br><br>EC: 259-627-5<br>CAS: 55406-53-6<br>Index: 616-212-00-7                         | 0.75      | Acute Tox. 4, H302<br><br>Acute Tox. 3, H331<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317<br>STOT RE 1, H372 (larynx) (inhalation)<br>Aquatic Acute 1, H400 (M=10)<br>Aquatic Chronic 1, H410 (M=1)                              | [1]     |
| Paraffin Oil  | REACH #: 01-2119487078-27<br>EC: 232-455-8<br>CAS: 8042-47-5  | 1         | Asp. Tox. 1, H304   | [1] [2] |
| poly (ethyleneglycol) dimethacrylate                                      | REACH #: Polymer<br><br>CAS: 26142-30-3   | <1        | Skin Sens. 1, H317  | [1]     |
| m-phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate | REACH #: Biocide<br><br>EC: 258-067-9<br>CAS: 52645-53-1<br>Index: 613-058-00-2                         | 0.25      | Acute Tox. 4, H302<br><br>Acute Tox. 4, H332<br>Skin Sens. 1, H317<br>Aquatic Acute 1, H400 (M=1000)<br>Aquatic Chronic 1, H410 (M=1000)  | [1] [2] |
| propiconazole (ISO)   | REACH #: Biocide<br>EC: 262-104-4<br>CAS: 60207-90-1<br>Index: 613-205-00-0                             | 0.24      | Acute Tox. 4, H302<br>Skin Sens. 1, H317<br>Repr. 1B, H360D (Unborn child)<br>Aquatic Acute 1, H400 (M=1)<br>Aquatic Chronic 1, H410 (M=1)<br><br><b>See Section 16 for the full text of the H statements declared above.</b> | [1]     |

Type

**Fungistop**

## SECTION 3: Composition/information on ingredients

- [1] Substance classified with a health or environmental hazard
  - [2] Substance with a workplace exposure limit
  - [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
  - [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
  - [5] Substance of equivalent concern
  - [6] Additional disclosure due to company policy
- Other hazards which do not result in classification

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- |                                   |  |
|-----------------------------------|--|
| <b>Eye contact</b>                | : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.  |
| <b>Inhalation</b>                 | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.   |
| <b>Skin contact</b>               | : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.  |
| <b>Ingestion</b>                  | : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| <b>Protection of first-aiders</b> | : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.   |

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

#### Potential acute health effects

- |                     |   |
|---------------------|---|
| <b>Eye contact</b>  | : Causes serious eye irritation.                                |
| <b>Inhalation</b>   | : No known significant effects or critical hazards.             |
| <b>Skin contact</b> | : Defatting to the skin. May cause skin dryness and irritation. |
| <b>Ingestion</b>    | : May be fatal if swallowed and enters airways.                 |

#### Over-exposure signs/symptoms

- |                     |  |
|---------------------|--|
| <b>Eye contact</b>  | : Adverse symptoms may include the following:<br>pain or irritation<br>watering<br>redness |
| <b>Inhalation</b>   | : No specific data.  |
| <b>Skin contact</b> | : Adverse symptoms may include the following:<br>irritation<br>dryness<br>cracking         |
| <b>Ingestion</b>    | : Adverse symptoms may include the following:<br>nausea or vomiting                        |

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

- |                           |   |
|---------------------------|---|
| <b>Notes to physician</b> | : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
|---------------------------|---|

## SECTION 4: First aid measures

**Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use dry chemical, CO<sub>2</sub>, water spray (fog) or foam.

**Unsuitable extinguishing media** : Do not use water jet.

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

**Hazards from the substance or mixture** : Flammable liquid and vapor. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

**Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide

### 5.3 Advice for firefighters

**Special precautions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

**Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

**For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flames, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

### 6.2 Environmental precautions

: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

### 6.3 Methods and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

## SECTION 6: Accidental release measures

**Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

**6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s). (Applicable when exposure scenario is available.)

### 7.1 Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container.

**Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Keep away from food, drink and animal feedingstuffs.

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

: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use. May not be disposed of in sewers, including rainwater canals.

### 7.3 Specific end use(s)

**Recommendations** : Not available.

**Industrial sector specific solutions** : Not available.

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s). (Applicable when exposure scenario is available.)

