

# SAFETY DATA SHEET



UVILUX SEALER 1453-02 - HY 0020 CLEAR

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

### 1.1 Product identifier

**Product name** : UVILUX SEALER 1453-02 - HY 0020 CLEAR

### 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  
STOT SE 3, H335  
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.  
H335 - May cause respiratory irritation.  
H411 - 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 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>Storage</b>	: P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.
<b>Disposal</b>	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
<b>Hazardous ingredients</b>	: Contains: 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid; (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate; Dipropylenglycol diacrylate and 2-Propenoic acid, 1,1'-[(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)]] ester, reaction products with diethylamine
<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
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	≥25 - ≤50	Skin Sens. 1, H317 Aquatic Chronic 2, H411	-	[1]
(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	≥10 - ≤25	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]
Dipropylenglycol diacrylate	REACH #: 01-2119484629-21 EC: 260-754-3 CAS: 57472-68-1	≥10 - ≤25	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317	-	[1]
Ethoxylated acrylated ester	-	≤10	Skin Irrit. 2, H315 Eye Irrit. 2, H319	-	[1]
2-Propenoic acid, 1,1'-[(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)]] ester, reaction products with diethylamine	REACH #: 01-2119961351-42 CAS: 111497-86-0	≤5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317	-	[1]
Propylidynetrimethanol,	REACH #:	≤5	Eye Irrit. 2, H319	-	[1]

## SECTION 3: Composition/information on ingredients

ethoxylated, esters with acrylic acid	01-2119489900-30 EC: 500-066-5 CAS: 28961-43-5		Skin Sens. 1, H317 Aquatic Chronic 3, H412		
2-hydroxy-2-methylpropiophenone	REACH #: 01-2119472306-39 EC: 231-272-0 CAS: 7473-98-5	≤3	Acute Tox. 4, H302 Aquatic Chronic 3, H412	ATE [Oral] = 1694 mg/kg	[1]
Fatty acids, C14-18 and C16-18-unsatd., maleated	REACH #: 01-2119976378-19 EC: 288-306-2 CAS: 85711-46-2	≤0.3	Skin Irrit. 2, H315 Skin Sens. 1, H317	-	[1]
2-Butoxyethanol	REACH #: 01-2119475108-36 EC: 203-905-0 CAS: 111-76-2 Index: 603-014-00-0	≤0.3	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]
Maleic anhydride	REACH #: 01-2119472428-31 EC: 203-571-6 CAS: 108-31-6 Index: 607-096-00-9	≤0.1	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Resp. Sens. 1, H334 Skin Sens. 1A, H317 STOT RE 1, H372 (respiratory system) (inhalation) EUH071 <b>See Section 16 for the full text of the H statements declared above.</b>	ATE [Oral] = 400 mg/kg Skin Sens. 1, H317: C ≥ 0.001%	[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.

#### 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. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

## SECTION 4: First aid measures

- 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** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- 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** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- 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 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.

## SECTION 5: Firefighting measures

**Hazardous combustion products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
halogenated compounds  
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

## SECTION 7: Handling and storage

- 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. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. 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
E2	200 tonne	500 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
Maleic anhydride	<b>Regulation on Limit Values - MAC (Austria, 4/2021). Skin sensitiser. Inhalation sensitiser.</b> TWA: 0.1 ppm 8 hours. TWA: 0.4 mg/m <sup>3</sup> 8 hours. CEIL: 0.2 ppm, 8 times per shift, 5 minutes. CEIL: 0.8 mg/m <sup>3</sup> , 8 times per shift, 5 minutes.
2-Butoxyethanol	<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.
Maleic anhydride	<b>Limit values (Belgium, 5/2021).</b> TWA: 0.0025 ppm 8 hours. Form: vapour and aerosol TWA: 0.01 mg/m <sup>3</sup> 8 hours. Form: vapour and aerosol



