# SAFETY DATA SHEET

TEKNOSHIELD 4005-00 - BASE T

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

### 1.1 Product identifier

**Product name** : TEKNOSHIELD 4005-00 - BASE T

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

**Product use** : Paint.

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

Teknos Group Oy, Takkatie 3, FI-00370 HELSINKI, FINLAND. Tel. +358 9 506 091.

**e-mail address of person responsible for this SDS** : Prod-safe@teknos.com

### 1.4 Emergency telephone number

**National advisory body/Poison Centre**

**Telephone number** : In an emergency, call 112

## 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]**

Aquatic Chronic 3, H412

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

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

**Signal word** : No signal word.

**Hazard statements** : H412 - Harmful to aquatic life with long lasting effects.

**Precautionary statements**

**Prevention** : P273 - Avoid release to the environment.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

**Supplemental label elements** : Contains 1,2-benzisothiazol-3(2H)-one and 2-Methyl-1,2-benzisothiazol-3(2H)-one. May produce an allergic reaction. Contains biocidal products for dry film and in-can preservation: IPBC and BIT and DTBMA and MBIT. Risk of skin sensitisation.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** :

### 2.3 Other hazards

## SECTION 2: Hazards identification

**Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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

## SECTION 3: Composition/information on ingredients

**3.2 Mixtures** : Mixture

| Product/ingredient name | Identifiers | % | Classification | Specific Conc. Limits, M-factors and ATEs | Type |
|---|---|---|---|---|---|
| 2-(2-butoxyethoxy)ethanol | REACH #: 01-2119475104-44<br>EC: 203-961-6<br>CAS: 112-34-5<br>Index: 603-096-00-8 | ≤3 | Eye Irrit. 2, H319 | - | [1] [2] |
| 2-Butoxyethanol | REACH #: 01-2119475108-36<br>EC: 203-905-0<br>CAS: 111-76-2<br>Index: 603-014-00-0 | <1 | Acute Tox. 4, H302<br>Acute Tox. 3, H331<br>Skin Irrit. 2, H315<br>Eye Irrit. 2, H319 | ATE [Oral] = 1200 mg/kg<br>ATE [Inhalation (vapours)] = 3 mg/l | [1] [2] |
| 3-iodo-2-propynyl-butyl carbamate | EC: 259-627-5<br>CAS: 55406-53-6<br>Index: 616-212-00-7 | <0.1 | Acute Tox. 4, H302<br>Acute Tox. 2, H330<br>Eye Dam. 1, H318<br>Skin Sens. 1, H317<br>STOT RE 1, H372 (larynx)<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 | ATE [Oral] = 400 mg/kg<br>ATE [Inhalation (dusts and mists)] = 0.17 mg/l<br>M [Acute] = 10<br>M [Chronic] = 10 | [1] |
| 1,2-benzisothiazol-3(2H)-one | EC: 220-120-9<br>CAS: 2634-33-5<br>Index: 613-088-00-6 | <0.036 | Acute Tox. 4, H302<br>Acute Tox. 2, H330<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Skin Sens. 1A, H317<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410 | ATE [Oral] = 450 mg/kg<br>ATE [Inhalation (dusts and mists)] = 0.21 mg/l<br>Skin Sens. 1, H317: C ≥ 0.036%<br>M [Acute] = 1<br>M [Chronic] = 1 | [1] |
| 2-Methyl-1,2-benzisothiazol-3(2H)-one | EC: 695-989-4<br>CAS: 2527-66-4<br>Index: 613-336-00-3 | <0.0015 | Acute Tox. 3, H301<br>Acute Tox. 4, H312<br>Skin Corr. 1C, H314<br>Eye Dam. 1, H318<br>Skin Sens. 1A, H317<br>Aquatic Acute 1, H400<br>Aquatic Chronic 2, H411<br>EUH071 | ATE [Oral] = 175 mg/kg<br>ATE [Dermal] = 1100 mg/kg<br>Skin Sens. 1, H317: C ≥ 0.0015%<br>M [Acute] = 1 | [1] |

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit

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

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

**Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

**Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

**Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

**Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

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

**Over-exposure signs/symptoms**

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

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

**Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

**Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

**Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

**Unsuitable extinguishing media** : None known.

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

**Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is harmful 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 protective actions 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.

**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 spilt material. Put on appropriate personal protective equipment.

**For emergency responders** : If specialised 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 spilt 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.

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

**Small spill** : Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. 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.

### 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).

### 7.1 Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. 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.

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

Store in accordance with local regulations. 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. 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 unlabelled containers. Use appropriate containment to avoid environmental contamination. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. See Section 10 for incompatible materials before handling or use.

### 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. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### 8.1 Control parameters

#### Occupational exposure limits

| Product/ingredient name | Exposure limit values |
|---|---|
| 2-(2-butoxyethoxy)ethanol | **Regulation on Limit Values - MAC (Austria, 12/2025)**<br>TWA 8 hours: 10 ppm.<br>TWA 8 hours: 67.5 mg/m³.<br>PEAK 15 minutes: 15 ppm 4 times per shift.<br>PEAK 15 minutes: 101.2 mg/m³ 4 times per shift. |
| 2-Butoxyethanol | **Regulation on Limit Values - MAC (Austria, 12/2025)** Absorbed through skin.<br>TWA 8 hours: 20 ppm.<br>TWA 8 hours: 98 mg/m³.<br>PEAK 30 minutes: 40 ppm 4 times per shift.<br>PEAK 30 minutes: 200 mg/m³ 4 times per shift. |
| 1,2-benzisothiazol-3(2H)-one | **Regulation on Limit Values - MAC (Austria, 12/2025)** Skin sensitiser. |
| 2-(2-butoxyethoxy)ethanol | **Limit values (Belgium, 12/2023)**<br>STEL 15 minutes: 15 ppm.<br>TWA 8 hours: 10 ppm.<br>TWA 8 hours: 67.5 mg/m³.<br>STEL 15 minutes: 101.2 mg/m³. |
| 2-Butoxyethanol | **Limit values (Belgium, 12/2023)** Absorbed through skin.<br>TWA 8 hours: 20 ppm.<br>TWA 8 hours: 98 mg/m³.<br>STEL 15 minutes: 50 ppm.<br>STEL 15 minutes: 246 mg/m³. |
| 2-(2-butoxyethoxy)ethanol | **Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)**<br>Limit value 8 hours: 67.5 mg/m³.<br>Limit value 15 minutes: 101.2 mg/m³.<br>Limit value 15 minutes: 15 ppm.<br>Limit value 8 hours: 10 ppm. |
| 2-Butoxyethanol | **Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 4/2024)** Absorbed through skin.<br>Limit value 8 hours: 98 mg/m³.<br>Limit value 15 minutes: 246 mg/m³.<br>Limit value 15 minutes: 50 ppm.<br>Limit value 8 hours: 20 ppm. |
| 2-(2-butoxyethoxy)ethanol | **Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia, 10/2025)**<br>STELV 15 minutes: 101.2 mg/m³.<br>STELV 15 minutes: 15 ppm.<br>ELV 8 hours: 67.5 mg/m³.<br>ELV 8 hours: 10 ppm. |
| 2-Butoxyethanol | **Ordinance on the protection of workers from exposure to hazardous chemicals at work, exposure limit values (Annex I) (Croatia, 10/2025)** Absorbed through skin.<br>STELV 15 minutes: 246 mg/m³.<br>STELV 15 minutes: 50 ppm.<br>ELV 8 hours: 98 mg/m³.<br>ELV 8 hours: 20 ppm. |

