

# SAFETY DATA SHEET



UVILUX 1745-02 - HARDTOP TS 21436 BLACK

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

### 1.1 Product identifier

**Product name** : UVILUX 1745-02 - HARDTOP TS 21436 BLACK

### 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

#### National contact

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

### 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]

Skin Irrit. 2, H315  
Eye Dam. 1, H318  
Skin Sens. 1, H317  
Aquatic Acute 1, H400  
Aquatic Chronic 2, H411

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

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H318 - Causes serious eye damage.  
H410 - Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

**Prevention** : P280 - Wear protective gloves. Wear eye or face protection.  
P273 - Avoid release to the environment.

## SECTION 2: Hazards identification

<b>Response</b>	: P391 - Collect spillage. P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
<b>Storage</b>	: Not applicable.
<b>Disposal</b>	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	: Contains: Hexamethylene diacrylate; pentaerythritol tetraacrylate; Propylidynetrimethanol, ethoxylated, esters with acrylic acid and Dipropylenglycol diacrylate
<b>Supplemental label elements</b>	:
<b>Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles</b>	:

### 2.3 Other hazards

<b>Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII</b>	: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
<b>Other hazards which do not result in classification</b>	: 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
Hexamethylene diacrylate	REACH #: 01-2119484737-22 EC: 235-921-9 CAS: 13048-33-4 Index: 607-109-00-8	≥25 - ≤50	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 2, H411	M [Acute] = 1	[1]
pentaerythritol tetraacrylate	CAS: 917379-62-5	≥10 - <25	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411	ATE [Oral] = 500 mg/kg	[1]
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	REACH #: 01-2119489900-30 EC: 500-066-5 CAS: 28961-43-5	≥10 - ≤25	Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412	-	[1]
Dipropylenglycol diacrylate	REACH #: 01-2119484629-21 EC: 260-754-3 CAS: 57472-68-1	≤10	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317	-	[1]
Methylbenzoylformiat	REACH #: 01-2120101338-67 EC: 239-263-3 CAS: 15206-55-0	≤3	Skin Sens. 1, H317	-	[1]

Date of issue/Date of revision : 17/04/2024 Date of previous issue : No previous validation Version : 1 2/26

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## SECTION 3: Composition/information on ingredients

Benzene, (1-methylethenyl)-, homopolymer, ar-(2-hydroxy-2-methyl-1-oxopropyl) derivs.	CAS: 163702-01-0	<3	Repr. 2, H361f	-	[1]
Phosphine oxide, phenylbis (2,4,6-trimethylbenzoyl)-	REACH #: 01-2119489401-38 EC: 423-340-5 CAS: 162881-26-7 Index: 015-189-00-5	≤3	Skin Sens. 1A, H317 Aquatic Chronic 4, H413	-	[1]
2-Butoxyethanol	REACH #: 01-2119475108-36 EC: 203-905-0 CAS: 111-76-2 Index: 603-014-00-0	<1	Acute Tox. 4, H302 Acute Tox. 3, H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319	ATE [Oral] = 1200 mg/kg ATE [Inhalation (vapours)] = 3 mg/l	[1] [2]
(1-methyl-1,2-ethanediyl)bis [oxy(methyl-2,1-ethanediyl)] diacrylate	REACH #: 01-2119484613-34 EC: 256-032-2 CAS: 42978-66-5 Index: 607-249-00-X	<1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 2, H411	STOT SE 3, H335: C ≥ 10%	[1]
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	REACH #: 01-2119490020-53 EC: 500-130-2 CAS: 55818-57-0	≤0.3	Eye Irrit. 2, H319 Skin Sens. 1, H317	-	[1]
Oligotriacrylate	REACH #: 01-2119487948-12 EC: 500-114-5 CAS: 52408-84-1	≤0.3	Eye Irrit. 2, H319 Skin Sens. 1, H317	-	[1]
copper bis (dimethyldithiocarbamate)	REACH #: 01-2120770993-40 EC: 205-287-8 CAS: 137-29-1	<0.1	Acute Tox. 2, H330 Aquatic Acute 1, H400  <b>See Section 16 for the full text of the H statements declared above.</b>	ATE [Inhalation (dusts and mists)] = 0.12 mg/l M [Acute] = 10	[1]

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.

### Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### Eye contact

: Get medical attention immediately. Call a poison center or physician. 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. Chemical burns must be treated promptly by a physician.

## SECTION 4: First aid measures

- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. 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. 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.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. 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. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. 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.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

### 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

## SECTION 5: Firefighting measures

- 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 very toxic to aquatic life. This material is 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  
phosphorus oxides  
metal oxide/oxides

### 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. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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. Collect spillage.

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

- Small spill** : Stop leak if without risk. Move containers from spill area. 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.
- 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. 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 spilt 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).

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. 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.