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2-Butoxyethanol	Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 6/2021). Absorbed through skin. 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.
Maleic anhydride	Ministry of Labour and Social Policy and the Ministry of Health - Ordinance No 13/2003. (Bulgaria, 6/2021). Limit value 8 hours: 1 mg/m <sup>3</sup> 8 hours.
2-Butoxyethanol	Ministry of Economy, Labour and Entrepreneurship ELV/STELV (Croatia, 1/2021). Absorbed through skin. 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.
Maleic anhydride	Ministry of Economy, Labour and Entrepreneurship ELV/STELV (Croatia, 1/2021). Skin sensitiser. Inhalation sensitiser. STELV: 0.2 ppm 15 minutes. ELV: 0.41 mg/m <sup>3</sup> 8 hours. STELV: 0.8 mg/m <sup>3</sup> 15 minutes. ELV: 0.1 ppm 8 hours.
2-Butoxyethanol	Department of labour inspection (Cyprus, 7/2021). Absorbed through skin. 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.
2-Butoxyethanol	Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 10/2022). Absorbed through skin. 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.
Maleic anhydride	Government regulation of Czech Republic PEL/NPK-P (Czech Republic, 10/2022). Skin sensitiser. TWA: 1 mg/m <sup>3</sup> 8 hours. TWA: 0.245 ppm 8 hours. STEL: 2 mg/m <sup>3</sup> 15 minutes. STEL: 0.49 ppm 15 minutes.
2-Butoxyethanol	Working Environment Authority (Denmark, 6/2022). Absorbed through skin. 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.
Maleic anhydride	Working Environment Authority (Denmark, 6/2022). TWA: 0.1 ppm 8 hours. TWA: 0.4 mg/m <sup>3</sup> 8 hours. STEL: 0.8 mg/m <sup>3</sup> 15 minutes. STEL: 0.2 ppm 15 minutes.
2-Butoxyethanol	Occupational exposure limits, Regulation No. 293 (Estonia, 12/2022). Absorbed through skin. Skin sensitiser. 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.
Maleic anhydride	Occupational exposure limits, Regulation No. 293 (Estonia, 12/2022). Skin sensitiser. TWA: 1.2 mg/m <sup>3</sup> 8 hours. TWA: 0.3 ppm 8 hours. STEL: 2.5 mg/m <sup>3</sup> 15 minutes. STEL: 0.6 ppm 15 minutes.

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2-Butoxyethanol	EU OEL (Europe, 1/2022). Absorbed through skin. Notes: list of indicative occupational exposure limit values 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.
Maleic anhydride	Institute of Occupational Health, Ministry of Social Affairs (Finland, 10/2021). TWA: 0.1 ppm 8 hours. TWA: 0.41 mg/m <sup>3</sup> 8 hours. CEIL: 0.2 ppm CEIL: 0.81 mg/m <sup>3</sup>
2-Butoxyethanol	Ministry of Labor (France, 10/2022). Absorbed through skin. Notes: Binding regulatory limit values (article R. 4412-149 of the Labor Code) 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.
Maleic anhydride	Ministry of Labor (France, 10/2022). Sensitization potential. Notes: Permissible limit values (circulars) STEL: 1 mg/m <sup>3</sup> 15 minutes.
1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate 2-Butoxyethanol	DFG MAC-values list (Germany, 7/2022). Skin sensitizer.  TRGS 900 OEL (Germany, 6/2022). Absorbed through skin. 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.
Maleic anhydride	DFG MAC-values list (Germany, 7/2022). Absorbed through skin. 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. TRGS 900 OEL (Germany, 6/2022). Skin sensitizer. Inhalation sensitizer. TWA: 0.081 mg/m <sup>3</sup> 8 hours. CEIL: 0.2025 mg/m <sup>3</sup> TWA: 0.02 ppm 8 hours. CEIL: 0.05 ppm PEAK: 0.081 mg/m <sup>3</sup> 15 minutes. PEAK: 0.02 ppm 15 minutes. DFG MAC-values list (Germany, 7/2022). Skin sensitizer. Inhalation sensitizer. TWA: 0.02 ppm 8 hours. CEIL: 0.05 ml/m <sup>3</sup> TWA: 0.081 mg/m <sup>3</sup> 8 hours. CEIL: 0.2 mg/m <sup>3</sup> PEAK: 0.081 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. PEAK: 0.02 ppm, 4 times per shift, 15 minutes.
2-Butoxyethanol	Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021). Absorbed through skin. TWA: 25 ppm 8 hours. TWA: 120 mg/m <sup>3</sup> 8 hours.
Maleic anhydride	Presidential Decree 307/1986: Occupational exposure limit values (Greece, 9/2021). TWA: 0.25 ppm 8 hours. TWA: 1 mg/m <sup>3</sup> 8 hours.