## SECTION 8: Exposure controls/personal protection

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|---|---|
| 2-(2-butoxyethoxy)ethanol | **Department of Labor Inspection, Chemical Agents (Cyprus, 11/2025)**<br>STEL 15 minutes: 15 ppm.<br>STEL 15 minutes: 101.2 mg/m³.<br>TWA 8 hours: 10 ppm.<br>TWA 8 hours: 67.5 mg/m³. |
| 2-Butoxyethanol | **Department of Labor Inspection, Chemical Agents (Cyprus, 11/2025)** Absorbed through skin.<br>STEL 15 minutes: 50 ppm.<br>STEL 15 minutes: 246 mg/m³.<br>TWA 8 hours: 20 ppm.<br>TWA 8 hours: 98 mg/m³. |
| 2-(2-butoxyethoxy)ethanol | **Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 11/2025)**<br>TWA 8 hours: 67.5 mg/m³.<br>TWA 8 hours: 10 ppm.<br>STEL 15 minutes: 101.2 mg/m³.<br>STEL 15 minutes: 15 ppm. |
| 2-Butoxyethanol | **Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 11/2025)** Absorbed through skin.<br>TWA 8 hours: 98 mg/m³.<br>TWA 8 hours: 20 ppm.<br>STEL 15 minutes: 200 mg/m³.<br>STEL 15 minutes: 40.7 ppm. |
| 2-(2-butoxyethoxy)ethanol | **Working Environment Authority (Denmark, 11/2025)**<br>TWA 8 hours: 68 mg/m³.<br>TWA 8 hours: 10 ppm.<br>STEL 15 minutes: 15 ppm.<br>STEL 15 minutes: 101 mg/m³. |
| 2-Butoxyethanol | **Working Environment Authority (Denmark, 11/2025)** Absorbed through skin.<br>TWA 8 hours: 20 ppm.<br>TWA 8 hours: 98 mg/m³.<br>STEL 15 minutes: 246 mg/m³.<br>STEL 15 minutes: 50 ppm. |
| 2-(2-butoxyethoxy)ethanol | **Occupational exposure limits, Regulation No. 293 (Estonia, 1/2026)**<br>TWA 8 hours: 10 ppm.<br>TWA 8 hours: 67.5 mg/m³. |
| 2-Butoxyethanol | **Occupational exposure limits, Regulation No. 293 (Estonia, 1/2026)** Absorbed through skin , Sensitiser.<br>TWA 8 hours: 98 mg/m³.<br>TWA 8 hours: 20 ppm.<br>STEL 15 minutes: 246 mg/m³.<br>STEL 15 minutes: 50 ppm. |
| 2-(2-butoxyethoxy)ethanol | **EU OEL (Europe, 1/2022)**<br>TWA 8 hours: 67.5 mg/m³.<br>TWA 8 hours: 10 ppm.<br>STEL 15 minutes: 101.2 mg/m³.<br>STEL 15 minutes: 15 ppm. |
| 2-Butoxyethanol | **EU OEL (Europe, 1/2022)** Absorbed through skin.<br>TWA 8 hours: 20 ppm.<br>TWA 8 hours: 98 mg/m³.<br>STEL 15 minutes: 50 ppm.<br>STEL 15 minutes: 246 mg/m³. |

## SECTION 8: Exposure controls/personal protection

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|---|---|
| 2-(2-butoxyethoxy)ethanol | **Institute of Occupational Health, Ministry of Social Affairs (Finland, 3/2026)**<br>TWA 8 hours: 10 ppm.<br>TWA 8 hours: 68 mg/m³. |
| 2-Butoxyethanol | **Institute of Occupational Health, Ministry of Social Affairs (Finland, 3/2026)** Absorbed through skin.<br>TWA 8 hours: 20 ppm.<br>TWA 8 hours: 98 mg/m³.<br>STEL 15 minutes: 50 ppm.<br>STEL 15 minutes: 250 mg/m³. |
| 2-(2-butoxyethoxy)ethanol | **Ministry of Labor (France, 1/2026)**<br>STEL 15 minutes: 101.2 mg/m³. Notes: Indicative regulatory limit values (decree of 30-06-2004 modified)<br>STEL 15 minutes: 15 ppm. Notes: Indicative regulatory limit values (decree of 30-06-2004 modified)<br>TWA 8 hours: 67.5 mg/m³. Notes: Indicative regulatory limit values (decree of 30-06-2004 modified)<br>TWA 8 hours: 10 ppm. Notes: Indicative regulatory limit values (decree of 30-06-2004 modified) |
| 2-Butoxyethanol | **Ministry of Labor (France, 1/2026)** Absorbed through skin.<br>TWA 8 hours: 10 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)<br>TWA 8 hours: 49 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)<br>STEL 15 minutes: 246 mg/m³. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)<br>STEL 15 minutes: 50 ppm. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) |
| 2-(2-butoxyethoxy)ethanol | **TRGS 900 OEL (Germany, 12/2025)**<br>TWA 8 hours: 67 mg/m³.<br>PEAK 15 minutes: 100.5 mg/m³.<br>TWA 8 hours: 10 ppm.<br>PEAK 15 minutes: 15 ppm.<br>**DFG MAC-values list (Germany, 7/2025)** Develop C.<br>TWA 8 hours: 67 mg/m³.<br>PEAK 15 minutes: 100.5 mg/m³ 4 times per shift [Interval: 1 hour].<br>TWA 8 hours: 10 ppm.<br>PEAK 15 minutes: 15 ppm 4 times per shift [Interval: 1 hour]. |
| 2-Butoxyethanol | **TRGS 900 OEL (Germany, 12/2025)** Absorbed through skin.<br>TWA 8 hours: 49 mg/m³.<br>PEAK 15 minutes: 98 mg/m³.<br>TWA 8 hours: 10 ppm.<br>PEAK 15 minutes: 20 ppm.<br>**DFG MAC-values list (Germany, 7/2025)** Develop C. Absorbed through skin.<br>TWA 8 hours: 10 ppm.<br>PEAK 15 minutes: 20 ppm 4 times per shift [Interval: 1 hour].<br>TWA 8 hours: 49 mg/m³.<br>PEAK 15 minutes: 98 mg/m³ 4 times per shift [Interval: 1 hour]. |
| 3-iodo-2-propynyl-butyl carbamate | **TRGS 900 OEL (Germany, 12/2025)** Skin sensitiser.<br>PEAK 15 minutes: 0.116 mg/m³.<br>PEAK 15 minutes: 0.01 ppm.<br>TWA 8 hours: 0.058 mg/m³.<br>TWA 8 hours: 0.005 ppm.<br>**DFG MAC-values list (Germany, 7/2025)** Develop C. Skin sensitiser.<br>PEAK 15 minutes: 0.116 mg/m³ 4 times per shift [Interval: 1 hour].<br>PEAK 15 minutes: 0.01 ppm 4 times per shift [Interval: 1 hour].<br>TWA 8 hours: 0.058 mg/m³.<br>TWA 8 hours: 0.005 ppm. |
| 1,2-benzisothiazol-3(2H)-one | **DFG MAC-values list (Germany, 7/2025)** Skin sensitiser. |