### 8.1 Control parameters

Occupational exposure limits

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

| Product/ingredient name   | Exposure limit values   |
|---|---|
| <b>Europe</b><br>2-butoxyethanol  | <b>EU OEL (Europe, 12/2009). Absorbed through skin. Notes: list of indicative occupational exposure limit values</b><br>TWA: 20 ppm 8 hours.<br>TWA: 98 mg/m <sup>3</sup> 8 hours.<br>STEL: 50 ppm 15 minutes.<br>STEL: 246 mg/m <sup>3</sup> 15 minutes.   |
| <b>Austria</b><br>2-butoxyethanol   | <b>Regulation on Limit Values - MAC (Austria, 12/2011). Absorbed through skin.</b><br>TWA: 20 ppm 8 hours.<br>TWA: 98 mg/m <sup>3</sup> 8 hours.<br>PEAK: 40 ppm, 4 times per shift, 30 minutes.<br>PEAK: 200 mg/m <sup>3</sup> , 4 times per shift, 30 minutes.  |
| <b>Belgium</b><br>2-butoxyethanol   | <b>Limit values (Belgium, 4/2014). Absorbed through skin.</b><br>TWA: 20 ppm 8 hours.<br>TWA: 98 mg/m <sup>3</sup> 8 hours.<br>STEL: 50 ppm 15 minutes.<br>STEL: 246 mg/m <sup>3</sup> 15 minutes.  |
| Paraffin Oil  | <b>Limit values (Belgium, 4/2014).</b><br>TWA: 5 mg/m <sup>3</sup> 8 hours. Form: mist<br>STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: mist   |
| <b>Bulgaria</b><br>2-butoxyethanol  | <b>Minister of Labour and Social Affairs and the Minister of Health (Bulgaria, 1/2012). Absorbed through skin.</b><br>Limit value 8 hours: 98 mg/m <sup>3</sup> 8 hours.<br>Limit value 15 min: 246 mg/m <sup>3</sup> 15 minutes.<br>Limit value 15 min: 50 ppm 15 minutes.<br>Limit value 8 hours: 20 ppm 8 hours. |
| Paraffin Oil  | <b>Minister of Labour and Social Affairs and the Minister of Health (Bulgaria, 1/2012).</b><br>Limit value 8 hours: 5 mg/m <sup>3</sup> 8 hours.  |
| m-phenoxybenzyl 3-(2,2-dichlorovinyl)<br>-2,2-dimethylcyclopropanecarboxylate | <b>Minister of Labour and Social Affairs and the Minister of Health (Bulgaria, 8/2007).</b><br>Limit value 8 hours: 5 mg/m <sup>3</sup> 8 hours.  |
| <b>Croatia</b><br>2-butoxyethanol   | <b>Ministry of Economy, Labour and Entrepreneurship ELV/ STELV (Croatia, 6/2013). Absorbed through skin.</b><br>STELV: 246 mg/m <sup>3</sup> 15 minutes.<br>STELV: 50 ppm 15 minutes.<br>ELV: 98 mg/m <sup>3</sup> 8 hours.<br>ELV: 20 ppm 8 hours.   |
| <b>Czech Republic</b><br>2-butoxyethanol                                      | <b>Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 1/2013). Absorbed through skin.</b><br>TWA: 100 mg/m <sup>3</sup> 8 hours.<br>TWA: 20.7 ppm 8 hours.<br>STEL: 200 mg/m <sup>3</sup> 15 minutes.<br>STEL: 41.4 ppm 15 minutes.   |
| Paraffin Oil  | <b>Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 1/2013).</b><br>TWA: 5 mg/m <sup>3</sup> 8 hours. Form: aerosol<br>STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: aerosol   |
| <b>Denmark</b>  |   |

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

|  |  |
|--|--|
| 2-butoxyethanol  | <b>Working Environment Authority (Denmark, 10/2012). Absorbed through skin.</b><br>TWA: 20 ppm 8 hours.<br>TWA: 98 mg/m <sup>3</sup> 8 hours.  |
| Paraffin Oil   | <b>Working Environment Authority (Denmark, 10/2012).</b><br>TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and particles   |
| <b>Estonia</b>   |  |
| 2-butoxyethanol  | <b>Occupational exposure limits, Regulation No. 293 (Estonia, 1/2008). Absorbed through skin. Skin sensitizer.</b><br>TWA: 98 mg/m <sup>3</sup> 8 hours.<br>TWA: 20 ppm 8 hours.<br>STEL: 246 mg/m <sup>3</sup> 15 minutes.<br>STEL: 50 ppm 15 minutes.                      |
| <b>Finland</b>   |  |
| 2-butoxyethanol  | <b>Institute of Occupational Health, Ministry of Social Affairs (Finland, 3/2014). Absorbed through skin.</b><br>TWA: 20 ppm 8 hours.<br>TWA: 98 mg/m <sup>3</sup> 8 hours.<br>STEL: 50 ppm 15 minutes.<br>STEL: 250 mg/m <sup>3</sup> 15 minutes.                           |
| <b>France</b>  |  |
| 2-butoxyethanol  | <b>Ministry of Labor (France, 7/2012). Absorbed through skin. Notes: Labour Act , Art 4412-149 (Regulatory binding exposure limits)</b><br>TWA: 10 ppm 8 hours.<br>TWA: 49 mg/m <sup>3</sup> 8 hours.<br>STEL: 246 mg/m <sup>3</sup> 15 minutes.<br>STEL: 50 ppm 15 minutes. |
| <b>Germany</b>   |  |
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | <b>DFG MAC-values list (Germany, 7/2013).</b><br>TWA: 50 ppm 8 hours.<br>TWA: 300 mg/m <sup>3</sup> 8 hours.<br>PEAK: 100 ppm, 4 times per shift, 15 minutes.<br>PEAK: 600 mg/m <sup>3</sup> , 4 times per shift, 15 minutes.  |
| 2-butoxyethanol  | <b>TRGS 900 OEL (Germany, 3/2015). Absorbed through skin.</b><br>TWA: 49 mg/m <sup>3</sup> 8 hours.<br>PEAK: 196 mg/m <sup>3</sup> 15 minutes.<br>TWA: 10 ppm 8 hours.<br>PEAK: 40 ppm 15 minutes.   |
|  | <b>DFG MAC-values list (Germany, 7/2015). Absorbed through skin.</b><br>TWA: 10 ppm 8 hours.<br>PEAK: 20 ppm, 4 times per shift, 15 minutes.<br>TWA: 49 mg/m <sup>3</sup> 8 hours.<br>PEAK: 98 mg/m <sup>3</sup> , 4 times per shift, 15 minutes.                            |
| Paraffin Oil   | <b>DFG MAC-values list (Germany, 7/2015).</b><br>PEAK: 20 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. Form: respirable fraction<br>TWA: 5 mg/m <sup>3</sup> 8 hours. Form: respirable fraction  |
| 3-iodo-2-propynyl butylcarbamate                                     | <b>DFG MAC-values list (Germany, 7/2018). Skin sensitizer.</b><br>PEAK: 0.116 mg/m <sup>3</sup> , 4 times per shift, 15 minutes.<br>PEAK: 0.01 ppm, 4 times per shift, 15 minutes.<br>TWA: 0.058 mg/m <sup>3</sup> 8 hours.<br>TWA: 0.005 ppm 8 hours.                       |
|  | <b>TRGS 900 OEL (Germany, 6/2018). Skin sensitizer.</b><br>PEAK: 0.116 mg/m <sup>3</sup> 15 minutes.<br>PEAK: 0.01 ppm 15 minutes.<br>TWA: 0.058 mg/m <sup>3</sup> 8 hours.<br>TWA: 0.005 ppm 8 hours.   |
| <b>Greece</b>  |  |