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2-Butoxyethanol	5/2020. (II. 6.) ITM Decree (Hungary, 12/2022). Absorbed through skin. Skin sensitiser. Inhalation sensitiser. 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.
Maleic anhydride	5/2020. (II. 6.) ITM Decree (Hungary, 12/2022). Skin sensitiser. Inhalation sensitiser. TWA: 0.08 mg/m <sup>3</sup> 8 hours. PEAK: 0.08 mg/m <sup>3</sup> 15 minutes. PEAK: 0.2 ppm 15 minutes. TWA: 0.2 ppm 8 hours.
2-Butoxyethanol	Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021). Absorbed through skin. 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.
Maleic anhydride	Ministry of Welfare, List of Exposure Limits (Iceland, 5/2021). Skin sensitiser. TWA: 0.4 mg/m <sup>3</sup> 8 hours. TWA: 0.1 ppm 8 hours.
2-Butoxyethanol	NAOSH (Ireland, 5/2021). Absorbed through skin. Notes: EU derived Occupational Exposure Limit Values 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.
Maleic anhydride	NAOSH (Ireland, 5/2021). Sensitization potential. Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV-8hr: 0.01 ppm 8 hours. Form: The Inhalable Fraction and Vapour note is used when a material exerts sufficient vapour pressure such that it may be present in both particle and vapour phases.
2-Butoxyethanol	Legislative Decree No. 819/2008. Title IX. Protection from chemical agents, carcinogens and mutagens (Italy, 6/2020). Absorbed through skin. 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.
2-Butoxyethanol	Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021). Absorbed through skin. 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.
Maleic anhydride	Ministers Cabinet Regulations Nr.325 - AER (Latvia, 2/2021). TWA: 1 mg/m <sup>3</sup> 8 hours.
2-Butoxyethanol	Lithuanian Hygiene Standard HN 23 (Lithuania, 7/2022). Absorbed through skin. 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.
Maleic anhydride	Lithuanian Hygiene Standard HN 23 (Lithuania, 7/2022). Skin sensitiser. Inhalation sensitiser. TWA: 1.2 mg/m <sup>3</sup> 8 hours. TWA: 0.3 ppm 8 hours. STEL: 2.5 mg/m <sup>3</sup> 15 minutes. STEL: 0.6 ppm 15 minutes.