#### Seveso Directive - Reporting thresholds

##### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
E1	100 tonne	200 tonne

### 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-Butoxyethanol	<b>Regulation on Limit Values - MAC (Austria, 4/2021). Absorbed through skin.</b> TWA: 20 ppm 8 hours. TWA: 98 mg/m <sup>3</sup> 8 hours. PEAK: 40 ppm, 4 times per shift, 30 minutes. PEAK: 200 mg/m <sup>3</sup> , 4 times per shift, 30 minutes.
copper bis(dimethyldithiocarbamate)	<b>Regulation on Limit Values - MAC (Austria, 4/2021). [Copper and its compounds]</b> TWA: 1 mg/m <sup>3</sup> , (measured as Cu) 8 hours. Form: Inhalable fraction PEAK: 4 mg/m <sup>3</sup> , (measured as Cu), 4 times per shift, 15 minutes. Form: Inhalable fraction <b>Regulation on Limit Values - MAC (Austria, 4/2021). [Copper and its compounds (Fume)]</b> TWA: 0.1 mg/m <sup>3</sup> , (measured as Cu) 8 hours. Form: respirable

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2-Butoxyethanol	<p>fume PEAK: 0.4 mg/m<sup>3</sup>, (measured as Cu), 4 times per shift, 15 minutes. Form: respirable fume</p> <p><b>Limit values (Belgium, 5/2021). Absorbed through skin.</b> TWA: 20 ppm 8 hours. TWA: 98 mg/m<sup>3</sup> 8 hours. STEL: 50 ppm 15 minutes. STEL: 246 mg/m<sup>3</sup> 15 minutes.</p>
2-Butoxyethanol	<p><b>Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 6/2021). Absorbed through skin.</b> Limit value 8 hours: 98 mg/m<sup>3</sup> 8 hours. Limit value 15 min: 246 mg/m<sup>3</sup> 15 minutes. Limit value 15 min: 50 ppm 15 minutes. Limit value 8 hours: 20 ppm 8 hours.</p>
copper bis(dimethyldithiocarbamate)	<p><b>Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 6/2021). [Copper - oxides and inorganic compounds (as copper)]</b> Limit value 8 hours: 1 mg/m<sup>3</sup>, (as copper) 8 hours.</p>
2-Butoxyethanol	<p><b>Ministry of Economy, Labour and Entrepreneurship ELV/ STELV (Croatia, 1/2021). Absorbed through skin.</b> STELV: 246 mg/m<sup>3</sup> 15 minutes. STELV: 50 ppm 15 minutes. ELV: 98 mg/m<sup>3</sup> 8 hours. ELV: 20 ppm 8 hours.</p>
2-Butoxyethanol	<p><b>Department of labour inspection (Cyprus, 7/2021). Absorbed through skin.</b> STEL: 50 ppm 15 minutes. STEL: 246 mg/m<sup>3</sup> 15 minutes. TWA: 20 ppm 8 hours. TWA: 98 mg/m<sup>3</sup> 8 hours.</p>
2-Butoxyethanol	<p><b>Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 10/2022). Absorbed through skin.</b> TWA: 100 mg/m<sup>3</sup> 8 hours. TWA: 20.4 ppm 8 hours. STEL: 200 mg/m<sup>3</sup> 15 minutes. STEL: 40.8 ppm 15 minutes.</p>
2-Butoxyethanol	<p><b>Working Environment Authority (Denmark, 6/2022). Absorbed through skin.</b> TWA: 20 ppm 8 hours. TWA: 98 mg/m<sup>3</sup> 8 hours. STEL: 246 mg/m<sup>3</sup> 15 minutes. STEL: 50 ppm 15 minutes.</p>
2-Butoxyethanol	<p><b>Occupational exposure limits, Regulation No. 293 (Estonia, 12/2022). Absorbed through skin. Skin sensitiser.</b> TWA: 98 mg/m<sup>3</sup> 8 hours. TWA: 20 ppm 8 hours. STEL: 246 mg/m<sup>3</sup> 15 minutes. STEL: 50 ppm 15 minutes.</p>
copper bis(dimethyldithiocarbamate)	<p><b>Occupational exposure limits, Regulation No. 293 (Estonia, 12/2022). [Copper and inorganic compounds]</b> TWA: 0.2 mg/m<sup>3</sup>, (calculated as Cu) 8 hours. Form: Respirable dust TWA: 1 mg/m<sup>3</sup>, (calculated as Cu) 8 hours. Form: Total dust</p>
2-Butoxyethanol	<p><b>EU OEL (Europe, 1/2022). Absorbed through skin. Notes: list of indicative occupational exposure limit values</b> TWA: 20 ppm 8 hours. TWA: 98 mg/m<sup>3</sup> 8 hours. STEL: 50 ppm 15 minutes. STEL: 246 mg/m<sup>3</sup> 15 minutes.</p>

