

## SAFETY DATA SHEET

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

**1.1. Product identifier:**

**Bond**

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

Adhesive for professional use. For industrial and professional use.

Quantity: 3 ml, 40 ml

**1.3. Details of the supplier of the safety data sheet:**

Information about the manufacturer:

**Invicon Chemical Solutions GmbH**

Schweizerstrasse 96

A-6830 Rankweil

Tel: +43-(0)5522-45301

E-mail: office@invicon.at

**1.3.1. Responsible person:**

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E-mail:

office@invicon.at

**1.4. Emergency telephone number:**

+43-(0)5522-45301 (during business hours)

### SECTION 2: HAZARDS IDENTIFICATION

**2.1. Classification of the substance or mixture:**

Classification according to Regulation (EC) No 1272/2008 (CLP):

Skin corrosion/irritation, Hazard Category 2 – H315

Serious eye damage/eye irritation, Hazard Category 2 – H319

Sensitisation - Skin, hazard category 1A – H317

Hazardous to the aquatic environment – Chronic Hazard, Category 2 – H411

**Hazard statements:**

**H315** – Causes skin irritation.

**H317** – May cause an allergic skin reaction.

**H319** – Causes serious eye irritation.

**H411** – Toxic to aquatic life with long lasting effects.

**2.2. Label elements:**

Components that define the hazards: 1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with oxirane, 4-(dimethylamino)-benzoate; Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate; Propylidyne-trimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine; (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate; 2-Ethyl-2-[[1-(1-oxoallyl)oxy]-methyl]-1,3-propanediyl diacrylate; 7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl bismethacrylate

GHS07



GHS09



WARNING

**Hazard statements:**

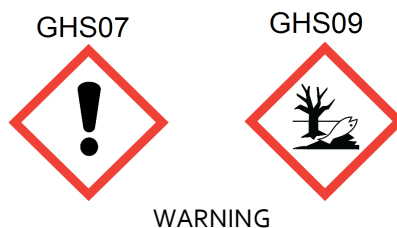
**H315** – Causes skin irritation.  
**H317** – May cause an allergic skin reaction.  
**H319** – Causes serious eye irritation.  
**H411** – Toxic to aquatic life with long lasting effects.

**Precautionary statements:**

**P264** – Wash hands thoroughly after handling.  
**P273** – Avoid release to the environment.  
**P280** – Wear protective gloves/eye protection/face protection.  
**P302 + P352** – IF ON SKIN: Wash with plenty of water.  
**P333 + P313** – If skin irritation or rash occurs: Get medical advice/ attention.  
**P305 + P351 + P338** – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
**P337 + P313** – If eye irritation persists: Get medical advice/ attention.  
**P501** – Dispose of contents/container in accordance with local/national regulations.

Labelling of packages where the contents do not exceed 125 ml

Components that define the hazards: 1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with oxirane, 4-(dimethylamino)-benzoate; Ethyl phenyl(2,4,6-trimethylbenzoyl)phosphinate; Propylidyne-trimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine; (5-Ethyl-1,3-dioxan-5-yl)methyl acrylate; 2-Ethyl-2-[[1-(oxoallyl)oxy]-methyl]-1,3-propanediyl diacrylate; 7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxa-5,12-diazahexadecane-1,16-diyl bismethacrylate



**Hazard statements:**

**H317** – May cause an allergic skin reaction.

**Precautionary statements:**

**P280** – Wear protective gloves/eye protection/face protection.  
**P302 + P352** – IF ON SKIN: Wash with plenty of water.  
**P333 + P313** – If skin irritation or rash occurs: Get medical advice/ attention.

**2.3. Other hazards:**

The product has no other known specific hazards for human or environment.

Results of PBT and vPvB assessment: Based on available data, the product does not contain ingredients that meet the criteria for PBT or vPvB substances.

Other information:

**2-(2H-Benzotriazol-2-yl)-p-cresol** (CAS: 2440-22-4) - Under assessment as Persistent, Bioaccumulative and Toxic  
Endocrine disrupting property: Based on available data, does not contain endocrine disruptors.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. **Substances:**  
 Not applicable.