## SECTION 8: Exposure controls/personal protection

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|---|---|
| 2-(2-butoxyethoxy)ethanol | **Presidential Decree 307/1986: Occupational exposure limit values (Greece, 8/2024)**<br>STEL 15 minutes: 101.2 mg/m³.<br>STEL 15 minutes: 15 ppm.<br>TWA 8 hours: 67.5 mg/m³.<br>TWA 8 hours: 10 ppm. |
| 2-Butoxyethanol | **Presidential Decree 307/1986: Occupational exposure limit values (Greece, 8/2024)** Absorbed through skin.<br>TWA 8 hours: 25 ppm.<br>TWA 8 hours: 120 mg/m³. |
| 2-(2-butoxyethoxy)ethanol | **5/2020. (II. 6.) ITM Decree (Hungary, 12/2025)**<br>TWA 8 hours: 67.5 mg/m³.<br>PEAK 15 minutes: 101.2 mg/m³.<br>PEAK 15 minutes: 15 ppm.<br>TWA 8 hours: 10 ppm. |
| 2-Butoxyethanol | **5/2020. (II. 6.) ITM Decree (Hungary, 12/2025)** Absorbed through skin.<br>TWA 8 hours: 98 mg/m³.<br>PEAK 15 minutes: 246 mg/m³.<br>PEAK 15 minutes: 50 ppm.<br>TWA 8 hours: 20 ppm. |
| 2-(2-butoxyethoxy)ethanol | **Ministry of Welfare, List of Exposure Limits (Iceland, 11/2024)**<br>STEL 15 minutes: 101.2 mg/m³.<br>STEL 15 minutes: 15 ppm.<br>TWA 8 hours: 67.5 mg/m³.<br>TWA 8 hours: 10 ppm. |
| 2-Butoxyethanol | **Ministry of Welfare, List of Exposure Limits (Iceland, 11/2024)** Absorbed through skin.<br>STEL 15 minutes: 246 mg/m³.<br>STEL 15 minutes: 50 ppm.<br>TWA 8 hours: 100 mg/m³.<br>TWA 8 hours: 20 ppm. |
| 2-(2-butoxyethoxy)ethanol | **NAOSH (Ireland, 4/2024)** Notes: EU derived Occupational Exposure Limit Values<br>OELV 8 hours: 10 ppm.<br>OELV 15 minutes: 101.2 mg/m³.<br>OELV 8 hours: 67.5 mg/m³.<br>OELV 15 minutes: 15 ppm. |
| 2-Butoxyethanol | **NAOSH (Ireland, 4/2024)** Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values<br>OELV 8 hours: 20 ppm.<br>OELV 8 hours: 98 mg/m³.<br>OELV 15 minutes: 50 ppm.<br>OELV 15 minutes: 246 mg/m³. |
| 2-(2-butoxyethoxy)ethanol | **Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 9/2024)**<br>Limit value 8 hours: 10 ppm.<br>Limit value 8 hours: 67.5 mg/m³.<br>Short Term 15 minutes: 15 ppm.<br>Short Term 15 minutes: 101.2 mg/m³. |
| 2-Butoxyethanol | **Legislative Decree No. 81/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 9/2024)** Absorbed through skin.<br>Limit value 8 hours: 20 ppm.<br>Limit value 8 hours: 98 mg/m³.<br>Short Term 15 minutes: 50 ppm.<br>Short Term 15 minutes: 246 mg/m³. |

## SECTION 8: Exposure controls/personal protection

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|---|---|
| 2-(2-butoxyethoxy)ethanol | **Ministers Cabinet Regulations Nr.325 (2007) - AER (Latvia, 3/2026)**<br>STEL 15 minutes: 101.2 mg/m³.<br>TWA 8 hours: 10 ppm.<br>STEL 15 minutes: 15 ppm.<br>TWA 8 hours: 67.5 mg/m³. |
| 2-Butoxyethanol | **Ministers Cabinet Regulations Nr.325 (2007) - AER (Latvia, 3/2026)** Absorbed through skin.<br>TWA 8 hours: 98 mg/m³.<br>TWA 8 hours: 20 ppm.<br>STEL 15 minutes: 50 ppm.<br>STEL 15 minutes: 246 mg/m³. |
| 2-(2-butoxyethoxy)ethanol | **Lithuanian Hygiene Standard HN 23 (Lithuania, 10/2025)**<br>TWA 8 hours: 67.5 mg/m³.<br>TWA 8 hours: 10 ppm.<br>STEL 15 minutes: 101.2 mg/m³.<br>STEL 15 minutes: 15 ppm. |
| 2-Butoxyethanol | **Lithuanian Hygiene Standard HN 23 (Lithuania, 10/2025)** Absorbed through skin.<br>TWA 8 hours: 50 mg/m³.<br>TWA 8 hours: 10 ppm.<br>STEL 15 minutes: 100 mg/m³.<br>STEL 15 minutes: 20 ppm. |
| 2-(2-butoxyethoxy)ethanol | **Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021)**<br>STEL 15 minutes: 15 ppm.<br>STEL 15 minutes: 101.2 mg/m³.<br>TWA 8 hours: 10 ppm.<br>TWA 8 hours: 67.5 mg/m³. |
| 2-Butoxyethanol | **Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021)** Absorbed through skin.<br>TWA 8 hours: 20 ppm.<br>TWA 8 hours: 98 mg/m³.<br>STEL 15 minutes: 50 ppm.<br>STEL 15 minutes: 246 mg/m³. |
| 2-(2-butoxyethoxy)ethanol | **EU OEL (Europe, 1/2022)**<br>TWA 8 hours: 67.5 mg/m³.<br>TWA 8 hours: 10 ppm.<br>STEL 15 minutes: 101.2 mg/m³.<br>STEL 15 minutes: 15 ppm. |
| 2-Butoxyethanol | **EU OEL (Europe, 1/2022)** Absorbed through skin.<br>TWA 8 hours: 20 ppm.<br>TWA 8 hours: 98 mg/m³.<br>STEL 15 minutes: 50 ppm.<br>STEL 15 minutes: 246 mg/m³. |
| 2-(2-butoxyethoxy)ethanol | **Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 3/2026)** Absorbed through skin.<br>TWA 8 hours: 50 mg/m³.<br>STEL 15 minutes: 100 mg/m³.<br>TWA 8 hours: 7.4 ppm.<br>STEL 15 minutes: 14.8 ppm. |
| 2-Butoxyethanol | **Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 3/2026)** Absorbed through skin.<br>TWA 8 hours: 100 mg/m³.<br>STEL 15 minutes: 246 mg/m³.<br>TWA 8 hours: 20.4 ppm.<br>STEL 15 minutes: 50 ppm. |