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2-Butoxyethanol	<b>Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021). Absorbed through skin.</b> TWA: 20 ppm 8 hours. TWA: 98 mg/m <sup>3</sup> 8 hours. STEL: 50 ppm 15 minutes. STEL: 250 mg/m <sup>3</sup> 15 minutes.
copper bis(dimethyldithiocarbamate)	<b>Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021). [Copper and its compounds]</b> TWA: 0.02 mg/m <sup>3</sup> , (calculated as Cu) 8 hours. Form: Respirable fraction
2-Butoxyethanol	<b>Ministry of Labor (France, 10/2022). Absorbed through skin. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code)</b> TWA: 10 ppm 8 hours. TWA: 49 mg/m <sup>3</sup> 8 hours. STEL: 246 mg/m <sup>3</sup> 15 minutes. STEL: 50 ppm 15 minutes.
Hexamethylene diacrylate 2-Butoxyethanol	<b>DFG MAC-values list (Germany, 7/2022). Skin sensitiser.</b> <b>TRGS 900 OEL (Germany, 6/2022). Absorbed through skin.</b> TWA: 49 mg/m <sup>3</sup> 8 hours. PEAK: 98 mg/m <sup>3</sup> 15 minutes. TWA: 10 ppm 8 hours. PEAK: 20 ppm 15 minutes. <b>DFG MAC-values list (Germany, 7/2022). Absorbed through skin.</b> TWA: 10 ppm 8 hours. PEAK: 20 ppm, 4 times per shift, 15 minutes. TWA: 49 mg/m <sup>3</sup> 8 hours. PEAK: 98 mg/m <sup>3</sup> , 4 times per shift, 15 minutes.
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate copper bis(dimethyldithiocarbamate)	<b>DFG MAC-values list (Germany, 7/2022). Skin sensitiser.</b> <b>DFG MAC-values list (Germany, 7/2022). [Copper and its inorganic compounds]</b> PEAK: 0.02 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. Form: respirable fraction TWA: 0.01 mg/m <sup>3</sup> 8 hours. Form: respirable fraction
2-Butoxyethanol	<b>Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021). Absorbed through skin.</b> TWA: 25 ppm 8 hours. TWA: 120 mg/m <sup>3</sup> 8 hours.
2-Butoxyethanol	<b>5/2020. (II. 6.) ITM Decree (Hungary, 12/2022). Absorbed through skin. Skin sensitiser. Inhalation sensitiser.</b> TWA: 98 mg/m <sup>3</sup> 8 hours. PEAK: 246 mg/m <sup>3</sup> 15 minutes. PEAK: 50 ppm 15 minutes. TWA: 20 ppm 8 hours.
copper bis(dimethyldithiocarbamate)	<b>5/2020. (II. 6.) ITM Decree (Hungary, 12/2022). [Copper and its compounds]</b> TWA: 0.1 mg/m <sup>3</sup> , (as Cu) 8 hours. PEAK: 0.2 mg/m <sup>3</sup> , (as Cu) 15 minutes.
2-Butoxyethanol	<b>Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021). Absorbed through skin.</b> STEL: 246 mg/m <sup>3</sup> 15 minutes. STEL: 50 ppm 15 minutes. TWA: 100 mg/m <sup>3</sup> 8 hours. TWA: 20 ppm 8 hours.
2-Butoxyethanol	<b>NAOSH (Ireland, 5/2021). Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values</b> OELV-8hr: 20 ppm 8 hours. OELV-8hr: 98 mg/m <sup>3</sup> 8 hours. OELV-15min: 50 ppm 15 minutes. OELV-15min: 246 mg/m <sup>3</sup> 15 minutes.