3.2. **Mixtures:**

Description	CAS number	EC number / ECHA list number	REACH registration number	Conc. (%)	Classification according to Regulation (EC) No 1272/2008 (CLP)		
					Pictogram, signal word code(s)	Hazard class and category code(s)	Hazard statement code(s)
1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with oxirane, 4-(dimethylamino)-benzoate*	2067275-86-7	862-976-1	-	0.1 – 1	GHS07 Warning	Skin Sens. 1B Aquatic Chronic 4	H317 H413
2-(2H-Benzotriazol-2-yl)-p-cresol*	2440-22-4	219-470-5	-	0.01 – 0.1	GHS07 GHS09 Warning	Skin Sens. 1B Aquatic Chronic 1	H317 H410
Ethyl phenyl(2,4,6-trimethylbenzoyl)-phosphinate*	84434-11-7	282-810-6	01-2119987994-10	0.1 – 2	GHS07 GHS09 Warning	Skin Sens. 1B Aquatic Chronic 2	H317 H411
Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate*	7534-94-3	231-403-1	01-2119886505-27	10 – 20	GHS07 Warning	Skin Irrit. 2 Eye Irrit. 2 STOT SE 3 Aquatic Chronic 3	H315 H319 H335 H412
Pentaerythritol, ethoxylated, esters with acrylic acid*	51728-26-8	500-111-9	01-2119969962-19	5 – 10	GHS07 GHS09 Warning	Skin Irrit. 2 Eye Irrit. 2 Aquatic Chronic 2	H315 H319 H411
Propylidene-trimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine*	159034-91-0	500-425-6	01-2119976593-23	2 – 7.5	GHS07 Warning	Skin Sens. 1A Eye Irrit. 2	H317 H319
Aliphatic Urethane Methacrylate*	82339-26-2	817-894-0	-	20 – 30	GHS07 Warning	Skin Irrit. 2 Eye Irrit. 2	H315 H319
(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate*	66492-51-1	266-380-7	01-2119976303-36	5 – 20	GHS07 GHS09 Warning	Skin Irrit. 2 Skin Sens. 1 Aquatic Chronic 2	H315 H317 H411
2-Ethyl-2-[[[(1-oxoallyl)oxy]-methyl]-1,3-propanediyl diacrylate Index number: 607-111-00-9	15625-89-5	239-701-3	01-2119489896-11	0.1 – 1	GHS08 GHS07 GHS09 Warning	Carc. 2 Skin Irrit. 2 Eye Irrit. 2 Skin Sens. 1 Aquatic Acute 1 M = 1 Aquatic Chronic 1 M = 1	H351 H315 H319 H317 H400 H410
7,7,9(or 7,9,9)-trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl-bismethacrylate*	72869-86-4	276-957-5	01-2120751202-68	10 – 20	GHS07 GHS09 Warning	Skin Sens. 1B Aquatic Chronic 2	H317 H411

\*: Classification specified by the manufacturer; the substance is not listed in Annex VI of the Regulation (EC) No 1272/2008.

It does not contain any other substance considered to be hazardous to health or to the environment, which is classified as a PBT or vPvB substance, which has a workplace exposure limit value, or its concentration does not reach the level specified in the relevant legislation and therefore it does not need to be included in the safety data sheet.

For the full text of hazard statements, see Section 16.

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of first aid measures:

**General information:** Remove contaminated and soaked clothing immediately and dispose of it safely.

#### INGESTION:

Measures:

- Rinse mouth with water.
- Give the victim plenty of water to drink.
- Obtain immediate medical attention.

#### INHALATION:

Measures:

- Take the victim into fresh air, loosen his clothes and let him rest.
- In case of complaints, obtain medical help.

#### SKIN CONTACT:

Measures:

- Wash the skin with plenty of water and soap.
- If skin irritation or rash occurs: Get medical advice/attention.

#### EYE CONTACT:

Measures:

- In case of contact with eyes flush with water holding eyelids apart and moving the eyeballs.
- If eye irritation persists, consult a specialist.

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

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

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

No special treatment needed; treat symptomatically.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing media:

#### 5.1.1. Suitable extinguishing media:

Water fog, foam, dry chemical, carbon dioxide.

Choose extinguishing media depending on surrounding fire.

#### 5.1.2. Unsuitable extinguishing media:

No unsuitable extinguishing media known.

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

The formation of dangerous decomposition products greatly depends on the circumstances of the combustion. A complex mixture of airborne solid, liquid and gas substances may occur, such as carbon monoxide, carbon dioxide and unidentified compounds.

The inhalation of such combustion products can have serious adverse effects on health.

### 5.3. Advice for firefighters:

Wear full protective clothing and self-contained breathing apparatus.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

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

#### 6.1.1. For non-emergency personnel:

Allow only well-trained experts wearing suitable protective clothing to abide in the field of accident.