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2-Butoxyethanol	Grand-Duchy Regulation 2016. Chemical agents. Annex I (Luxembourg, 3/2021). Absorbed through skin. 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.
2-Butoxyethanol	EU OEL (Europe, 1/2022). Absorbed through skin. Notes: list of indicative occupational exposure limit values 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.
2-Butoxyethanol	Ministry of Social Affairs and Employment, Legal limit values (Netherlands, 12/2022). Absorbed through skin. 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.
2-Butoxyethanol	FOR-2011-12-06-1358 (Norway, 12/2022). Absorbed through skin. Notes: indicative limit value TWA: 10 ppm 8 hours. TWA: 50 mg/m <sup>3</sup> 8 hours.
Maleic anhydride	FOR-2011-12-06-1358 (Norway, 12/2022). Skin sensitiser. TWA: 0.2 ppm 8 hours. TWA: 0.8 mg/m <sup>3</sup> 8 hours.
2-Butoxyethanol	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. TWA: 98 mg/m <sup>3</sup> 8 hours. STEL: 200 mg/m <sup>3</sup> 15 minutes.
Maleic anhydride	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. TWA: 0.5 mg/m <sup>3</sup> 8 hours. STEL: 1 mg/m <sup>3</sup> 15 minutes.
2-Butoxyethanol	Portuguese Institute of Quality (Portugal, 11/2014). TWA: 20 ppm 8 hours.
Maleic anhydride	Portuguese Institute of Quality (Portugal, 11/2014). Skin sensitiser. TWA: 0.01 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction and vapor
Maleic anhydride	HG 1218/2006, Annex 1, with subsequent modifications and additions (Romania, 3/2021). VLA: 1 mg/m <sup>3</sup> 8 hours. VLA: 0.25 ppm 8 hours. Short term: 3 mg/m <sup>3</sup> 15 minutes. Short term: 0.75 ppm 15 minutes.
2-Butoxyethanol	Government regulation SR c. 355/2006 (Slovakia, 9/2020). Absorbed through skin. 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.
Maleic anhydride	Government regulation SR c. 355/2006 (Slovakia, 9/2020). Skin sensitiser. TWA: 0.41 mg/m <sup>3</sup> 8 hours. TWA: 0.1 ppm 8 hours.

## SECTION 8: Exposure controls/personal protection

2-Butoxyethanol	<p><b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021).</b></p> <p><b>Absorbed through skin.</b></p> <p>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.</p>
Maleic anhydride	<p><b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021).</b></p> <p>TWA: 0.41 mg/m<sup>3</sup> 8 hours. TWA: 0.1 ppm 8 hours. KTV: 0.41 mg/m<sup>3</sup>, 4 times per shift, 15 minutes. KTV: 0.1 ppm, 4 times per shift, 15 minutes.</p>
Maleic anhydride	<p><b>National institute of occupational safety and health (Spain, 4/2022). Skin sensitiser. Inhalation sensitiser.</b></p> <p>TWA: 0.1 ppm 8 hours. TWA: 0.4 mg/m<sup>3</sup> 8 hours.</p>
2-Butoxyethanol	<p><b>Work environment authority Regulation 2018:1 (Sweden, 9/2021). Absorbed through skin.</b></p> <p>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.</p>
Maleic anhydride	<p><b>Work environment authority Regulation 2018:1 (Sweden, 9/2021). Skin sensitiser.</b></p> <p>TWA: 0.05 ppm 8 hours. TWA: 0.2 mg/m<sup>3</sup> 8 hours. STEL: 0.1 ppm 15 minutes. STEL: 0.4 mg/m<sup>3</sup> 15 minutes.</p>
2-Butoxyethanol	<p><b>SUVA (Switzerland, 1/2023). Absorbed through skin.</b></p> <p>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.</p>
Maleic anhydride	<p><b>SUVA (Switzerland, 1/2023). Skin sensitiser.</b></p> <p>TWA: 0.1 ppm 8 hours. Form: vapour and aerosols TWA: 0.4 mg/m<sup>3</sup> 8 hours. Form: vapour and aerosols STEL: 0.1 ppm 15 minutes. Form: vapour and aerosols STEL: 0.4 mg/m<sup>3</sup> 15 minutes. Form: vapour and aerosols</p>
2-Butoxyethanol	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b></p> <p>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.</p>
2-ethylhexan-1-ol	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b></p> <p>TWA: 5.4 mg/m<sup>3</sup> 8 hours. TWA: 1 ppm 8 hours.</p>
Acrylic acid	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020).</b></p> <p>STEL: 59 mg/m<sup>3</sup> 1 minutes. STEL: 20 ppm 1 minutes. TWA: 29 mg/m<sup>3</sup> 8 hours. TWA: 10 ppm 8 hours.</p>
Maleic anhydride	<p><b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Inhalation sensitiser.</b></p> <p>STEL: 3 mg/m<sup>3</sup> 15 minutes. TWA: 1 mg/m<sup>3</sup> 8 hours.</p>

### Biological exposure indices

## SECTION 8: Exposure controls/personal protection

Product/ingredient name	Exposure indices
No exposure indices known.	<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.	
2-Butoxyethanol	
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.
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.	
2-Butoxyethanol	<b>NAOSH (Ireland, 1/2011)</b> 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	
No exposure indices known.	<b>Portuguese Institute of Quality (Portugal, 11/2014)</b> BEI: 200 mg/g creatinine, butoxyacetic acid (BAA) [in urine]. Sampling time: end of shift.
No exposure indices known.	