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|---|---|
| 2-(2-butoxyethoxy)ethanol | **FOR-2011-12-06-1358 (Norway, 12/2025)**<br>TWA 8 hours: 10 ppm.<br>TWA 8 hours: 68 mg/m³. |
| 2-Butoxyethanol | **FOR-2011-12-06-1358 (Norway, 12/2025)** Absorbed through skin.<br>TWA 8 hours: 10 ppm.<br>TWA 8 hours: 50 mg/m³. |
| 2-(2-butoxyethoxy)ethanol | **Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286) (Poland, 4/2026)**<br>TWA 8 hours: 67 mg/m³.<br>STEL 15 minutes: 100 mg/m³. |
| 2-Butoxyethanol | **Regulation of the Minister of Family, Labor and Social Policy of June 12, 2018 on the maximum permissible concentrations and intensities of factors harmful to health in the work environment (Journal of Laws of 2018, item 1286) (Poland, 4/2026)** Absorbed through skin.<br>TWA 8 hours: 98 mg/m³.<br>STEL 15 minutes: 200 mg/m³. |
| 2-(2-butoxyethoxy)ethanol | **Portuguese Institute of Quality (Portugal, 11/2014)**<br>TWA 8 hours: 10 ppm. Form: Inhalable fraction and vapor.<br>**Decree-Law 24/2012 - Occupational exposure limits for chemical agents (Portugal, 6/2021)**<br>STEL 15 minutes: 15 ppm.<br>STEL 15 minutes: 101.2 mg/m³.<br>TWA 8 hours: 10 ppm.<br>TWA 8 hours: 67.5 mg/m³. |
| 2-Butoxyethanol | **Portuguese Institute of Quality (Portugal, 11/2014)** A3.<br>TWA 8 hours: 20 ppm.<br>**Decree-Law 24/2012 - Occupational exposure limits for chemical agents (Portugal, 6/2021)** Absorbed through skin.<br>STEL 15 minutes: 50 ppm.<br>STEL 15 minutes: 246 mg/m³.<br>TWA 8 hours: 20 ppm.<br>TWA 8 hours: 98 mg/m³. |
| 2-(2-butoxyethoxy)ethanol | **HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 2/2026)**<br>VLA 8 hours: 67.5 mg/m³.<br>Short term 15 minutes: 101.2 mg/m³.<br>Short term 15 minutes: 15 ppm.<br>VLA 8 hours: 10 ppm. |
| 2-Butoxyethanol | **HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 2/2026)** Absorbed through skin.<br>VLA 8 hours: 98 mg/m³.<br>VLA 8 hours: 20 ppm.<br>Short term 15 minutes: 246 mg/m³.<br>Short term 15 minutes: 50 ppm. |
| 2-(2-butoxyethoxy)ethanol | **Government regulation SR c. 355/2006 (Slovakia, 6/2024)**<br>Inhalation sensitiser.<br>TWA 8 hours: 67.5 mg/m³.<br>STEL 15 minutes: 101.2 mg/m³.<br>TWA 8 hours: 10 ppm.<br>STEL 15 minutes: 15 ppm. |
| 2-Butoxyethanol | **Government regulation SR c. 355/2006 (Slovakia, 6/2024)**<br>Absorbed through skin , Inhalation sensitiser.<br>TWA 8 hours: 98 mg/m³.<br>TWA 8 hours: 20 ppm.<br>STEL 15 minutes: 246 mg/m³.<br>STEL 15 minutes: 50 ppm. |

| | |
|---|---|
| 2-(2-butoxyethoxy)ethanol | **Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2025)**<br>TWA 8 hours: 67.5 mg/m³.<br>TWA 8 hours: 10 ppm.<br>KTV 15 minutes: 101.2 mg/m³ 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].<br>KTV 15 minutes: 15 ppm 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes]. |
| 2-Butoxyethanol | **Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2025)**<br>Absorbed through skin.<br>TWA 8 hours: 98 mg/m³.<br>TWA 8 hours: 20 ppm.<br>KTV 15 minutes: 246 mg/m³ 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].<br>KTV 15 minutes: 50 ppm 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes]. |
| 3-iodo-2-propynyl-butyl carbamate | **Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2025)**<br>KTV 15 minutes: 0.01 ppm 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].<br>TWA 8 hours: 0.005 ppm.<br>KTV 15 minutes: 0.116 mg/m³ 4 times per shift [time between two exposure events at this concentration must be at least 60 minutes].<br>TWA 8 hours: 0.058 mg/m³. |
| 2-(2-butoxyethoxy)ethanol | **National institute of occupational safety and health (Spain, 2/2026)**<br>TWA 8 hours: 67.5 mg/m³.<br>TWA 8 hours: 10 ppm.<br>STEL 15 minutes: 15 ppm.<br>STEL 15 minutes: 101.2 mg/m³. |
| 2-Butoxyethanol | **National institute of occupational safety and health (Spain, 2/2026)** Absorbed through skin.<br>TWA 8 hours: 20 ppm.<br>TWA 8 hours: 98 mg/m³.<br>STEL 15 minutes: 245 mg/m³.<br>STEL 15 minutes: 50 ppm. |
| 2-(2-butoxyethoxy)ethanol | **Work environment authority Regulation 2023:14 (Sweden, 6/2025)**<br>TWA 8 hours: 10 ppm.<br>TWA 8 hours: 68 mg/m³.<br>STEL 15 minutes: 15 ppm.<br>STEL 15 minutes: 101 mg/m³. |
| 2-Butoxyethanol | **Work environment authority Regulation 2023:14 (Sweden, 6/2025)** Absorbed through skin.<br>TWA 8 hours: 10 ppm.<br>TWA 8 hours: 50 mg/m³.<br>STEL 15 minutes: 50 ppm.<br>STEL 15 minutes: 246 mg/m³. |
| 2-(2-butoxyethoxy)ethanol | **SUVA (Switzerland, 1/2026)**<br>TWA 8 hours: 67 mg/m³. Form: vapour and aerosols.<br>STEL 15 minutes: 101 mg/m³. Form: vapour and aerosols.<br>STEL 15 minutes: 15 ppm. Form: vapour and aerosols.<br>TWA 8 hours: 10 ppm. Form: vapour and aerosols. |
| 2-Butoxyethanol | **SUVA (Switzerland, 1/2026)** Absorbed through skin.<br>TWA 8 hours: 10 ppm.<br>TWA 8 hours: 49 mg/m³.<br>STEL 15 minutes: 20 ppm.<br>STEL 15 minutes: 98 mg/m³. |
| 3-iodo-2-propynyl-butyl carbamate | **SUVA (Switzerland, 1/2026)** Sensitiser.<br>STEL 15 minutes: 0.24 mg/m³. Form: vapour and aerosols.<br>STEL 15 minutes: 0.02 ppm. Form: vapour and aerosols. |

| | |
|---|---|
| | TWA 8 hours: 0.01 ppm. Form: vapour and aerosols.<br>TWA 8 hours: 0.12 mg/m³. Form: vapour and aerosols. |
| 2-(2-butoxyethoxy)ethanol | **EH40/2005 WELs (United Kingdom (UK), 1/2020)**<br>TWA 8 hours: 10 ppm.<br>TWA 8 hours: 67.5 mg/m³.<br>STEL 15 minutes: 15 ppm.<br>STEL 15 minutes: 101.2 mg/m³. |
| 2-Butoxyethanol | **EH40/2005 WELs (United Kingdom (UK), 1/2020)** Absorbed through skin.<br>STEL 15 minutes: 50 ppm.<br>TWA 8 hours: 25 ppm.<br>STEL 15 minutes: 246 mg/m³.<br>TWA 8 hours: 123 mg/m³. |