#### 6.1.2. For emergency responders:

Avoid contact with skin, eyes and clothing.  
 Wear appropriate personal protective equipment.

**6.2. Environmental precautions:**

Dispose of the spillage and the resulting waste according to the applicable environmental regulations. Do not allow the product and the resulting waste to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.

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

Collect the spilled product with absorbent (sawdust, diatomaceous earth, universal binder), then place into a suitable, closed, properly labelled chemical waste container for removal/disposal.

Dispose of the collected waste as described in Section 13.

**6.4. Reference to other sections:**

For further and detailed information see Sections 8 and 13.

## SECTION 7: HANDLING AND STORAGE

**7.1. Precautions for safe handling:**

Observe conventional hygiene precautions.  
 Avoid contact with skin, eyes and clothing.  
 Do not eat, drink, or smoke when using this product.  
 Wash hands thoroughly after the use of this product.  
 Take off contaminated clothing and wash it before reuse.  
 Avoid release to the environment.  
 Observe the pertinent regulations on industrial safety and basic hygiene rules.

**Technical measures:**

No special measures required.

**Precautions against fire and explosion:**

General measures of preventive fire protection.

**7.2. Conditions for safe storage, including any incompatibilities:**

**Technical measures and storage condition:**

Keep in the original, closed and appropriately labelled container.  
 Opened containers should be carefully closed and stored in a vertical position to avoid any leakage.  
 Keep away from food, drink and animal feed.

**Storage temperature:** Store at room temperature.

**Incompatible materials:** See Section 10.5.

**Packaging material:** No special prescriptions.

**7.3. Specific end use(s):**

No specific instructions available.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1. Control parameters:**

**Occupational exposure limit values** (Commission Directive (EC) No 2000/39 of 8 June 2000):

The components of the mixture are not regulated with exposure limit value.

**Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate (CAS: 7534-94-3):**

DNEL values		Oral exposure		Dermal exposure		Inhalative exposure	
		Short term (acute)	Long term (chronic)	Short term (acute)	Long term (chronic)	Short term (acute)	Long term (chronic)
Consumer	Local	no data	no data	no data	no data	no data	no data
	Systemic	no data	no data	no data	0.625 mg/kg	no data	no data
Worker	Local	no data	no data	no data	no data	no data	no data
	Systemic	no data	no data	no data	1.04 mg/kg	no data	no data

**PNEC values**

Compartment	Value	Note(s)
Freshwater	4.66 µg/l	no notes
Marine water	0.466 µg/l	no notes
Freshwater sediment	0.604 mg/kg dw	no notes

Marine water sediment	0.06 mg/kg dw	no notes
Sewage Treatment Plant (STP)	2.45 mg/l	no notes
Intermittent release	17.9 µg/l	no notes
Secondary poisoning	no data	no notes
Soil	0.118 mg/kg dw	no notes

**(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate (CAS: 66492-51-1):**

PNEC values		
Compartment	Value	Note(s)
Freshwater	4 µg/l	no notes
Marine water	19 µg/l	no notes
Freshwater sediment	2 µg/kg	no notes
Marine water sediment	no data	no notes
Sewage Treatment Plant (STP)	30 mg/l	no notes
Intermittent release	no data	no notes
Secondary poisoning	no data	no notes
Soil	1 µg/kg	no notes

**7,7,9 (or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl-bismethacrylate (CAS: 72869-86-4):**

DNEL values	
Oral	0.3 mg/kg bw/day
Dermal	0.7 mg/kg bw/day
Inhalation	0.6 mg/m <sup>3</sup>

PNEC values		
Compartment	Value	Note(s)
Freshwater	0.01 mg/l	no notes
Marine water	0.001 mg/l	no notes
Freshwater sediment	4.56 mg/kg	no notes
Marine water sediment	0.46 mg/kg	no notes
Sewage Treatment Plant (STP)	3.61 mg/l	no notes
Intermittent release	no data	no notes
Secondary poisoning	no data	no notes
Soil	0.91 mg/kg	no notes

**8.2. Exposure controls:**

In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

**8.2.1. Appropriate engineering controls:**

In pursuance of work is proper foresight needed to avoid leaking onto clothes and floors and to avoid contact with eyes and skin.

**8.2.2. Individual protection measures, such as personal protective equipment:**

Observe the general safety regulations when handling chemicals.

Contact with eyes, skin and clothing should be avoided.

Do not eat, drink, or smoke when using this product.

Wash hands and/or face before breaks and immediately after handling the product.