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2-Butoxyethanol	<p><b>Legislative Decree No. 819/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 6/2020).</b>  <b>Absorbed through skin.</b>              8 hours: 20 ppm 8 hours.              8 hours: 98 mg/m<sup>3</sup> 8 hours.              Short Term: 50 ppm 15 minutes.              Short Term: 246 mg/m<sup>3</sup> 15 minutes.</p>
2-Butoxyethanol	<p><b>Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021).</b>  <b>Absorbed through skin.</b>              TWA: 98 mg/m<sup>3</sup> 8 hours.              TWA: 20 ppm 8 hours.              STEL: 50 ppm 15 minutes.              STEL: 246 mg/m<sup>3</sup> 15 minutes.</p>
2-Butoxyethanol	<p><b>Lithuanian Hygiene Standard HN 23 (Lithuania, 7/2022).</b>  <b>Absorbed through skin.</b>              TWA: 50 mg/m<sup>3</sup> 8 hours.              TWA: 10 ppm 8 hours.              STEL: 100 mg/m<sup>3</sup> 15 minutes.              STEL: 20 ppm 15 minutes.</p>
copper bis(dimethyldithiocarbamate)	<p><b>Lithuanian Hygiene Standard HN 23 (Lithuania, 7/2022).</b>  <b>[Copper and its inorganic compounds]</b>              TWA: 0.2 mg/m<sup>3</sup>, (as Cu) 8 hours. Form: Respirable fraction              TWA: 1 mg/m<sup>3</sup>, (as Cu) 8 hours. Form: Inhalable fraction</p>
2-Butoxyethanol	<p><b>Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021). Absorbed through skin.</b>              TWA: 20 ppm 8 hours.              TWA: 98 mg/m<sup>3</sup> 8 hours.              STEL: 50 ppm 15 minutes.              STEL: 246 mg/m<sup>3</sup> 15 minutes.</p>
2-Butoxyethanol	<p><b>EU OEL (Europe, 1/2022). Absorbed through skin. Notes: list of indicative occupational exposure limit values</b>              TWA: 20 ppm 8 hours.              TWA: 98 mg/m<sup>3</sup> 8 hours.              STEL: 50 ppm 15 minutes.              STEL: 246 mg/m<sup>3</sup> 15 minutes.</p>
2-Butoxyethanol	<p><b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022). Absorbed through skin.</b>              OEL, 8-h TWA: 100 mg/m<sup>3</sup> 8 hours.              STEL, 15-min: 246 mg/m<sup>3</sup> 15 minutes.              OEL, 8-h TWA: 20.4 ppm 8 hours.              STEL, 15-min: 50 ppm 15 minutes.</p>
copper bis(dimethyldithiocarbamate)	<p><b>Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022). [copper and inorganic copper compounds]</b>              OEL, 8-h TWA: 0.1 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction</p>
2-Butoxyethanol	<p><b>FOR-2011-12-06-1358 (Norway, 12/2022). Absorbed through skin. Notes: indicative limit value</b>              TWA: 10 ppm 8 hours.              TWA: 50 mg/m<sup>3</sup> 8 hours.</p>
2-Butoxyethanol	<p><b>Regulation of the Minister of Family, Labor and Social Policy of 18 February 2021, regarding the highest permissible concentrations and values of agents harmful to health in the work environment (Journal of Laws 2021, item 325) (Poland, 2/2021). Absorbed through skin.</b>              TWA: 98 mg/m<sup>3</sup> 8 hours.              STEL: 200 mg/m<sup>3</sup> 15 minutes.</p>
copper bis(dimethyldithiocarbamate)	<p><b>Regulation of the Minister of Family, Labor and Social Policy of 18 February 2021, regarding the highest permissible concentrations and values of agents harmful to health in the work environment (Journal of Laws 2021, item 325) (Poland, 2/2021). [copper and its inorganic compounds as Cu]</b>              TWA: 0.2 mg/m<sup>3</sup>, (calculated as Cu) 8 hours.</p>

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2-Butoxyethanol	<b>Portuguese Institute of Quality (Portugal, 11/2014).</b> TWA: 20 ppm 8 hours.
2-Butoxyethanol	<b>HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2021). Absorbed through skin.</b> VLA: 98 mg/m <sup>3</sup> 8 hours. VLA: 20 ppm 8 hours. Short term: 246 mg/m <sup>3</sup> 15 minutes. Short term: 50 ppm 15 minutes.
2-Butoxyethanol	<b>Government regulation SR c. 355/2006 (Slovakia, 9/2020). Absorbed through skin.</b> TWA: 98 mg/m <sup>3</sup> 8 hours. TWA: 20 ppm 8 hours. STEL: 246 mg/m <sup>3</sup> 15 minutes. STEL: 50 ppm 15 minutes.
copper bis(dimethyldithiocarbamate)	<b>Government regulation SR c. 355/2006 (Slovakia, 9/2020). [Copper and its inorganic compounds]</b> TWA: 1 mg/m <sup>3</sup> , (Copper and its inorganic compounds, as Cu) 8 hours. Form: Inhalable fraction TWA: 0.2 mg/m <sup>3</sup> , (Copper and its inorganic compounds, as Cu) 8 hours. Form: respirable fraction and fumes
2-Butoxyethanol	<b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021). Absorbed through skin.</b> TWA: 98 mg/m <sup>3</sup> 8 hours. TWA: 20 ppm 8 hours. KTV: 246 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. KTV: 50 ppm, 4 times per shift, 15 minutes.
2-Butoxyethanol	<b>National institute of occupational safety and health (Spain, 4/2022). Absorbed through skin.</b> TWA: 20 ppm 8 hours. TWA: 98 mg/m <sup>3</sup> 8 hours. STEL: 245 mg/m <sup>3</sup> 15 minutes. STEL: 50 ppm 15 minutes.
copper bis(dimethyldithiocarbamate)	<b>National institute of occupational safety and health (Spain, 4/2022). [copper compounds]</b> TWA: 0.01 mg/m <sup>3</sup> , (as Cu) 8 hours. Form: Respirable fraction
2-Butoxyethanol	<b>Work environment authority Regulation 2018:1 (Sweden, 9/2021). Absorbed through skin.</b> TWA: 10 ppm 8 hours. TWA: 50 mg/m <sup>3</sup> 8 hours. STEL: 50 ppm 15 minutes. STEL: 246 mg/m <sup>3</sup> 15 minutes.
copper bis(dimethyldithiocarbamate)	<b>Work environment authority Regulation 2018:1 (Sweden, 9/2021). [copper and inorganic compounds respirable fraction, (as Cu)]</b> TWA: 0.01 mg/m <sup>3</sup> , (as Cu) 8 hours. Form: respirable fraction
2-Butoxyethanol	<b>SUVA (Switzerland, 1/2023). Absorbed through skin.</b> TWA: 10 ppm 8 hours. TWA: 49 mg/m <sup>3</sup> 8 hours. STEL: 20 ppm 15 minutes. STEL: 98 mg/m <sup>3</sup> 15 minutes.
copper bis(dimethyldithiocarbamate)	<b>SUVA (Switzerland, 1/2023). [Copper and its inorganic compounds]</b> TWA: 0.1 mg/m <sup>3</sup> , (As Cu calculated) 8 hours. Form: Inhalable fraction STEL: 0.2 mg/m <sup>3</sup> , (As Cu calculated) 15 minutes. Form: Inhalable fraction