**Biological exposure indices**

| Product/ingredient name | Exposure indices |
|---|---|
| No exposure indices known. | |
| No exposure indices known. | |
| No exposure indices known. | |
| No exposure indices known. | |
| No exposure indices known. | |
| 2-Butoxyethanol | **Government regulation of Czech Republic Limit Values of Biological Exposure Tests (Czech Republic, 10/2025)**<br>Biological limit values: 0.17 mmol/mmol creatinine, butoxyacetic acid (after hydrolysis) [in urine]. Sampling time: the end of the shift at the end of the week.<br>Biological limit values: 200 mg/g creatinine, butoxyacetic acid (after hydrolysis) [in urine]. Sampling time: the end of the shift at the end of the week. |
| No exposure indices known. | |
| No exposure indices known. | |
| No exposure indices known. | |
| No exposure indices known. | |
| 2-Butoxyethanol | **Biological limit values (BLV) - Labour Code / ANSES (France, 3/2026) [2- butoxyéthanol et son acétate]**<br>BLV: 100 mg/g Cr, 2-butoxyacetic acid [in urine]. Sampling time: end of shift (regardless of the day of the week). |
| 2-Butoxyethanol | **DFG BEI-values list (Germany, 7/2025)** Notes: danger from percutaneous absorption (see p. 211 and p. 228).<br>BEI: 150 mg/g creatinine, butoxyacetic acid (after hydrolysis) [in urine]. Sampling time: at the end of the shift, for long-term exposures after several previous shifts.<br>**TRGS 903 - BEI Values (Germany, 12/2025)**<br>BEI: 150 mg/g creatinine, butoxy acetic acid (after hydrolysis) [in urine]. Sampling time: at the end of the shift, for long-term exposure after several previous shifts. |
| No exposure indices known. | |
| No exposure indices known. | |
| No exposure indices known. | |
| 2-Butoxyethanol | **NAOSH BGVs (Ireland, 1/2011)**<br>BMGV: 200 mg/g creatinine, BAA [in urine]. Sampling time: end of shift - As soon as possible after exposure ceases. |
| No exposure indices known. | |
| No exposure indices known. | |
| No exposure indices known. | |

| | |
|---|---|
| No exposure indices known. | |
| No exposure indices known. | |
| No exposure indices known. | |
| No exposure indices known. | |
| No exposure indices known. | |
| 2-Butoxyethanol | **Portuguese Institute of Quality (Portugal, 11/2014)**<br>BEI: 200 mg/g creatinine, butoxyacetic acid (BAA) [in urine]. Sampling time: end of shift. |
| No exposure indices known. | |
| No exposure indices known. | |
| 2-Butoxyethanol | **Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 4/2025)**<br>BLV: 150 mg/g creatinine, butoxyacetic acid (after hydrolysis) [in urine]. Sampling time: at the end of the work shift, at long-term exposure: at the end of the work shift after several consecutive workdays. |
| 2-Butoxyethanol | **National institute of occupational safety and health (Spain, 2/2026)**<br>BLV: 200 mg/g creatinine, butoxyacetic acid [in urine]. Sampling time: end of shift. |
| No exposure indices known. | |
| 2-Butoxyethanol | **SUVA (Switzerland, 1/2026)**<br>BEI: 150 mg/g creatinine, 2-butoxy acetic acid (after hydrolisis) [in urine]. Sampling time: immediately after exposure or after working hours. In case of long-term exposure: after more than one shift. |
| 2-Butoxyethanol | **EH40/2005 BMGVs (United Kingdom (UK), 1/2020)**<br>BGV: 240 mmol/mol creatinine, butoxyacetic acid [in urine]. Sampling time: post shift. |

**Recommended monitoring procedures** : 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.

**DNELs/DMELs**

| Product/ingredient name | Result |
|---|---|
| 2-(2-butoxyethoxy)ethanol | **DNEL - General population - Long term - Oral**<br>6.25 mg/kg bw/day<br>Effects: Systemic<br><br>**DNEL - Workers - Long term - Inhalation**<br>67.5 mg/m³<br>Effects: Local<br><br>**DNEL - Workers - Short term - Inhalation**<br>101.2 mg/m³<br>Effects: Local |
| 2-Butoxyethanol | **DNEL - General population - Long term - Oral**<br>6.3 mg/kg bw/day<br>Effects: Systemic<br><br>**DNEL - General population - Short term - Oral**<br>26.7 mg/kg bw/day |

| | |
|---|---|
| | Effects: Systemic<br><br>**DNEL - General population - Long term - Inhalation**<br>59 mg/m³<br>Effects: Systemic<br><br>**DNEL - Workers - Long term - Inhalation**<br>98 mg/m³<br>Effects: Systemic<br><br>**DNEL - General population - Short term - Inhalation**<br>147 mg/m³<br>Effects: Local<br><br>**DNEL - Workers - Short term - Inhalation**<br>246 mg/m³<br>Effects: Local<br><br>**DNEL - General population - Short term - Inhalation**<br>426 mg/m³<br>Effects: Systemic<br><br>**DNEL - Workers - Short term - Inhalation**<br>1091 mg/m³<br>Effects: Systemic |
| 3-iodo-2-propynyl-butyl carbamate | **DNEL - Workers - Long term - Inhalation**<br>0.023 mg/m³<br>Effects: Systemic<br><br>**DNEL - Workers - Short term - Inhalation**<br>0.07 mg/m³<br>Effects: Systemic<br><br>**DNEL - Workers - Short term - Inhalation**<br>1.16 mg/m³<br>Effects: Local<br><br>**DNEL - Workers - Long term - Inhalation**<br>1.16 mg/m³<br>Effects: Local<br><br>**DNEL - Workers - Long term - Dermal**<br>2 mg/kg bw/day<br>Effects: Systemic |
| 1,2-benzisothiazol-3(2H)-one | **DNEL - General population - Long term - Dermal**<br>0.345 mg/kg bw/day<br>Effects: Systemic<br><br>**DNEL - Workers - Long term - Dermal**<br>0.966 mg/kg bw/day<br>Effects: Systemic<br><br>**DNEL - General population - Long term - Inhalation**<br>1.2 mg/m³<br>Effects: Systemic<br><br>**DNEL - Workers - Long term - Inhalation**<br>6.81 mg/m³<br>Effects: Systemic |

**PNECs**

Not available.

## SECTION 8: Exposure controls/personal protection

### 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

**Individual protection measures**

**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: safety glasses with side-shields.

**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.

Recommendations : Wear suitable gloves tested to EN374.

> 8 hours (breakthrough time): Nitrile gloves. thickness > 0.3 mm

Not recommended polyvinyl alcohol (PVA) gloves

**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.

**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.

Filter type (spray application): A P

**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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### 9.1 Information on basic physical and chemical properties

**Appearance**

**Physical state** : Liquid.

**Colour** : Clear.

**Odour** : Slight

**Odour threshold** : Not available.

**Melting point/freezing point** : Not available.

**Initial boiling point and boiling range** :

## SECTION 9: Physical and chemical properties

| Ingredient name | °C | °F | Method |
|---|---|---|---|
| water | 100 | 212 | |
| 2-(2-butoxyethoxy)ethanol | 225 to 227.6 | 437 to 441.7 | |

**Flammability** : Not available.

**Lower and upper explosion limit** : Lower: Not applicable.
Upper: Not applicable.

**Flash point** : Closed cup: >100°C (>212°F)

**Auto-ignition temperature** :

| Ingredient name | °C | °F | Method |
|---|---|---|---|
| 2-(2-butoxyethoxy)ethanol | 210 | 410 | DIN 51794 |

**Decomposition temperature** : Not available.

**pH** : 8.5 to 9 [Conc. (% w/w): 100%]

**Viscosity** : Not available.

**Solubility(ies)** :

Not available.