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

|  |   |
|--|---|
| 2-butoxyethanol  | <b>Ministry of Labour and Social Affairs (Greece, 2/2012). Absorbed through skin.</b><br>TWA: 25 ppm 8 hours.<br>TWA: 120 mg/m <sup>3</sup> 8 hours.  |
| Paraffin Oil   | <b>Ministry of Labour and Social Affairs (Greece, 2/2012).</b><br>TWA: 5 mg/m <sup>3</sup> 8 hours.   |
| <b>Hungary</b><br>Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | <b>25/2000. (IX.30) Ministry of Health and Ministry of Social and Family Affairs Joint Decree (Hungary).</b><br>TWA: 5 mg/m <sup>3</sup> Form: Mist   |
| 2-butoxyethanol  | <b>25/2000. (IX.30) Ministry of Health and Ministry of Social and Family Affairs Joint Decree (Hungary, 12/2011). Absorbed through skin.</b><br>TWA: 98 mg/m <sup>3</sup> 8 hours.<br>PEAK: 246 mg/m <sup>3</sup> 15 minutes.                 |
| Paraffin Oil   | <b>25/2000. (IX.30) Ministry of Health and Ministry of Social and Family Affairs Joint Decree (Hungary, 12/2011).</b><br>CEIL: 5 mg/m <sup>3</sup> Form: mist   |
| <b>Ireland</b><br>2-butoxyethanol  | <b>NAOSH (Ireland, 12/2011). Absorbed through skin.</b><br>OELV-8hr: 20 ppm 8 hours.<br>OELV-8hr: 98 mg/m <sup>3</sup> 8 hours.<br>OELV-15min: 50 ppm 15 minutes.<br>OELV-15min: 246 mg/m <sup>3</sup> 15 minutes.                            |
| Paraffin Oil   | <b>NAOSH (Ireland, 12/2011).</b><br>OELV-8hr: 5 ppm 8 hours. Form: Inhalable fraction   |
| <b>Italy</b><br>2-butoxyethanol  | <b>Ministry of Labour and Social Policy (Italy, 10/2013). Absorbed through skin.</b><br>8 hours: 20 ppm 8 hours.<br>8 hours: 98 mg/m <sup>3</sup> 8 hours.<br>Short Term: 50 ppm 15 minutes.<br>Short Term: 246 mg/m <sup>3</sup> 15 minutes. |
| <b>Latvia</b><br>2-butoxyethanol   | <b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 6/2015). Absorbed through skin.</b><br>TWA: 98 mg/m <sup>3</sup> 8 hours.<br>TWA: 20 ppm 8 hours.<br>STEL: 50 ppm 15 minutes.<br>STEL: 246 mg/m <sup>3</sup> 15 minutes.               |
| <b>Lithuania</b><br>2-butoxyethanol  | <b>Lithuanian Hygiene Standard HN 23 (Lithuania, 10/2007). Absorbed through skin.</b><br>TWA: 50 mg/m <sup>3</sup> 8 hours.<br>TWA: 10 ppm 8 hours.<br>STEL: 100 mg/m <sup>3</sup> 15 minutes.<br>STEL: 20 ppm 15 minutes.                    |
| <b>Netherlands</b><br>2-butoxyethanol  | <b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2014). Absorbed through skin.</b><br>OEL, 8-h TWA: 100 mg/m <sup>3</sup> 8 hours.<br>STEL, 15-min: 246 mg/m <sup>3</sup> 15 minutes.                        |
| Paraffin Oil   | <b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2014).</b><br>OEL, 8-h TWA: 5 mg/m <sup>3</sup> 8 hours. Form: mist   |
| <b>Norway</b>  |   |

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

|   |   |
|---|---|
| 2-butoxyethanol   | <b>FOR-2011-12-06-1358 (Norway, 6/2015). Absorbed through skin.</b><br>TWA: 10 ppm 8 hours.<br>TWA: 50 mg/m <sup>3</sup> 8 hours.   |
| Paraffin Oil  | <b>FOR-2011-12-06-1358 (Norway, 6/2015).</b><br>TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and particles<br>TWA: 50 mg/m <sup>3</sup> 8 hours. Form: vapor  |
| <b>Poland</b><br>Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | <b>Regulation of the Minister of Family, Labor and Social Policy of 12 June 2018, regarding the highest permissible concentrations and values of agents harmful to health in the work environment (J of Laws 2018, item 1286) (Poland, 12/2011).</b><br>STEL: 900 mg/m <sup>3</sup> 15 minutes.<br>TWA: 300 mg/m <sup>3</sup> 8 hours.  |
| 2-butoxyethanol   | <b>Regulation of the Minister of Family, Labor and Social Policy of 12 June 2018, regarding the highest permissible concentrations and values of agents harmful to health in the work environment (J of Laws 2018, item 1286) (Poland, 6/2014).</b><br>TWA: 98 mg/m <sup>3</sup> 8 hours.<br>STEL: 200 mg/m <sup>3</sup> 15 minutes.  |
| Paraffin Oil  | <b>Regulation of the Minister of Family, Labor and Social Policy of 12 June 2018, regarding the highest permissible concentrations and values of agents harmful to health in the work environment (J of Laws 2018, item 1286) (Poland, 6/2014).</b><br>TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction   |
| <b>Portugal</b><br>2-butoxyethanol  | <b>Portuguese Institute of Quality (Portugal, 11/2014).</b><br>TWA: 20 ppm 8 hours.   |
| Paraffin Oil  | <b>Portuguese Institute of Quality (Portugal, 11/2014).</b><br>TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Only aerosol<br>STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: Only aerosol  |
| <b>Romania</b><br>2-butoxyethanol   | <b>HG 1218/2006 with subsequent modifications and additions (Romania, 1/2012). Absorbed through skin.</b><br>Short term: 50 ppm 15 minutes.<br>VLA: 98 mg/m <sup>3</sup> 8 hours.<br>VLA: 20 ppm 8 hours.<br>Short term: 246 mg/m <sup>3</sup> 15 minutes.  |
| Paraffin Oil  | <b>HG 1218/2006 with subsequent modifications and additions (Romania, 1/2012).</b><br>VLA: 5 mg/m <sup>3</sup> 8 hours.<br>Short term: 10 mg/m <sup>3</sup> 15 minutes.   |
| <b>Slovakia</b><br>2-butoxyethanol  | <b>Government regulation SR c. 356/2006 (Slovakia, 12/2011). Absorbed through skin.</b><br>TWA: 98 mg/m <sup>3</sup> 8 hours.<br>TWA: 20 ppm 8 hours.<br>STEL: 246 mg/m <sup>3</sup> 15 minutes.<br>STEL: 50 ppm 15 minutes.  |
| Paraffin Oil  | <b>Government regulation SR c. 356/2006 (Slovakia, 12/2011).</b><br>TWA: 1 mg/m <sup>3</sup> , (Mineral oils) 8 hours. Form: liquid aerosol, fumes<br>TWA: 5 ppm, (Mineral oils) 8 hours. Form: liquid aerosol, fumes<br>STEL: 3 mg/m <sup>3</sup> , (Mineral oils) 15 minutes. Form: liquid aerosol, fumes<br>STEL: 15 ppm, (Mineral oils) 15 minutes. Form: liquid aerosol, fumes |
| <b>Slovenia</b>   |   |