Observe the pertinent regulations on industrial safety and basic hygiene rules.

The information regarding personal protective equipment is only for informative purposes. A complete risk assessment is required before the use of the product for the determination of the appropriate personal protective equipment, taking local circumstances into account.

1. **Eye/face protection:** Use appropriate protective glasses (EN ISO 16321-1:2022; EN 166).

2. **Skin protection:**

a. **Hand protection:** Use appropriate protective gloves (EN 374).

For short-term contact or if splashes may occur: Recommended minimum protection index 2, penetration time > 30 minutes, nitrile rubber (NBR), thickness ≥ 0.4 mm.

For direct and prolonged contact: Recommended protection index 6, penetration time > 480 minutes, nitrile rubber (NBR), thickness  $\geq 0.4$  mm.

The glove material should be impermeable and resistant to the product.

Select glove material based on the penetration time, rates of diffusion and degradation.

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which may vary from manufacturer to manufacturer.

As the product is a mixture of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked before use.

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

b. **Other:** Use appropriate protective clothing.

3. **Respiratory protection:** In case of normal condition of use and adequate ventilation, not required.

4. **Thermal hazards:** No thermal hazards known.

#### 8.2.3. Environmental exposure controls:

Avoid release to the environment.

The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions, an expert's advice is necessary before deciding upon further protective measures.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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

Parameter	Value / Test method / Remarks
1. Physical state	liquid
2. Colour	clear and colourless
3. Odour, odour threshold	specific
4. Melting point/freezing point	no data*
5. Boiling point or initial boiling point and boiling range	no data*
6. Flammability	not flammable
7. Lower and upper explosion limit	no data*
8. Flash point	no data*
9. Auto-ignition temperature	no data*
10. Decomposition temperature	no data*
11. pH	no data*
12. Kinematic viscosity	no data*
13. Solubility in water	no data*
in other solvents	no data*
14. Partition coefficient n-octanol/water (log value)	no data*
15. Vapour pressure	no data*
16. Density and/or relative density	no data*
17. Relative vapour density	no data*
18. Particle characteristics	no data*

### 9.2. Other information:

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

No further data available or not applicable for the product.

#### 9.2.2. Other safety characteristics:

No other characteristics available.

\*: The manufacturer did not carry out any tests on this parameter for the product or the results of the tests are not available at the time of publication of the data sheet, or the property is not applicable for the product.

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity:

No reactivity known.

- 10.2. **Chemical stability:**  
Stable within normal temperature and under general work conditions.
- 10.3. **Possibility of hazardous reactions:**  
No hazardous reactions known.
- 10.4. **Conditions to avoid:**  
No conditions to avoid known.
- 10.5. **Incompatible materials:**  
No incompatible materials known.
- 10.6. **Hazardous decomposition products:**  
No hazardous decomposition products known.