## SECTION 8: Exposure controls/personal protection

2-Methoxy-1-methylethyl acetate	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b> STEL: 548 mg/m <sup>3</sup> 15 minutes. TWA: 50 ppm 8 hours. TWA: 274 mg/m <sup>3</sup> 8 hours. STEL: 100 ppm 15 minutes.
2-Butoxyethanol	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b> STEL: 50 ppm 15 minutes. TWA: 25 ppm 8 hours. STEL: 246 mg/m <sup>3</sup> 15 minutes. TWA: 123 mg/m <sup>3</sup> 8 hours.
2-ethylhexan-1-ol	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> TWA: 5.4 mg/m <sup>3</sup> 8 hours. TWA: 1 ppm 8 hours.
Cyclohexane	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b> STEL: 1050 mg/m <sup>3</sup> 15 minutes. STEL: 300 ppm 15 minutes. TWA: 100 ppm 8 hours. TWA: 350 mg/m <sup>3</sup> 8 hours.
copper bis(dimethyldithiocarbamate)	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). [Copper and compounds dust and mists, as Cu]</b> STEL: 2 mg/m <sup>3</sup> , (as Cu) 15 minutes. Form: Dusts and Mists TWA: 1 mg/m <sup>3</sup> , (as Cu) 8 hours. Form: Dusts and Mists

### 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	<b>Government regulation of Czech Republic Limit Values of Biological Exposure Tests (Czech Republic, 9/2015)</b> 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. 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.	
No exposure indices known.	
2-Butoxyethanol	<b>DFG BEI-values list (Germany, 7/2022) Notes: danger from percutaneous absorption (see p. 211 and p. 228).</b> BEI: 150 mg/g creatinine, butoxyacetic acid (after hydrolysis) [in urine]. Sampling time: end of exposure or end of shift / for long-term exposures: at the end of the shift after several shifts. <b>TRGS 903 - BEI Values (Germany, 2/2022)</b> BEI: 150 mg/g creatinine, butoxy acetic acid (after hydrolysis) [in urine]. Sampling time: end of exposure or end of shift; for long-term exposures: at the end of shift after several shifts.
copper bis(dimethyldithiocarbamate)	<b>DFG BEI-values list (Germany, 7/2022) [Copper and its inorganic compounds]</b> BEI: See Section XV.2: For the following substances currently no BAR may be derived, but there is documentation in the

## SECTION 8: Exposure controls/personal protection

No exposure indices known.

No exposure indices known.

No exposure indices known.

2-Butoxyethanol

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

No exposure indices known.

No exposure indices known.

2-Butoxyethanol

2-Butoxyethanol

No exposure indices known.

2-Butoxyethanol

2-Butoxyethanol

"Occupational medicine and toxicology Justifications for BAT values, EKA, BLW, and BAR", copper [in urine]. Sampling time: Sample time not specified.

### NAOSH (Ireland, 1/2011)

BMGV: 200 mg/g creatinine, BAA [in urine]. Sampling time: end of shift - As soon as possible after exposure ceases.

### Portuguese Institute of Quality (Portugal, 11/2014)

BEI: 200 mg/g creatinine, butoxyacetic acid (BAA) [in urine]. Sampling time: end of shift.

### Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021)

BAT: 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.

### National institute of occupational safety and health (Spain, 4/2022)

VLB: 200 mg/g creatinine, butoxyacetic acid [in urine]. Sampling time: end of shift.

### SUVA (Switzerland, 1/2023)

BEI: 150 mg/g creatinine, 2-butoxy acetic acid (after hydrolysis) [in urine]. Sampling time: immediately after exposure or after working hours. In case of long-term exposure: after more than one shift.