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

|  |   |
|--|---|
| 2-butoxyethanol  | <b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 6/2015). Absorbed through skin.</b><br>TWA: 98 mg/m <sup>3</sup> 8 hours.<br>TWA: 20 ppm 8 hours.<br>KTV: 245 mg/m <sup>3</sup> , 4 times per shift, 15 minutes.<br>KTV: 50 ppm, 4 times per shift, 15 minutes. |
| <b>Spain</b>   |   |
| 2-butoxyethanol  | <b>National institute of occupational safety and health (Spain, 1/2015). Absorbed through skin.</b><br>TWA: 20 ppm 8 hours.<br>TWA: 98 mg/m <sup>3</sup> 8 hours.<br>STEL: 245 mg/m <sup>3</sup> 15 minutes.<br>STEL: 50 ppm 15 minutes.  |
| Paraffin Oil   | <b>National institute of occupational safety and health (Spain, 1/2015).</b><br>TWA: 5 mg/m <sup>3</sup> 8 hours. Form: mist<br>STEL: 10 mg/m <sup>3</sup> 15 minutes. Form: mist   |
| <b>Sweden</b>  |   |
| 2-butoxyethanol  | <b>Work environment authority Regulation 2018:1 (Sweden, 12/2011). Absorbed through skin.</b><br>TWA: 10 ppm 8 hours.<br>TWA: 50 mg/m <sup>3</sup> 8 hours.<br>STEL: 20 ppm 15 minutes.<br>STEL: 100 mg/m <sup>3</sup> 15 minutes.  |
| Paraffin Oil   | <b>Work environment authority Regulation 2018:1 (Sweden, 12/2011).</b><br>TWA: 1 mg/m <sup>3</sup> 8 hours. Form: mist and fume<br>STEL: 3 mg/m <sup>3</sup> 15 minutes. Form: mist and fume  |
| <b>Switzerland</b>   |   |
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | <b>SUVA (Switzerland, 6/2013).</b><br>STEL: 600 mg/m <sup>3</sup> 15 minutes.<br>STEL: 100 ppm 15 minutes.<br>TWA: 50 ppm 8 hours.<br>TWA: 300 mg/m <sup>3</sup> 8 hours.   |
| 2-butoxyethanol  | <b>SUVA (Switzerland, 1/2015). Absorbed through skin.</b><br>TWA: 10 ppm 8 hours.<br>TWA: 49 mg/m <sup>3</sup> 8 hours.<br>STEL: 20 ppm 15 minutes.<br>STEL: 98 mg/m <sup>3</sup> 15 minutes.   |
| 3-iodo-2-propynyl butylcarbamate                                     | <b>SUVA (Switzerland, 1/2018). Skin sensitizer.</b><br>STEL: 0.24 mg/m <sup>3</sup> 15 minutes. Form: vapour and aerosols<br>STEL: 0.02 ppm 15 minutes. Form: vapour and aerosols<br>TWA: 0.01 ppm 8 hours. Form: vapour and aerosols<br>TWA: 0.12 mg/m <sup>3</sup> 8 hours. Form: vapour and aerosols                             |
| <b>Turkey</b>  |   |
| 2-butoxyethanol  | <b>TR ISGGM OEL (Turkey, 12/2013). Absorbed through skin.</b><br>TWA: 98 mg/m <sup>3</sup> 8 hours.<br>TWA: 20 ppm 8 hours.<br>STEL: 246 mg/m <sup>3</sup> 15 minutes.<br>STEL: 50 ppm 15 minutes.  |
| Paraffin Oil   | <b>ACGIH TLV (United States, 3/2015).</b><br>TWA: 5 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction   |
| <b>United Kingdom (UK)</b>   |   |
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | <b>EH40/2005 WELs (United Kingdom (UK)).</b><br>TWA: 1200 mg/m <sup>3</sup> Form: Vapor   |
| 2-butoxyethanol  | <b>EH40/2005 WELs (United Kingdom (UK), 12/2011). Absorbed through skin.</b><br>STEL: 50 ppm 15 minutes.<br>TWA: 25 ppm 8 hours.  |