## SECTION 8: Exposure controls/personal protection

<p>2-Butoxyethanol</p> <p>No exposure indices known.</p> <p>No exposure indices known.</p> <p>2-Butoxyethanol</p> <p>2-Butoxyethanol</p>	<p><b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021)</b> 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.</p> <p><b>SUVA (Switzerland, 1/2023)</b> 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.</p> <p><b>EH40/2005 BMGVs (United Kingdom (UK), 8/2018)</b> BGV: 240 mmol/mol creatinine, butoxyacetic acid [in urine]. Sampling time: post shift.</p>
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**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	Type	Exposure	Value	Population	Effects
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	DNEL	Long term Inhalation	1.17 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Dermal	33 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	1.7 mg/kg bw/day	Workers	Systemic
(1-methyl-1,2-ethanediyl)bis[oxy (methyl-2,1-ethanediyl)] diacrylate	DNEL	Long term Inhalation	2.35 mg/m <sup>3</sup>	Workers	Systemic
	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
Dipropylenglycol diacrylate	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
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
	DNEL	Long term Dermal	1 mg/kg bw/day	Workers	Systemic
2-hydroxy-2-methylpropiophenone	DNEL	Long term Oral	0.4 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.5 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.9 mg/m <sup>3</sup>	General population	Systemic
Fatty acids, C14-18 and	DNEL	Long term Inhalation	3.5 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Oral	1.5 mg/kg	General	Systemic

## SECTION 8: Exposure controls/personal protection

C16-18-unsatd., maleated	DNEL	Long term Dermal	bw/day 1.5 mg/kg	population General population	Systemic
	DNEL	Long term Dermal	bw/day 3 mg/kg	Workers	Systemic
	DNEL	Long term Oral	bw/day 6.3 mg/kg	General population	Systemic
	DNEL	Short term Oral	bw/day 26.7 mg/kg	General population	Systemic
	DNEL	Long term Inhalation	bw/day 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
2-Butoxyethanol	DNEL	Long term Inhalation	0.081 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Inhalation	0.081 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Short term Inhalation	0.2 mg/m <sup>3</sup>	Workers	Local
	DNEL	Short term Inhalation	0.2 mg/m <sup>3</sup>	Workers	Systemic
	DNEL	Long term Inhalation	0.05 mg/m <sup>3</sup>	General population	Systemic
	DNEL	Long term Oral	0.06 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	0.08 mg/m <sup>3</sup>	General population	Local
	DNEL	Short term Oral	0.1 mg/kg bw/day	General population	Systemic
	DNEL	Short term Dermal	0.1 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.1 mg/kg bw/day	General population	Systemic
Maleic anhydride	DNEL	Short term Dermal	0.2 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Dermal	0.2 mg/kg bw/day	Workers	Systemic

### PNECs

No PNECs available

## 8.2 Exposure controls

### Appropriate engineering controls

: Use only with adequate ventilation. 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.



## SECTION 8: Exposure controls/personal protection

- 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.
- 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** : Clear.
- Odour** : Slight
- Odour threshold** : Not available.
- Melting point/freezing point** : Not available.
- Initial boiling point and boiling range** :

Ingredient name	°C	°F	Method
(1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] diacrylate	>120	>248	OECD 103
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	>391	>735.8	

- 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** :

## SECTION 9: Physical and chemical properties

Ingredient name	°C	°F	Method
Dipropylenglycol diacrylate	240	464	DIN 51794
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	465	869	EU A.15