**Solubility in water** : Not available.

**Partition coefficient: n-octanol/ water** : Not applicable.

**Vapour pressure** :

| | Vapour Pressure at 20˚C | | | Vapour pressure at 50˚C | | |
|---|---|---|---|---|---|---|
| Ingredient name | mm Hg | kPa | Method | mm Hg | kPa | Method |
| water | 17.5 | 2.3 | | | | |
| 2-(2-butoxyethoxy)ethanol | 0.022 | 0.0029 | | | | |

**Relative density** : Not available.

**Density** : 1 g/cm³

**Vapour density** : Not available.

**Particle characteristics**

**Median particle size** : Not applicable.

### 9.2 Other information

#### 9.2.1 Information with regard to physical hazard classes

**Explosive properties** : Not available.

**Oxidising properties** : Not available.

#### 9.2.2 Other safety characteristics

Not applicable.

## SECTION 10: Stability and reactivity

**10.1 Reactivity** : No specific test data related to reactivity available for this product or its ingredients.

**10.2 Chemical stability** : The product is stable.

**10.3 Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

**10.4 Conditions to avoid** : No specific data.

**10.5 Incompatible materials** : No specific data.

## SECTION 10: Stability and reactivity

**10.6 Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

**Acute toxicity**

| Product/ingredient name | Result |
|---|---|
| 2-(2-butoxyethoxy)ethanol | **Rabbit - Dermal - LD50**<br>2700 mg/kg<br><br>**Rat - Oral - LD50**<br>4500 mg/kg<br>Toxic effects: Behavioral - Tetany Lung, Thorax, or Respiration - Dyspnea Liver - Other changes |
| 3-iodo-2-propynyl-butyl carbamate | **Rat - Oral - LD50**<br>400 mg/kg<br><br>**Rat - Dermal - LD50**<br>>2000 mg/kg<br><br>**Rat - Inhalation - LC50 Dusts and mists**<br>0.763 mg/l [4 hours]<br><br>**Rat - Inhalation - LC50 Dusts and mists**<br>0.67 g/m³ [4 hours] |
| 1,2-benzisothiazol-3(2H)-one | **Rat - Oral - LD50**<br>1020 mg/kg |

**Conclusion/Summary [Product]** : Not available.

**Acute toxicity estimates**

| Product/ingredient name | Oral (mg/kg) | Dermal (mg/kg) | Inhalation (gases) (ppm) | Inhalation (vapours) (mg/l) | Inhalation (dusts and mists) (mg/l) |
|---|---|---|---|---|---|
| TEKNOSHIELD 4005-00 | N/A | N/A | N/A | 382.6 | N/A |
| 2-(2-butoxyethoxy)ethanol | 4500 | 2700 | N/A | N/A | N/A |
| 2-Butoxyethanol | 1200 | N/A | N/A | 3 | N/A |
| 3-iodo-2-propynyl-butyl carbamate | 400 | N/A | N/A | N/A | 0.17 |
| 1,2-benzisothiazol-3(2H)-one | 450 | N/A | N/A | N/A | 0.21 |
| 2-Methyl-1,2-benzisothiazol-3(2H)-one | 175 | 1100 | N/A | N/A | N/A |

**Skin corrosion/irritation**

| Product/ingredient name | Result |
|---|---|
| 2-Butoxyethanol | **Rabbit - Skin - Mild irritant**<br>Amount/concentration applied: 500 mg |
| 1,2-benzisothiazol-3(2H)-one | **Human - Skin - Mild irritant**<br>Duration of treatment/exposure: 48 hours<br>Amount/concentration applied: 5 % |

**Conclusion/Summary [Product]** : Not available.

**Serious eye damage/eye irritation**

| Product/ingredient name | Result |
|---|---|

| | |
|---|---|
| 2-(2-butoxyethoxy)ethanol | **Rabbit - Eyes - Moderate irritant**<br>Duration of treatment/exposure: 24 hours<br>Amount/concentration applied: 20 mg<br><br>**Rabbit - Eyes - Severe irritant**<br>Amount/concentration applied: 20 mg |
| 2-Butoxyethanol | **Rabbit - Eyes - Moderate irritant**<br>Duration of treatment/exposure: 24 hours<br>Amount/concentration applied: 100 mg<br><br>**Rabbit - Eyes - Severe irritant**<br>Amount/concentration applied: 100 mg |
| 3-iodo-2-propynyl-butyl carbamate | **Rabbit - Eyes - Severe irritant** |

**Conclusion/Summary [Product]** : Not available.

## Respiratory corrosion/irritation

Not available.

**Conclusion/Summary [Product]** : Not available.

## Respiratory or skin sensitization

| Product/ingredient name | Result |
|---|---|
| 3-iodo-2-propynyl-butyl carbamate | **Guinea pig - skin**<br>Not sensitizing |

### Skin

**Conclusion/Summary [Product]** : Not available.

### Respiratory

**Conclusion/Summary [Product]** : Not available.

## Germ cell mutagenicity

| Product/ingredient name | Result |
|---|---|
| 3-iodo-2-propynyl-butyl carbamate | **In vitro - Bacteria**<br>Result: Negative |

**Conclusion/Summary [Product]** : Not available.

## Carcinogenicity

Not available.

**Conclusion/Summary [Product]** : Not available.

## Reproductive toxicity

| Product/ingredient name | Result |
|---|---|
| 3-iodo-2-propynyl-butyl carbamate | **Rabbit - Female - Oral**<br>50 mg/kg [7 days per week] [13 days]<br>Maternal toxicity: Positive<br>Developmental: Negative<br><br>**Rabbit - Female - Oral**<br>20 mg/kg [7 days per week] [13 days]<br>Maternal toxicity: Negative<br>Developmental: Negative |

**Conclusion/Summary [Product]** : Not available.

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

Not available.

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

| Product/ingredient name | Result |
|---|---|
| 3-iodo-2-propynyl-butyl carbamate | STOT RE 1, H372 (larynx) |

**Aspiration hazard**

Not available.

**Information on likely routes of exposure**

Not available.

**Potential acute health effects**

**Eye contact** : No known significant effects or critical hazards.

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

**Skin contact** : No known significant effects or critical hazards.

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

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

**Eye contact** : No specific data.

**Inhalation** : No specific data.

**Skin contact** : No specific data.

**Ingestion** : No specific data.

**Delayed and immediate effects as well as 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.

**Potential delayed effects** : Not available.

**Potential chronic health effects**

Not available.

**Conclusion/Summary [Product]** : Not available.

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

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

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

**Reproductive toxicity** : No known significant effects or critical hazards.

## 11.2 Information on other hazards

### 11.2.1 Endocrine disrupting properties

Not available.