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

**Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

**Derived effect levels**

| Product/ingredient name | Type | Exposure              | Value                  | Population                     | Effects  |
|-------------------------|------|-----------------------|------------------------|--------------------------------|----------|
| 2-butoxyethanol         | DNEL | Long term Oral        | 3.2 mg/kg bw/day       | General population [Consumers] | Systemic |
|                         | DNEL | Short term Oral       | 26.7 mg/kg bw/day      | General population [Consumers] | Systemic |
|                         | DNEL | Short term Dermal     | 89 mg/kg bw/day        | General population [Consumers] | Systemic |
|                         | DNEL | Short term Dermal     | 125 mg/kg bw/day       | Workers                        | Systemic |
|                         | DNEL | Long term Dermal      | 75 mg/kg bw/day        | Workers                        | Systemic |
|                         | DNEL | Long term Dermal      | 38 mg/kg bw/day        | General population [Consumers] | Systemic |
|                         | DNEL | Short term Inhalation | 123 mg/m <sup>3</sup>  | General population [Consumers] | Local    |
|                         | DNEL | Short term Inhalation | 1091 mg/m <sup>3</sup> | Workers                        | Systemic |
|                         | DNEL | Short term Inhalation | 246 mg/m <sup>3</sup>  | Workers                        | Local    |
|                         | DNEL | Long term Inhalation  | 59 mg/m <sup>3</sup>   | General population [Consumers] | Systemic |
|                         | DNEL | Long term Inhalation  | 98 mg/m <sup>3</sup>   | Workers                        | Systemic |

**Predicted effect concentrations**

| Product/ingredient name | Type | Compartment Detail     | Value      | Method Detail |
|-------------------------|------|------------------------|------------|---------------|
| 2-butoxyethanol         | -    | Fresh water            | 8.8 mg/l   | -             |
|                         | -    | Marine water           | 0.88 mg/l  | -             |
|                         | -    | Fresh water sediment   | 34.6 mg/l  | -             |
|                         | -    | Marine water sediment  | 3.46 mg/l  | -             |
|                         | -    | Sewage Treatment Plant | 463 mg/l   | -             |
|                         | -    | Soil                   | 2.33 mg/kg | -             |

**8.2 Exposure controls**

**Appropriate engineering controls** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

**Individual protection measures**

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

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Wear suitable gloves tested to EN374. Cat. 3
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****Appearance**

- Physical state** : Liquid.
- Color** : Clear. Colorless.
- Odor** : Characteristic.
- Odor threshold** : Not available.
- pH** : 7 [Conc. (% w/w): 1%]
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** : Not available.
- Flash point** : Closed cup: 57.5°C [Pensky-Martens.]
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Burning time** : Not applicable.
- Burning rate** : Not applicable.
- Upper/lower flammability or explosive limits** : Not available.
- Vapor pressure** : Not available.

**SECTION 9: Physical and chemical properties**

|  |   |
|--|---|
| <b>Vapor density</b>                               | : Not available.  |
| <b>Relative density</b>                            | : 0.8   |
| <b>Solubility(ies)</b>                             | : Not available.  |
| <b>Dispersibility properties</b>                   | : Not available.  |
| <b>Partition coefficient: n-octanol/<br/>water</b> | : Not available.  |
| <b>Auto-ignition temperature</b>                   | : 148°C   |
| <b>Decomposition temperature</b>                   | : Not available.  |
| <b>Viscosity</b>                                   | : Dynamic (room temperature): 1.5 mPa·s<br>Kinematic (room temperature): 0.019 cm <sup>2</sup> /s<br>Kinematic (40°C): 0.014 cm <sup>2</sup> /s |
| <b>Explosive properties</b>                        | : Not available.  |
| <b>Oxidizing properties</b>                        | : Not an oxidizer   |

**9.2 Other information**

No additional information.

**SECTION 10: Stability and reactivity**

|  |   |
|--|---|
| <b>10.1 Reactivity</b>                             | : No specific test data related to reactivity available for this product or its ingredients.  |
| <b>10.2 Chemical stability</b>                     | : The product is stable.  |
| <b>10.3 Possibility of<br/>hazardous reactions</b> | : Under normal conditions of storage and use, hazardous reactions will not occur.   |
| <b>10.4 Conditions to avoid</b>                    | : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. |
| <b>10.5 Incompatible materials</b>                 | : Reactive or incompatible with the following materials:<br>oxidizing materials   |
| <b>10.6 Hazardous<br/>decomposition products</b>   | : Under normal conditions of storage and use, hazardous decomposition products should not be produced.  |

**SECTION 11: Toxicological information****11.1 Information on toxicological effects.****Acute toxicity**

| Product/ingredient name  | Result                          | Species      | Dose                   | Exposure         |
|--|---------------------------------|--------------|------------------------|------------------|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | LC50 Inhalation Vapor           | Rat          | >6.1 mg/l              | 4 hours          |
|  | LD50 Dermal                     | Rabbit       | >3000 mg/kg            | -                |
|  | LD50 Oral                       | Rat          | >15000 mg/kg           | -                |
| 2-butoxyethanol  | LC50 Inhalation Gas.            | Rat          | 450 ppm                | 4 hours          |
|  | LD50 Dermal                     | Rabbit       | 220 mg/kg              | -                |
|  | LD50 Oral                       | Rabbit       | 300 mg/kg              | -                |
| Oxirane, 2-methyl-, polymer with oxirane, mono (2-ethylhexyl) ether  | LD50 Oral                       | Rat          | 917 mg/kg              | -                |
|  | LC50 Inhalation Dusts and mists | Rat          | 2.76 mg/l              | 4 hours          |
|  | LD50 Dermal                     | Rat          | >4000 mg/kg            | -                |
| 3-iodo-2-propynyl butylcarbamate                                     | LD50 Oral                       | Rat          | 2645 mg/kg             | -                |
|  | LC50 Inhalation Dusts and mists | Rat          | 0.763 g/m <sup>3</sup> | 4 hours Aerosol. |
|  | LD50 Dermal                     | Rabbit       | >2000 mg/kg            | -                |
|  | LD50 Oral                       | Rat - Female | 1056 mg/kg             | -                |

**SECTION 11: Toxicological information**

|                     |                                 |            |             |         |
|---------------------|---------------------------------|------------|-------------|---------|
| permethrin (ISO)    | LD50 Oral                       | Rat - Male | 1795 mg/kg  | -       |
|                     | LC50 Inhalation Dusts and mists | Rat        | >23.5 mg/l  | 4 hours |
|                     | LD50 Dermal                     | Rabbit     | >2000 mg/kg | -       |
|                     | LD50 Dermal                     | Rat        | >1750 mg/kg | -       |
|                     | LD50 Oral                       | Rat        | 383 mg/kg   | -       |
| propiconazole (ISO) | LD50 Oral                       | Rat        | 480 mg/kg   | -       |
|                     | LD50 Oral                       | Rat        | 480 mg/kg   | -       |
|                     | LC50 Inhalation Dusts and mists | Rat        | 1264 mg/m³  | 4 hours |
|                     | LD50 Dermal                     | Rat        | >4 g/kg     | -       |
|                     | LD50 Oral                       | Rat        | 1517 mg/kg  | -       |