### EH40/2005 BMGVs (United Kingdom (UK), 8/2018)

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

## SECTION 8: Exposure controls/personal protection

Product/ingredient name	Type	Exposure	Value	Population	Effects
Hexamethylene diacrylate	DNEL	Long term Inhalation	7.2 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	1.66 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	2.1 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	2.77 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	24.5 mg/m <sup>3</sup>	Workers	Systemic
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	DNEL	Long term Dermal	10.5 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	37 mg/m <sup>3</sup>	Workers	Systemic
Dipropylenglycol diacrylate	DNEL	Long term Dermal	1.66 mg/kg bw/day	General population	Systemic
	DNEL	Long term Oral	2.08 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	2.77 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	7.24 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	24.48 mg/m <sup>3</sup>	Workers	Systemic
Methylbenzoylformiat	DNEL	Long term Oral	1.67 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	1.67 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	3.33 mg/kg bw/day	Workers	Systemic
Benzene, (1-methylethenyl)-, homopolymer, ar-(2-hydroxy-2-methyl-1-oxopropyl) derivs.	DNEL	Long term Oral	5.28 µg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	5.28 µg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	9.18 µg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	14.8 µg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	52.1 µg/m <sup>3</sup>	Workers	Systemic
Phosphine oxide, phenylbis (2,4,6-trimethylbenzoyl)-	DNEL	Long term Inhalation	21 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	21 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	3.3 mg/kg	Workers	Systemic
	DNEL	Short term Dermal	3.3 mg/kg	Workers	Systemic
	DNEL	Long term Inhalation	5.2 mg/m <sup>3</sup>	General population [Consumers]	Systemic
	DNEL	Long term Dermal	1.5 mg/kg	General population [Consumers]	Systemic
	DNEL	Long term Oral	1.5 mg/kg	General population [Consumers]	Systemic
	DNEL	Short term Oral	1.67 ng/kg bw/day	General population	Systemic
	DNEL	Long term Oral	1.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	1.5 mg/kg bw/day	General population	Systemic
DNEL	Short term Dermal	1.67 mg/kg bw/day	General population	Systemic	

## SECTION 8: Exposure controls/personal protection

2-Butoxyethanol	DNEL	Short term Inhalation	1.93 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	1.93 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Dermal	3 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Dermal	3.33 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	7.84 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	7.84 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Oral	6.3 mg/kg bw/day	General population	Systemic
	DNEL	Short term Oral	26.7 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	59 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Inhalation	98 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	147 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Inhalation	246 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	426 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Short term Inhalation	1091 mg/m <sup>3</sup>	Workers	Systemic
	(1-methyl-1,2-ethanediy)bis[oxy (methyl-2,1-ethanediy)] diacrylate	DNEL	Long term Dermal	1.7 mg/kg bw/day	Workers
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	DNEL	Long term Inhalation	2.35 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	1.17 mg/m <sup>3</sup>	Workers	Systemic
Oligotriacrylate	DNEL	Long term Dermal	33 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	7.4 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	2.1 mg/kg bw/day	Workers	Systemic

### PNECs

No PNECs available

### 8.2 Exposure controls

#### Appropriate engineering controls

: If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

#### 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. Contaminated work clothing should not be allowed out of the workplace. 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 and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

## SECTION 8: Exposure controls/personal protection

### 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.

< 1 hour (breakthrough time): Nitrile gloves. thickness > 0.3 mm

1 - 4 hours (breakthrough time): 4H / Silver Shield® 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: A

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** : Black.

**Odour** : Slight

**Odour threshold** : Not available.

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

**Initial boiling point and boiling range** :

Ingredient name	°C	°F	Method
Polyethylene wax	341 to 665	645.8 to 1229	EN ISO 15199
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	>391	>735.8	OECD 103

**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
Hexamethylene diacrylate	235	455	DIN 51794
Dipropylenglycol diacrylate	240	464	DIN 51794

**Decomposition temperature** : Not available.

**pH** : Not applicable.

## SECTION 9: Physical and chemical properties

**Viscosity** : Not available.

**Solubility(ies)** :

Not available.

**Solubility in water** : Not available.

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

**Vapour pressure** :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
Dipropylenglycol diacrylate	0.00064	0.000085	OECD 104			
Hexamethylene diacrylate	0.00045	0.00006	EU A.4			

**Relative density** : Not available.

**Density** : 1.2 g/cm<sup>3</sup>

**Vapour density** : Not available.

**Explosive properties** : Not available.

**Oxidising properties** : Not available.

### Particle characteristics

**Median particle size** : 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.

**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	Species	Dose	Exposure
Hexamethylene diacrylate Propylidynetrimethanol, ethoxylated, esters with acrylic acid	LD50 Oral	Rat	5 g/kg	-
	LD50 Dermal	Rabbit	>13 g/kg	-
Dipropylenglycol diacrylate Phosphine oxide, phenylbis	LD50 Oral	Rat	4600 mg/kg	-
	LD50 Oral	Rat	>2000 mg/kg	-
(2,4,6-trimethylbenzoyl)- (1-methyl-1,2-ethanediyl)bis [oxy(methyl-2,1-ethanediyl)] diacrylate	LD50 Oral	Rat	6200 mg/kg	-
copper bis (dimethyldithiocarbamate)	LC50 Inhalation Dusts and mists	Rat	0.12 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-