**Decomposition temperature** : Not available.

**pH** : Not applicable.

**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
2-hydroxy-2-methylpropiophenone	0.00428	0.00057	OECD 104	0.09751	0.013	OECD 104
Dipropylenglycol diacrylate	0.00064	0.000085	OECD 104			

**Relative density** : Not available.

**Density** : 1.3 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

## SECTION 11: Toxicological information

Product/ingredient name	Result	Species	Dose	Exposure
(1-methyl-1,2-ethanediyl)bis [oxy(methyl-2,1-ethanediyl)] diacrylate	LD50 Oral	Rat	6200 mg/kg	-
Dipropylenglycol diacrylate	LD50 Oral	Rat	4600 mg/kg	-
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	LD50 Dermal	Rabbit	>13 g/kg	-
2-hydroxy-2-methylpropiophenone	LD50 Dermal	Rat	6929 mg/kg	-
Maleic anhydride	LD50 Oral	Rat	1694 mg/kg	-
	LD50 Dermal	Rabbit	2620 mg/kg	-
	LD50 Oral	Rat	400 mg/kg	-

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

### Acute toxicity estimates

Route	ATE value
Oral	86419.93 mg/kg
Inhalation (vapours)	1249.88 mg/l

### Irritation/Corrosion

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

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

### Sensitisation

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

### Mutagenicity

**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)

## SECTION 11: Toxicological information

Product/ingredient name	Category	Route of exposure	Target organs
Maleic anhydride	Category 1	inhalation	respiratory system

### Aspiration hazard

Not available.

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

### Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : May cause respiratory irritation.
- 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** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing
- 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

Product/ingredient name	Result	Species	Exposure
2-Butoxyethanol	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
	Acute LC50 1250000 µg/l Marine water	Fish - <i>Menidia beryllina</i>	96 hours
Maleic anhydride	Acute LC50 230000 µg/l Fresh water	Fish - <i>Gambusia affinis</i> - Adult	96 hours

**Conclusion/Summary** : 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

### 12.3 Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, esters with acrylic acid	1.6 to 3	-	Low
(1-methyl-1,2-ethanediyl)bis [oxy(methyl-2,1-ethanediyl)] diacrylate	2	-	Low
Dipropylenglycol diacrylate	0.01 to 0.39	-	Low
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	2.89	-	Low
2-hydroxy-2-methylpropiophenone	1.62	-	Low
2-Butoxyethanol	0.81	-	Low
Maleic anhydride	-2.78	-	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.

### 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.

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

**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.

**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.



## SECTION 14: Transport information

**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 SEALER 1453-02	≥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
E2

National regulations

Austria

**VbF class** : Not regulated.

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

Czech Republic

**Storage code** : IV

Denmark

## SECTION 15: Regulatory information

**Danish fire class** : IV-1

**MAL-code** : 0-5

**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: 0-5

**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.

**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

## SECTION 15: Regulatory information

### Finland

### France

**Social Security Code, Articles L 461-1 to L 461-7** : 1-methyl-1,2-ethanediyl]bis[oxy(methyl-2,1-ethanediyl)] diacrylate RG 84  
2-Butoxyethanol RG 84  
Maleic anhydride RG 66

**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
E2	1.3.2

**Hazard class for water** : 2

**Technical instruction on air quality control** : 1A-Luft Number 5.2.5: 66.7%

**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(2) Toxic for aquatic organisms, may have long-term hazardous effects in aquatic environment. Decontamination effort: A

### Norway

### Sweden

### Switzerland

**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
STOT SE 3, H335	Calculation method
Aquatic Chronic 2, H411	Calculation method

### Full text of abbreviated H statements

H302	Harmful if swallowed.
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.
H331	Toxic if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H372	Causes damage to organs through prolonged or repeated exposure.
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]

Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
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
Resp. Sens. 1	RESPIRATORY SENSITISATION - Category 1
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1A	SKIN SENSITISATION - Category 1A
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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### Notice to reader

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UVILUX SEALER 1453-02 - HY 0020 CLEAR

Label No : 50818

## SECTION 16: Other information

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.