**Conclusion/Summary** : Not available.**Acute toxicity estimates**

| Route                        | ATE value      |
|------------------------------|----------------|
| Oral                         | 21666.67 mg/kg |
| Dermal                       | 18333.33 mg/kg |
| Inhalation (dusts and mists) | 18.24 mg/l     |

**Irritation/Corrosion**

| Product/ingredient name   | Result                   | Species | Score | Exposure                | Observation |
|---|--------------------------|---------|-------|-------------------------|-------------|
| 2-butoxyethanol   | Eyes - Moderate irritant | Rabbit  | -     | 24 hours 100 milligrams | -           |
|   | Eyes - Severe irritant   | Rabbit  | -     | 100 milligrams          | -           |
|   | Skin - Mild irritant     | Rabbit  | -     | 500 milligrams          | -           |
| 3-iodo-2-propynyl butylcarbamate poly (ethyleneglycol) dimethacrylate | Eyes - Severe irritant   | Rabbit  | -     | -                       | -           |
|   | Skin - Irritant          | Rabbit  | -     | -                       | -           |

**Conclusion/Summary** : Not available.**Sensitizer**

| Product/ingredient name                                  | Route of exposure | Species    | Result          |
|--|-------------------|------------|-----------------|
| 2-butoxyethanol poly (ethyleneglycol) dimethacrylate     | skin              | Guinea pig | Not sensitizing |
|  | skin              | Guinea pig | Not sensitizing |
| m-phenoxybenzyl 3-(2,2-dichlorovinyl)                    | skin              | Guinea pig | Sensitizing     |
| -2,2-dimethylcyclopropanecarboxylate propiconazole (ISO) | skin              | Guinea pig | Sensitizing     |

**Conclusion/Summary** : Not available.**Mutagenicity**

| Product/ingredient name          | Test | Experiment                                | Result   |
|----------------------------------|------|---|----------|
| 3-iodo-2-propynyl butylcarbamate | -    | Experiment: In vitro<br>Subject: Bacteria | Negative |

**Conclusion/Summary** : Not available.**Carcinogenicity****Conclusion/Summary** : Not available.**Reproductive toxicity**

Fungistop

**SECTION 11: Toxicological information**

| Product/ingredient name          | Maternal toxicity | Fertility | Development toxin | Species         | Dose           | Exposure                 |
|----------------------------------|-------------------|-----------|-------------------|-----------------|----------------|--------------------------|
| 3-iodo-2-propynyl butylcarbamate | Positive          | -         | Negative          | Rabbit - Female | Oral: 50 mg/kg | 13 days; 7 days per week |
|                                  | Negative          | -         | Negative          | Rabbit - Female | Oral: 20 mg/kg | 13 days; 7 days per week |

**Conclusion/Summary** : Not available.**Teratogenicity**

| Product/ingredient name          | Result          | Species         | Dose     | Exposure |
|----------------------------------|-----------------|-----------------|----------|----------|
| 3-iodo-2-propynyl butylcarbamate | Negative - Oral | Rabbit - Female | 50 mg/kg | -        |

**Conclusion/Summary** : Not available.**Specific target organ toxicity (single exposure)**

Not available.

**Specific target organ toxicity (repeated exposure)**

| Product/ingredient name          | Category   | Route of exposure | Target organs |
|----------------------------------|------------|-------------------|---------------|
| 3-iodo-2-propynyl butylcarbamate | Category 1 | Inhalation        | larynx        |

**Aspiration hazard**

| Product/ingredient name  | Result                         |
|--|--------------------------------|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | ASPIRATION HAZARD - Category 1 |

**Information on the likely routes of exposure** : Not available.**Potential acute health effects**

- Inhalation** : No known significant effects or critical hazards.
- Ingestion** : May be fatal if swallowed and enters airways.
- Skin contact** : Defatting to the skin. May cause skin dryness and irritation.
- Eye contact** : Causes serious eye irritation.

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

- Inhalation** : No specific data.
- Ingestion** : Adverse symptoms may include the following:  
nausea or vomiting
- Skin contact** : Adverse symptoms may include the following:  
irritation  
dryness  
cracking
- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness

**Delayed and immediate effects and also chronic effects from short and long term exposure****Short term exposure****Potential immediate effects** : Not available.**Potential delayed effects** : Not available.**Long term exposure****Potential immediate effects** : Not available.



## SECTION 11: Toxicological information

Potential delayed effects : Not available.

### Potential chronic health effects

| Product/ingredient name   | Result                             | Species               | Dose                   | Exposure |
|---|------------------------------------|-----------------------|------------------------|----------|
| 3-iodo-2-propynyl butylcarbamate  | Sub-chronic NOAEL Oral             | Rat                   | 35 mg/kg               | 90 days  |
|   | Chronic NOAEL Oral                 | Rat                   | 20 mg/kg               | 2 years  |
|   | Sub-chronic NOAEL Dermal           | Rat                   | 200 mg/kg              | 90 days  |
|   | Sub-acute NOAEL Oral               | Rabbit - Male, Female | 13 mg/kg               | -        |
| m-phenoxybenzyl 3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate | Sub-chronic NOAEL Inhalation Vapor | Rat                   | 1.16 mg/m <sup>3</sup> | 90 days  |
|   | Sub-chronic NOAEL Oral             | Dog                   | 5 mg/kg                | 1 years  |
|   | Sub-chronic NOAEL Oral             | Mouse                 | 2.7 mg/kg              | 17 weeks |
|   | Sub-chronic NOAEL Dermal           | Rat                   | 100 mg/kg              | 28 days  |