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 11.2.2 Other information

Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

| Product/ingredient name | Result |
|---|---|
| 2-(2-butoxyethoxy)ethanol | **Acute - LC50 - Fresh water**<br>Fish - Bluegill - *Lepomis macrochirus*<br>Size: 33 to 75 mm<br>1300000 µg/l [96 hours]<br>Effect: Mortality |
| 2-Butoxyethanol | **Acute - LC50 - Marine water**<br>Fish - Inland silverside - *Menidia beryllina*<br>Size: 40 to 100 mm<br>1250000 µg/l [96 hours]<br>Effect: Mortality<br><br>**Acute - LC50 - Marine water**<br>Crustaceans - Common shrimp, sand shrimp - *Crangon crangon*<br>800000 µg/l [48 hours]<br>Effect: Mortality |
| 3-iodo-2-propynyl-butyl carbamate | **Acute - LC50 - Fresh water**<br>EU<br>Fish - Trout - *Oncorhynchus mykiss*<br>0.067 mg/l [96 hours]<br><br>**Acute - NOEC - Fresh water**<br>EU<br>Fish - Trout - *Oncorhynchus mykiss*<br>0.049 mg/l [96 hours]<br><br>**Acute - EC50 - Fresh water**<br>EU<br>Daphnia - Daphnia - *Daphnia magna*<br>0.16 mg/l [48 hours]<br><br>**Chronic - NOEC - Fresh water**<br>EU<br>Daphnia - Daphnia - *Daphnia Magna*<br>0.05 mg/l [21 days]<br><br>**Acute - EC50 - Fresh water**<br>EU<br>Algae - Algae - *Scenedemus subspicatus*<br>0.022 mg/l [72 hours] |
| 1,2-benzisothiazol-3(2H)-one | **Acute - LC50 - Fresh water**<br>OECD [Fish, Acute Toxicity Test]<br>Fish - Trout - *Onorhynchus Mykiss*<br>1.9 mg/l [96 hours]<br><br>**Acute - EC50**<br>OECD 202 [Daphnia sp. Acute Immobilization Test and Reproduction Test]<br>Daphnia - Daphnia - *Daphnia Magna*<br>3.7 mg/l [48 hours]<br><br>**Acute - EC50 - Marine water**<br>OECD 201 [Alga, Growth Inhibition Test]<br>Algae - Algae - *Skeletonema Costatum*<br>0.36 mg/l [72 hours]<br><br>**Acute - NOEC - Marine water**<br>OECD 201 [Alga, Growth Inhibition Test]<br>Algae - Algae - *Skeletonema Costatum* |

| | |
|---|---|
| | 0.15 mg/l [72 hours] |
| 2-Methyl-1,2-benzisothiazol-3(2H)-one | **Acute - EC50 - Fresh water**<br>US EPA<br>Daphnia - Water flea - *Daphnia magna*<br>Age: <24 hours<br>0.92 ppm [48 hours]<br>Effect: Intoxication<br><br>**Acute - EC50 - Fresh water**<br>US EPA<br>Algae - Green algae - *Pseudokirchneriella subcapitata*<br>0.22 ppm [96 hours]<br>Effect: Population<br><br>**Acute - LC50 - Fresh water**<br>US EPA<br>Fish - Rainbow trout,donaldson trout - *Oncorhynchus mykiss* - Juvenile (Fledgling, Hatchling, Weanling)<br>0.24 ppm [96 hours]<br>Effect: Mortality<br><br>**Chronic - NOEC**<br>US EPA<br>Fish - Fathead minnow - *Pimephales promelas*<br>0.16 ppm [32 days] |

**Conclusion/Summary [Product]** : Not available.

### 12.2 Persistence and degradability

| Product/ingredient name | Result |
|---|---|
| 1,2-benzisothiazol-3(2H)-one | EU<br>24% [28 days] |

**Conclusion/Summary [Product]** : Not available.

| Product/ingredient name | Aquatic half-life | Photolysis | Biodegradability |
|---|---|---|---|
| 3-iodo-2-propynyl-butyl carbamate | - | - | Not readily |
| 1,2-benzisothiazol-3(2H)-one | - | - | Inherent |

### 12.3 Bioaccumulative potential

| Product/ingredient name | $LogP_{ow}$ | BCF | Potential |
|---|---|---|---|
| 2-(2-butoxyethoxy)ethanol | 1 | - | Low |
| 2-Butoxyethanol | 0.81 | - | Low |
| 3-iodo-2-propynyl-butyl carbamate | >1 | - | Low |
| 1,2-benzisothiazol-3(2H)-one | - | 3.2 | Low |

### 12.4 Mobility in soil

**Soil/water partition coefficient**

| Product/ingredient name | Value |
|---|---|
| 2-(2-butoxyethoxy)ethanol | logKoc: 1.6<br>Koc: 36.5981 |
| 2-Butoxyethanol | logKoc: 1.8<br>Koc: 67.3685 |
| 3-iodo-2-propynyl-butyl carbamate | logKoc: 1.1<br>Koc: 13.4558 |
| 1,2-benzisothiazol-3(2H)-one | logKoc: 1.9<br>Koc: 73.142 |

## SECTION 12: Ecological information

| | |
|---|---|
| 2-Methyl-1,2-benzisothiazol-3(2H)-one | logKoc: 1.7<br>Koc: 52.5063 |

**Results of PMT and vPvM assessment**

| Product/ingredient name | PMT | P | M | T | vPvM | vP | vM |
|---|---|---|---|---|---|---|---|
| 2-(2-butoxyethoxy)ethanol | No | No | No | No | No | No | No |
| 2-Butoxyethanol | No | No | No | No | No | No | No |
| 3-iodo-2-propynyl-butyl carbamate | No | No | No | No | No | No | No |
| 1,2-benzisothiazol-3(2H)-one | No | No | No | No | No | No | No |
| 2-Methyl-1,2-benzisothiazol-3(2H)-one | No | No | No | No | No | No | No |

**Mobility** : Not available.

**Conclusion/Summary** : The product does not meet the criteria to be considered as a PMT or vPvM.

### 12.5 Results of PBT and vPvB assessment

**Regulation (EC) No. 1907/2006 [REACH]**

| Product/ingredient name | PBT | P | B | T | vPvB | vP | vB |
|---|---|---|---|---|---|---|---|
| 2-(2-butoxyethoxy)ethanol | No | N/A | N/A | No | N/A | N/A | N/A |
| 2-Butoxyethanol | No | N/A | N/A | No | N/A | N/A | N/A |
| 3-iodo-2-propynyl-butyl carbamate | N/A | N/A | N/A | Yes | N/A | N/A | N/A |
| 1,2-benzisothiazol-3(2H)-one | No | N/A | No | No | No | N/A | No |
| 2-Methyl-1,2-benzisothiazol-3(2H)-one | No | N/A | N/A | No | N/A | N/A | N/A |

**Regulation (EC) No. 1272/2008 [CLP]**

| Product/ingredient name | PBT | P | B | T | vPvB | vP | vB |
|---|---|---|---|---|---|---|---|
| 2-(2-butoxyethoxy)ethanol | No | No | No | No | No | No | No |
| 2-Butoxyethanol | No | No | No | No | No | No | No |
| 3-iodo-2-propynyl-butyl carbamate | No | No | No | No | No | No | No |
| 1,2-benzisothiazol-3(2H)-one | No | No | No | No | No | No | No |
| 2-Methyl-1,2-benzisothiazol-3(2H)-one | No | No | No | No | No | No | No |

**Conclusion/Summary Regulation (EC) No. 1272/2008 [CLP]** : The product does not meet the criteria to be considered as a PBT or vPvB.

### 12.6 Endocrine disrupting properties

Not available.