## SECTION 11: TOXICOLOGICAL INFORMATION

- 11.1. **Information on hazard classes as defined in Regulation (EC) No 1272/2008:**  
**Acute toxicity:** Based on available data, the classification criteria are not met.  
**Skin corrosion/irritation:** Causes skin irritation.  
**Serious eye damage/irritation:** Causes serious eye irritation.  
**Respiratory or skin sensitisation:** May cause an allergic skin reaction.  
**Germ cell mutagenicity:** Based on available data, the classification criteria are not met.  
**Carcinogenicity:** Based on available data, the classification criteria are not met.  
**Reproductive toxicity:** Based on available data, the classification criteria are not met.  
**STOT-single exposure:** Based on available data, the classification criteria are not met.  
**STOT-repeated exposure:** Based on available data, the classification criteria are not met.  
**Aspiration hazard:** Based on available data, the classification criteria are not met.
- 11.1.1. **Summaries of the information derived from the test conducted:**  
No data available.
- 11.1.2. **Relevant toxicological properties:**  
No data available about the product.  
Information about the components:
- Acute toxicity:**  
**1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with oxirane, 4-(dimethylamino)-benzoate** (CAS: 2067275-86-7):  
LD<sub>50</sub> (dermal, rat): >2000 mg/kg bw/24 h (OECD 402)  
LD<sub>50</sub> (oral, rat): >2000 mg/kg bw (OECD 423)  
**2-(2H-Benzotriazol-2-yl)-p-cresol** (CAS: 2440-22-4):  
LD<sub>50</sub> (oral, rat): >10,000 mg/l (OECD 423)  
LC<sub>50</sub> (inhalation, rat): >0.59 mg/l/4 h (OECD 403)  
LD<sub>50</sub> (dermal, rat): >2000 mg/kg (OECD 402)  
**Ethyl phenyl(2,4,6-trimethylbenzoyl) phosphinate** (CAS: 84434-11-7):  
LD<sub>50</sub> (oral, rat): >5000 mg/kg  
LD<sub>50</sub> (dermal, rat): >2000 mg/kg  
**Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate** (CAS: 7534-94-3):  
LD<sub>50</sub> (oral, rat): 3100 – 6700 mg/l  
LD<sub>50</sub> (dermal, rabbit): >3000 mg/kg  
**Pentaerythritol, ethoxylated, esters with acrylic acid** (CAS: 51728-26-8):  
LD<sub>50</sub> (oral, rat): >2000 mg/kg bw (OECD 423)  
LD<sub>50</sub> (dermal, rat): >2000 mg/kg bw/24 h (OECD 402)  
**Propylidyne-trimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine** (CAS: 159034-91-0):  
LD<sub>50</sub> (dermal, rat): >2000 mg/kg bw/24 h (OECD 402)  
LD<sub>50</sub> (oral, rat): >2000 mg/kg bw (OECD 423)  
**(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate** (CAS: 66492-51-1):  
LD<sub>50</sub> (oral, rat): 2001 mg/kg  
LD<sub>50</sub> (dermal, rat): 2001 mg/kg  
**2-Ethyl-2-[[1-(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate** (CAS: 15625-89-5):  
LD<sub>50</sub> (oral, rat): >5000 mg/kg  
LD<sub>50</sub> (dermal, rabbit): >5000 mg/kg/24 h
- 7,7,9 (or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl-bismethacrylate** (CAS: 72869-86-4):  
LD<sub>50</sub> (oral, rat): > 5000 mg/kg (OECD 401)  
LD<sub>50</sub> (dermal, rat, 24 hours): > 2000 mg/kg (OECD 402)

**Skin corrosion/irritation:**

**1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with oxirane, 4- (dimethylamino)-benzoate (CAS: 2067275-86-7):**

Non-irritant (rabbit, 0.5 g/4 h, OECD 404)

**2-(2H-Benzotriazol-2-yl)-p-cresol (CAS: 2440-22-4):**

Non-irritant (rabbit, OPP 81-5 (EPA-Guideline))

**Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate (CAS: 7534-94-3):**

In animals: Mild skin irritation (OECD 404)

**Pentaerythritol, ethoxylated, esters with acrylic acid (CAS: 51728-26-8):**

Irritant (in vitro, EPISKIN™, OECD 439)

**Propylidyne-trimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine (CAS: 159034-91-0):**

Mild skin irritant (rabbit, 0.5 ml/24 h, US Federal Register 1973, Vol.38, No.187, Section 1500:41)

**Aliphatic Urethane Methacrylate (CAS: 82339-26-2):**

Irritating to the skin.

**(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate (CAS: 66492-51-1):**

Irritating (rabbit, 0.5 ml/4 hours, OECD 404)

**2-Ethyl-2-[[1-(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate (CAS: 15625-89-5):**

Irritating (rabbit, 0.5 ml/4 hours, OECD 404)

#### Serious eye damage/irritation:

**1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with oxirane, 4- (dimethylamino)-benzoate (CAS: 2067275-86-7):**

Non-irritant (ex vivo, 0.003 ml, OECD 438)

**2-(2H-Benzotriazol-2-yl)-p-cresol (CAS: 2440-22-4):**

Non-irritant (rabbit, OECD 405)

**Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate (CAS: 7534-94-3):**

Not irritating to the eyes.

**Pentaerythritol, ethoxylated, esters with acrylic acid (CAS: 51728-26-8):**

Irritant (rabbit, 0.1 ml/24 h, OECD 405)

**Propylidyne-trimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine (CAS: 159034-91-0):**

Irritant (rabbit, 0.1 ml/24 h, OECD 405)

**Aliphatic Urethane Methacrylate (CAS: 82339-26-2):**

Irritating to the eyes.