**Conclusion/Summary** : Not available.

**General** : Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

**Carcinogenicity** : No known significant effects or critical hazards.

**Mutagenicity** : No known significant effects or critical hazards.

**Teratogenicity** : No known significant effects or critical hazards.

**Developmental effects** : No known significant effects or critical hazards.

**Fertility effects** : No known significant effects or critical hazards.

**Other information** : Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

| Product/ingredient name  | Result                               | Species                                 | Exposure |
|--|--------------------------------------|---|----------|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | Acute LC50 >100 mg/l                 | Algae                                   | 96 hours |
|  | Acute LC50 >100 mg/l                 | Daphnia                                 | 96 hours |
|  | Acute LC50 >100 mg/l                 | Fish                                    | 96 hours |
|  | Acute EC50 >1000 mg/l Fresh water    | Daphnia - Daphnia magna                 | 48 hours |
| 2-butoxyethanol  | Acute LC50 800000 µg/l Marine water  | Crustaceans - Crangon crangon           | 48 hours |
|  | Acute LC50 1250000 µg/l Marine water | Fish - Menidia beryllina                | 96 hours |
|  | Acute LC50 20 mg/l                   | Fish - Brachydanio rerio                | 96 hours |
|  | EC50 0.05 mg/l                       | Daphnia - Daphnia magna                 | 21 days  |
| Oxirane, 2-methyl-, polymer with oxirane, mono (2-ethylhexyl) ether  | EC50 44 mg/l                         | Micro-organism                          | 3 hours  |
|  | NOEC 0.0084 mg/l                     | Fish - Pimephales promelas - Larvae     | 35 days  |
|  | NOEC 0.049 mg/l                      | Fish - rainbow trout                    | 96 hours |
|  | Acute EC50 0.022 mg/l                | Algae - Scenedesmus subspicatus         | 72 hours |
| 3-iodo-2-propynyl butylcarbamate                                     | Acute EC50 0.16 mg/l                 | Daphnia - Daphnia magna                 | 48 hours |
|  | Acute LC50 0.067 mg/l                | Fish - rainbow trout                    | 96 hours |
|  | Acute NOEC 0.0046 mg/l               | Algae - Scenedesmus subspicatus         | 72 hours |
|  | Acute EC50 0.5 mg/l                  | Algae                                   | 72 hours |
|  | Acute EC50 0.00064 mg/l              | Daphnia - Daphnia magna                 | 48 hours |
|  | Acute EC50 0.00017 mg/l              | Daphnia                                 | 48 hours |
|  | Acute EC50 0.112 ppb Fresh water     | Daphnia - Daphnia magna                 | 48 hours |
|  | Acute IC50 >1.13 mg/l                | Algae - Pseudokirchneriella subcapitata | 72 hours |
| permethrin (ISO)   | Acute LC50 0.548 ppb Marine water    | Crustaceans - Palaemonetes              | 48 hours |

**SECTION 12: Ecological information**

|                     |                                  |                                 |          |
|---------------------|----------------------------------|---------------------------------|----------|
| propiconazole (ISO) | Acute LC50 0.0051 mg/l           | pugio                           | 96 hours |
|                     | Acute LC50 0.0076 mg/l           | Fish                            | 96 hours |
|                     | Acute LC50 0.62 µg/l Fresh water | Fish                            | 96 hours |
|                     | Acute EC50 0.76 mg/l             | Fish - Oncorhynchus mykiss      | 96 hours |
|                     |                                  | Algae - Scenedesmus subspicatus | 72 hours |
|                     | Acute EC50 10.2 mg/l             | Daphnia - Daphnia magna         | 48 hours |
|                     | Acute LC50 4.3 mg/l              | Fish                            | 96 hours |

**Conclusion/Summary** : Not available.

**12.2 Persistence and degradability**

| Product/ingredient name  | Test  | Result                    | Dose                         | Inoculum                 |
|--|---|---------------------------|------------------------------|--------------------------|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | -   | 80 % - Readily - 28 days  | -                            | -                        |
| 2-butoxyethanol  | 301B Ready Biodegradability- CO <sub>2</sub> Evolution Test | 90 % - Readily - 28 days  | -                            | -                        |
| 3-iodo-2-propynyl butylcarbamate                                     | -   | 18.3 % - Readily - 3 days | -                            | -                        |
| poly (ethyleneglycol)  | OECD 301F   | 25 % - 28 days            | 1.03 gO <sub>2</sub> /g ThOD | 30 mg/l Activated sludge |
| dimethacrylate   | -   | 14 to 21 % - 28 days      | -                            | -                        |

**Conclusion/Summary** : Not available.

| Product/ingredient name  | Aquatic half-life | Photolysis | Biodegradability |
|--|-------------------|------------|------------------|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | -                 | -          | Not readily      |
| 3-iodo-2-propynyl butylcarbamate                                     | -                 | -          | Readily          |
| permethrin (ISO)   | -                 | -          | Not readily      |
| propiconazole (ISO)  | -                 | -          | Not readily      |

**12.3 Bioaccumulative potential**

| Product/ingredient name  | LogP <sub>ow</sub> | BCF | Potential |
|--|--------------------|-----|-----------|
| Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics | 5.5 to 7.2         | -   | high      |
| 3-iodo-2-propynyl butylcarbamate                                     | 2.81               | -   | low       |
| permethrin (ISO)   | 6.1                | 570 | high      |
| propiconazole (ISO)  | 3.65               | 116 | low       |

**12.4 Mobility in soil**

**Soil/water partition coefficient (K<sub>oc</sub>)** : Not available.

**Mobility** : Not available.

**12.5 Results of PBT and vPvB assessment**

**PBT** : Not applicable.

**vPvB** : Not applicable.

**12.6 Other adverse effects** : No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 13.1 Waste treatment methods.

#### Product

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

**Hazardous waste** : Yes.

#### European waste catalogue (EWC)






| Waste code | Waste designation  |
|------------|--|
| 03 02 05*  | other wood preservatives containing hazardous substances                 |
| 15 01 10*  | packaging containing residues of or contaminated by hazardous substances |