**Conclusion/Summary [Product]** : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

### 12.7 Other adverse effects

No known significant effects or critical hazards.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

**Product**

**Methods of disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations. Avoid release to the environment. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

## SECTION 13: Disposal considerations

**European waste catalogue (EWC)** : 080112

**Packaging**

**Methods of disposal** : The generation of waste should be avoided or minimised 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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

| | ADR/RID | ADN | IMDG | IATA |
|---|---|---|---|---|
| **14.1 UN number or ID number** | Not regulated. | Not regulated. | Not regulated. | Not regulated. |
| **14.2 UN proper shipping name** | - | - | - | - |
| **14.3 Transport hazard class(es)** | - | - | - | - |
| **14.4 Packing group** | - | - | - | - |
| **14.5 Environmental hazards** | No. | No. | No. | No. |

**14.6 Special precautions for user** : **Transport within user's premises:** 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.

**14.7 Maritime transport in bulk according to IMO instruments** : Not relevant/applicable due to nature of the product.

## SECTION 15: Regulatory information

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

**EU Regulation (EC) No. 1907/2006 (REACH)**

**Annex XIV - List of substances subject to authorisation**

**Annex XIV**

None of the components are listed.

**Substances of very high concern**

None of the components are listed.

**Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles**

| Product/ingredient name | % | Designation [Usage] |
|---|---|---|
| TEKNOSHIELD 4005-00 | ≥90 | 3 |
| 2-(2-butoxyethoxy)ethanol | ≤3 | 55 [Consumer paint] |

**Labelling** :

**Synthetic polymer microparticles - Designation 78**

**Generic identity of polymer(s)** : 3901 - Polymers of ethylene.

## SECTION 15: Regulatory information

**Total percentage of synthetic polymer microparticles** : 0.1%

The synthetic polymer microparticles supplied is subject to conditions laid down by entry 78 of Annex XVII to Regulation (EC) No 1907/2006 of the European Parliament and of the Council.

### Other EU regulations

**Industrial emissions (integrated pollution prevention and control) - Air** : Not listed

**Industrial emissions (integrated pollution prevention and control) - Water** : Not listed

**Explosive precursors** : Not applicable.

#### (EC) No 273/2004 on drug precursors

Not listed.

#### (EC) No 111/2005 Trade between the Union and third countries in drug precursors

Not listed.

#### Ozone depleting substances (EU 2024/590)

Not listed.

#### Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

#### Persistent Organic Pollutants

Not listed.

#### Seveso Directive

This product is not controlled under the Seveso Directive.

### National regulations

#### Austria

**Limitation of the use of organic solvents** : Permitted.

#### Belgium

#### Czech Republic

**Storage code** : IV

#### Denmark

**Fire class** : IV-1

**MAL-code** : 0-1

**Protection based on MAL** : **According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment:**

**General:** Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. A face shield must be worn in work involving spattering if a full mask is not required. In this case, other recommended use of eye protection is not required.

In all spraying operations in which there is return spray, the following must be worn: respiratory protection and arm protectors/apron/coveralls/protective clothing as appropriate or as instructed.

MAL-code: 0-1

**Application:** When spraying in existing* spray booths, if the operator is outside the spray zone.

- Arm protectors must be worn.

During non-atomising spraying in existing* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone.

- Gas filter mask must be worn.

During all spraying where atomisation occurs in cabins or spray booths where the operator is inside the spray zone and during spraying outside a closed facility, cabin or booth.

- Full mask with combined filter, coveralls and hood must be worn.

**Drying:** Items for drying/drying ovens that are temporarily placed on such things as rack trolleys, etc, must be equipped with a mechanical exhaust system to prevent fumes from wet items from passing through workers' inhalation zone.

**Polishing:** When polishing treated surfaces, a mask with dust filter must be worn. When machine grinding, eye protection must be worn. Work gloves must always be worn.

**Caution** The regulations contain other stipulations in addition to the above.

*See Regulations.

**List of undesirable substances** : Not listed

**Finland**

**France**

**Social Security Code, Articles L 461-1 to L 461-7** :

| | |
|---|---|
| 2-(2-butoxyethoxy)ethanol | RG 84 |
| 2-Butoxyethanol | RG 84 |

**Reinforced medical surveillance** : Act of July 11, 1977 determining the list of activities which require reinforced medical surveillance: not applicable

**Germany**

**Storage class (TRGS 510)** : 10

**Hazardous incident ordinance**

This product is not controlled under the Germany Hazardous Incident Ordinance.

**Hazard class for water** : 2

**Technical instruction on air quality control (TA Luft)**

| Number [Class] | Description | % |
|---|---|---|
| 5.2.1 | Total dust | 9 |
| 5.2.5 | Organic substances | 3.7 |
| 5.2.5 [I] | Organic substances | 2.1 |

**AOX** : The product contains organically bound halogens and can contribute to the AOX value in waste water.

**Italy**

**D.Lgs. 152/06** : Not determined.

**Netherlands**

**Water Discharge Policy (ABM)** : A(3) Hazardous for aquatic organisms, may have long-term hazardous effects in aquatic environment. Decontamination effort: A

**Norway**

**Sweden**

## SECTION 15: Regulatory information

### Switzerland

**LRV Klasse (Ta-Luft)** : Table 72, Class 2: 0.734%

**VOC content** : Exempt.

### International regulations

### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

### Montreal Protocol

Not listed.

### Stockholm Convention on Persistent Organic Pollutants

Not listed.

### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

**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]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

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

| Classification | Justification |
|---|---|
| Aquatic Chronic 3, H412 | Calculation method |

### Full text of abbreviated H statements

| | |
|---|---|
| H301 | Toxic if swallowed. |
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H319 | Causes serious eye irritation. |
| H330 | Fatal if inhaled. |
| H331 | Toxic if inhaled. |
| H372 | Causes damage to organs through prolonged or repeated exposure. |
| 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. |
| H412 | Harmful to aquatic life with long lasting effects. |
| EUH071 | Corrosive to the respiratory tract. |

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

## SECTION 16: Other information

| | |
|---|---|
| Acute Tox. 2 | ACUTE TOXICITY - Category 2 |
| Acute Tox. 3 | ACUTE TOXICITY - Category 3 |
| Acute Tox. 4 | ACUTE TOXICITY - Category 4 |
| Aquatic Acute 1 | SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1 |
| Aquatic Chronic 1 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1 |
| Aquatic Chronic 2 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2 |
| Aquatic Chronic 3 | LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3 |
| Eye Dam. 1 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1 |
| Eye Irrit. 2 | SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2 |
| Skin Corr. 1C | SKIN CORROSION/IRRITATION - Category 1C |
| Skin Irrit. 2 | SKIN CORROSION/IRRITATION - Category 2 |
| Skin Sens. 1 | SKIN SENSITISATION - Category 1 |
| Skin Sens. 1A | SKIN SENSITISATION - Category 1A |
| STOT RE 1 | SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1 |

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TEKNOSHIELD 4005-00_BASE T BASE T

**Notice to reader**

**The information in this SDS is based on the present state of our knowledge and on current laws. The product is not to be used for purposes other than those specified under section 1 without first obtaining written handling instructions. It is always the responsibility of the user to take all necessary steps to fulfil the demands set out in the local rules and legislation. The information in this SDS is meant to be a description of the safety requirements for our product. It is not to be considered a guarantee of the product's properties.**