**Date of issue/Date of revision** : 17/04/2024 **Date of previous issue** : No previous validation **Version** : 1 **16/26**

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## SECTION 11: Toxicological information

	LD50 Oral	Rat	>5000 mg/kg	-
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**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Acute toxicity estimates

Route	ATE value
Oral	3448.01 mg/kg
Inhalation (vapours)	446.16 mg/l

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Hexamethylene diacrylate	Skin - Severe irritant	Rabbit	-	24 hours 500 mg	-
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	Eyes - Moderate irritant	Rabbit	-	100 mg	-
Dipropylenglycol diacrylate	Skin - Moderate irritant	Rabbit	-	500 mg	-
	Eyes - Severe irritant	Rabbit	-	100 mg	-
2-Butoxyethanol	Skin - Severe irritant	Rabbit	-	500 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
(1-methyl-1,2-ethanediyl)bis [oxy(methyl-2,1-ethanediyl)] diacrylate	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	500 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 100 uL	-
	Skin - Moderate irritant	Rabbit	-	500 mg	-

**Conclusion/Summary** : Causes skin irritation.

### Sensitisation

Product/ingredient name	Route of exposure	Species	Result
Phosphine oxide, phenylbis (2,4,6-trimethylbenzoyl)-	skin	Guinea pig	Sensitising

**Conclusion/Summary** : May cause an allergic skin reaction.

### Mutagenicity

Product/ingredient name	Test	Experiment	Result
Phosphine oxide, phenylbis (2,4,6-trimethylbenzoyl)-	-	Subject: Bacteria	Negative

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Carcinogenicity

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Reproductive toxicity

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Teratogenicity

**Conclusion/Summary** : Based on available data, the classification criteria are not met.

### Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	Category 3	-	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Not available.

### Aspiration hazard

Not available.

## SECTION 11: Toxicological information

**Information on likely routes of exposure** : Not available.

### Potential acute health effects

- Eye contact** : Causes serious eye damage.  
**Inhalation** : No known significant effects or critical hazards.  
**Skin contact** : Causes skin irritation. May cause an allergic skin reaction.  
**Ingestion** : No known significant effects or critical hazards.

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

- Eye contact** : Adverse symptoms may include the following:  
pain  
watering  
redness
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
pain or irritation  
redness  
blistering may occur
- Ingestion** : Adverse symptoms may include the following:  
stomach pains

### 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** : Not available.
- General** : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
- 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.

### 11.2.2 Other information

Not available.

## SECTION 12: Ecological information

### 12.1 Toxicity

## SECTION 12: Ecological information

Product/ingredient name	Result	Species	Exposure
Hexamethylene diacrylate	EC50 1.09 mg/l	Algae - <i>Selenastrum capricornutum</i>	72 hours
	EC50 2.7 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours
	LC50 0.38 mg/l	Fish - <i>Oryzias latipes</i>	96 hours
	NOEC 0.5 mg/l	Algae - <i>Desmodesmus subspicatus</i>	72 hours
Phosphine oxide, phenylbis (2,4,6-trimethylbenzoyl)-	NOEC 0.14 mg/l	Daphnia - <i>Daphnia magna</i>	21 days
	NOEC 0.072 mg/l	Fish - <i>Oryzias latipes</i>	96 hours
	EC50 ≥0.26 mg/l	Aquatic plants - <i>Desmodesmus subspicatus</i>	72 hours
	NOEC ≥0.008 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	21 days
2-Butoxyethanol	Acute EC50 >1.175 mg/l	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 >0.09 mg/l	Fish - <i>Brachydanio rerio</i>	96 hours
	Acute EC50 >1000 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 800000 µg/l Marine water	Crustaceans - <i>Crangon crangon</i>	48 hours
copper bis (dimethyldithiocarbamate)	Acute LC50 1250000 µg/l Marine water	Fish - <i>Menidia beryllina</i>	96 hours
	Acute LC50 71 µg/l Fresh water	Fish - <i>Pimephales promelas</i>	96 hours

**Conclusion/Summary** : Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

### 12.2 Persistence and degradability

**Conclusion/Summary** : This product has not been tested for biodegradation.

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	-	-	Readily
Phosphine oxide, phenylbis (2,4,6-trimethylbenzoyl)-	-	-	Not readily

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Hexamethylene diacrylate	2.81	-	Low
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	2.89	-	Low
Dipropylenglycol diacrylate	0.01 to 0.39	-	Low
Phosphine oxide, phenylbis (2,4,6-trimethylbenzoyl)-	5.77	<5	Low
2-Butoxyethanol	0.81	-	Low
(1-methyl-1,2-ethanediyl)bis [oxy(methyl-2,1-ethanediyl)] diacrylate	2	-	Low
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	1.6 to 3	-	Low
Oligotriacrylate	2.52	-	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

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

## SECTION 12: Ecological information

### 12.6 Endocrine disrupting properties

Not available.