#### Packaging

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

**Special precautions** : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

|  | ADR/RID   | IMDG  | IATA  |
|--|---|---|---|
| <b>14.1 UN number</b>                    | UN1993  | UN1993  | UN1993  |
| <b>14.2 UN proper shipping name</b>      | FLAMMABLE LIQUID, N.O.S. (Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics, permethrin (ISO))   | FLAMMABLE LIQUID, N.O.S. (Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics, permethrin (ISO))   | FLAMMABLE LIQUID, N.O.S. (Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics, permethrin (ISO))   |
| <b>14.3 Transport hazard class(es)</b>   | 3<br> F1<br>                      | 3<br>                             | 3<br>  |
| <b>14.4 Packing group</b>                | III   | III   | III   |
| <b>14.5 Environmental hazards</b>        | Yes.  | Yes.  | Yes. The environmentally hazardous substance mark is not required.  |
| <b>14.6 Special precautions for user</b> | <b>Transport within user's premises:</b> always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or | <b>Transport within user's premises:</b> always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or | <b>Transport within user's premises:</b> always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or |

|                               |   |   |  |
|-------------------------------|---|---|--|
|                               | spillage.   | spillage.   | spillage.  |
| <b>Additional information</b> | The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.<br><b><u>Tunnel code</u></b> (D/E) | The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.<br><b><u>Emergency schedules</u></b> F-E, S-E | The environmentally hazardous substance mark may appear if required by other transportation regulations. |

## SECTION 15: Regulatory information

|   |                  |
|---|------------------|
| <b>Black List Chemicals</b>   | : Not listed     |
| <b>Priority List Chemicals</b>  | : Not determined |
| <b>Industrial emissions<br/>(integrated pollution<br/>prevention and control) -<br/>Air</b>   | : Not listed     |
| <b>Industrial emissions<br/>(integrated pollution<br/>prevention and control) -<br/>Water</b> | : Not listed     |

| Product/ingredient name | Carcinogenic effects | Mutagenic effects | Developmental effects             | Fertility effects |
|-------------------------|----------------------|-------------------|-----------------------------------|-------------------|
| propiconazole (ISO)     | -                    | -                 | Repr. 1B, H360D<br>(Unborn child) | -                 |

**SECTION 15: Regulatory information**

Registry No : EL TP8-0122

Hazard class for water : 2 AwSV Anlage 1, Nummer 5.3

Chemical Weapons : Not listed

Convention List Schedule I  
Chemicals

Chemical Weapons : Not listed

Convention List Schedule II  
Chemicals

Chemical Weapons : Not listed

Convention List Schedule III  
Chemicals

**15.2 Chemical Safety Assessment** : This product contains substances for which Chemical Safety Assessments are still required.

**SECTION 16: Other information**

Indicates information that has changed from previously issued version.

**Abbreviations and acronyms** : ATE = Acute Toxicity Estimate

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

DNEL = Derived No Effect Level

EUH statement = CLP-specific Hazard statement

PNEC = Predicted No Effect Concentration

RRN = REACH Registration Number

PBT = Persistent, Bioaccumulative and Toxic

vPvB = Very Persistent and Very Bioaccumulative

LD50 = Median lethal dose

LC50 = Median lethal concentration

EC50 = Half maximal effective concentration

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG = International Maritime Dangerous Goods

IATA = International Air Transport Association

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

| Classification          | Justification         |
|-------------------------|-----------------------|
| Flam. Liq. 3, H226      | On basis of test data |
| Eye Irrit. 2, H319      | Regulatory data       |
| Asp. Tox. 1, H304       | Calculation method    |
| Aquatic Acute 1, H400   | Calculation method    |
| Aquatic Chronic 1, H410 | Calculation method    |

**Full text of abbreviated H statements**

|        |   |
|--------|---|
| : H226 | Flammable liquid and vapor.                   |
| H302   | Harmful if swallowed.                         |
| H304   | May be fatal if swallowed and enters airways. |
| H312   | Harmful in contact with skin.                 |
| H315   | Causes skin irritation.                       |
| H317   | May cause an allergic skin reaction.          |
| H318   | Causes serious eye damage.                    |
| H319   | Causes serious eye irritation.                |
| H331   | Toxic if inhaled.                             |
| H332   | Harmful if inhaled.                           |

**SECTION 16: Other information**

H360D May damage the unborn child.

H372 Causes damage to organs through prolonged or repeated exposure if (inhalation) inhaled.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

**Full text of classifications  
[CLP/GHS]**

|                              |  |
|------------------------------|--|
| : Acute Tox. 3, H331         | ACUTE TOXICITY (inhalation) - Category 3                                     |
| Acute Tox. 4, H302           | ACUTE TOXICITY (oral) - Category 4   |
| Acute Tox. 4, H312           | ACUTE TOXICITY (dermal) - Category 4   |
| Acute Tox. 4, H332           | ACUTE TOXICITY (inhalation) - Category 4                                     |
| Aquatic Acute 1, H400        | AQUATIC HAZARD (ACUTE) - Category 1  |
| Aquatic Chronic 1, H410      | AQUATIC HAZARD (LONG-TERM) - Category 1                                      |
| Aquatic Chronic 3, H412      | AQUATIC HAZARD (LONG-TERM) - Category 3                                      |
| Asp. Tox. 1, H304            | ASPIRATION HAZARD - Category 1   |
| EUH066                       | Repeated exposure may cause skin dryness or cracking.                        |
| Eye Dam. 1, H318             | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1                              |
| Eye Irrit. 2, H319           | SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2                              |
| Flam. Liq. 3, H226           | FLAMMABLE LIQUIDS - Category 3   |
| Repr. 1B, H360D              | TOXIC TO REPRODUCTION (Unborn child) - Category 1B                           |
| Skin Irrit. 2, H315          | SKIN CORROSION/IRRITATION - Category 2                                       |
| Skin Sens. 1, H317           | SKIN SENSITIZATION - Category 1  |
| STOT RE 1, H372 (inhalation) | SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (inhalation) - Category 1 |

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To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.