### 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** : The generation of waste should be avoided or minimised 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.

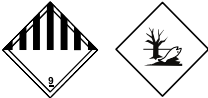
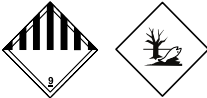
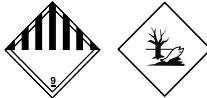

**European waste catalogue (EWC)** : 080111\*

#### 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 spill material and runoff and contact with soil, waterways, drains and sewers.

## SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
<b>14.1 UN number or ID number</b>	UN3082	UN3082	UN3082	UN3082
<b>14.2 UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PAINT)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PAINT)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PAINT)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PAINT)
<b>14.3 Transport hazard class(es)</b>	9 	9 	9 	9 
<b>14.4 Packing group</b>	III	III	III	III
<b>14.5 Environmental hazards</b>	Yes.	Yes.	Yes.	Yes.

#### Additional information

**ADR/RID** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

**Tunnel code** (-)

**ADN** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

## SECTION 14: Transport information

**IMDG** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

**IATA** : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

**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]
UVILUX 1745-02	≥90	3

**Labelling** :

**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.

**Ozone depleting substances (1005/2009/EU)**

Not listed.

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

Not listed.

**Persistent Organic Pollutants**

Not listed.

**Seveso Directive**

This product is controlled under the Seveso Directive.

**Danger criteria**

**Category**

E1

**National regulations**

**Austria**

## SECTION 15: Regulatory information

**VbF class** : Not regulated.

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

### Czech Republic

**Storage code** : IV

### Denmark

**Danish fire class** : IV-1

### Executive Order No. 1795/2015

Ingredient name	Annex I Section A	Annex I Section B
carbon black respirable	Listed	-

**MAL-code** : 0-6

**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: 0-6

**Application:** When using scraper or knife, brush, roller etc. for pre- and post-treatments in a spray booth where the operator is outside the spray zone and when working in similar new\* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When spraying in new\* booths and cabins with non-atomizing guns. During downtimes, cleaning and repair in closed facilities, spray booths or cabins, if there is a risk of contact with wet paint or organic solvents. When using scraper or knife, brush, roller, etc. for pre- and post-treatments in cabins or booths of the existing\* facility type, if the operator is inside the spray zone. When using scraper or knife, brush, roller, etc. for pre- and post-treatments outside a closed facility, spray booth or spray cabin.

- Protective clothing must be worn.

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

- Air-supplied full mask and protective clothing 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 and protective clothing 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.

- Air-supplied full mask, protective clothing and hood must be worn.

## SECTION 15: Regulatory information

**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.

**Restrictions on use** : Not to be used by professional users below 18 years of age. See the National Working Environment Authorities Executive Order regarding Young People At Work.

**List of undesirable substances** : Not listed

**Carcinogenic waste** : Waste containers must be labeled: Contains a substance or substances regulated by Danish working environment legislation on cancer risks.

### Finland

### France

**Social Security Code, Articles L 461-1 to L 461-7** : 2-Butoxyethanol RG 84  
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate 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 controlled under the Germany Hazardous Incident Ordinance.

### Danger criteria

Category	Reference number
E1	1.3.1

**Hazard class for water** : 2

**Technical instruction on air quality control** : TA-Luft Number 5.2.5: 60%  
TA-Luft Class I - Number 5.2.5: 2%

**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

**Ministry of Social Affairs and Employment (SZW) - Carcinogenic substances and processes, mutagenic or reprotoxic substances**

Ingredient name	Carcinogen	Mutagen	Reproductive toxicity - Fertility	Reproductive toxicity - Development	Harmful via breastfeeding
Naphtha (petroleum), hydrodesulfurized heavy	Listed	Listed	-	-	-

**Water Discharge Policy (ABM)** : Z(1) Non biodegradable substances with hazardous properties for humans and the environment (carcinogenicity/ mutagenicity/ reprotoxicity/ bioacumulative potential/ toxicity or persistence). Decontamination effort: Z

### Norway

### Sweden

### Switzerland

## SECTION 15: Regulatory information

**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
Skin Irrit. 2, H315	Calculation method
Eye Dam. 1, H318	Calculation method
Skin Sens. 1, H317	Calculation method
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 2, H411	Calculation method

### Full text of abbreviated H statements

H302	Harmful if swallowed.
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.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

### 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 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
Aquatic Chronic 4	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Repr. 2	REPRODUCTIVE TOXICITY - Category 2
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1A	SKIN SENSITISATION - Category 1A
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

**Date of issue/ Date of revision** : 17/04/2024

**Date of previous issue** : No previous validation

**Version** : 1

UVILUX 1745-02\_HARDTOP TS 21436 BLACK HARDTOP TS 21436 BLACK

### 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.