**(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate (CAS: 66492-51-1):**

Irritating (rabbit, OECD 405)

**2-Ethyl-2-[[1-(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate (CAS: 15625-89-5):**

Irritating (rabbit, 0.1 ml)

#### Skin sensitisation:

**1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with oxirane, 4- (dimethylamino)-benzoate (CAS: 2067275-86-7):**

May cause sensitisation by skin contact (mouse, OECD 429)

**2-(2H-Benzotriazol-2-yl)-p-cresol (CAS: 2440-22-4):**

Guinea pig maximization test guinea pig: skin sensitizing (OECD Guideline 406)

**Ethyl phenyl(2,4,6-trimethylbenzoyl) phosphinate (CAS: 84434-11-7):**

Rabbit, skin: Sensitizing (OECD 429: Skin Sensitisation: Local Lymph Node Assay)

**Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate (CAS: 7534-94-3):**

No sensitisation by skin contact

In animals: No skin allergy was observed (OECD 406, Guinea pig)

**Pentaerythritol, ethoxylated, esters with acrylic acid (CAS: 51728-26-8):**

Not a skin sensitizer (guinea pig, OECD 406)

**Propylidyne-trimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine (CAS: 159034-91-0):**

Sensitising (mouse, OECD 429)

**Aliphatic Urethane Methacrylate (CAS: 82339-26-2):**

Sensitisation through skin contact possible.

**(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate (CAS: 66492-51-1):**

Sensitizer (mouse, OECD 429)

**2-Ethyl-2-[[1-(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate (CAS: 15625-89-5):**

Sensitizer (human, analogy)

**7,7,9 (or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazaheptadecane-1,16-diyl-bismethacrylate (CAS: 72869-86-4):**

OECD 429 (Local lymph node test) (dermal, rabbit): Sensitizing.

#### Germ cell mutagenicity:

**1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with oxirane, 4- (dimethylamino)-benzoate (CAS: 2067275-86-7):**

Not mutagenic (in vitro, OECD 476)

Mutagenic (in vitro, OECD 473)

Not mutagenic (in vitro, OECD 471)

**2-(2H-Benzotriazol-2-yl)-p-cresol (CAS: 2440-22-4):**

Mutagenicity tests revealed no genotoxic potential.

**Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate** (CAS: 7534-94-3):

Ames test in vitro: No effect (OECD 471)

Chromosome aberration test in vitro: No effect (OECD 473)

- In vitro mutation tests with mammalian cells: No effect (OECD 476)

**Pentaerythritol, ethoxylated, esters with acrylic acid** (CAS: 51728-26-8):

Not mutagenic (in vitro, OECD 471)

Not mutagenic (mouse, OECD 474)

**Propylidyne-trimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine** (CAS: 159034-91-0):

Mutagenic (in vitro, OECD 476)

Mutagenic (in vitro, OECD 471)

Not mutagenic (in vitro, OECD 487)

Not mutagenic (rat, OECD 489)

#### **Carcinogenicity:**

**2-(2H-Benzotriazol-2-yl)-p-cresol** (CAS: 2440-22-4):

In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed.

#### **Reproductive toxicity:**

**2-(2H-Benzotriazol-2-yl)-p-cresol** (CAS: 2440-22-4):

Repeated oral uptake of the substance did not cause damage to the reproductive organs.

In animal studies the substance did not cause malformations.

**Ethyl phenyl(2,4,6-trimethylbenzoyl) phosphinate** (CAS: 84434-11-7):

NOAEL (oral, rat): 300 mg/kg bw/day (OECD 414: Prenatal Developmental Toxicity Study)

**Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate** (CAS: 7534-94-3):

No toxic effects on fertility

NOAEL (parental toxicity): 25 mg/kg bw/day

NOAEL (fertility): 500 mg/kg bw/day

(Method: OECD Test Guideline 421, Rat, Oral)

**Pentaerythritol, ethoxylated, esters with acrylic acid** (CAS: 51728-26-8):

NOAEL (oral, rat): 200 mg/kg bw/day (max. 47 days, OECD 422)

NOAEL (oral, rabbit): 75 mg/kg bw/day (29 days, OECD 414)

**Propylidyne-trimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine** (CAS: 159034-91-0):

NOAEL (oral, rat): 300 mg/kg bw/day (max. 47 days, OECD 421)

NOAEL (oral, rat): 600 mg/kg bw/day (max. 47 days, OECD 421)

**7,7,9 (or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl-bismethacrylate** (CAS: 72869-86-4):

NOAEL (oral, rat, 64 days): 300 mg/kg bw/day (OECD 422, Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test)

#### **11.1.3. Information on likely routes of exposure:**

Ingestion, inhalation, skin contact, eye contact.

#### **11.1.4. Symptoms related to the physical, chemical and toxicological characteristics:**

No data available.

#### **11.1.5. Delayed and immediate effects as well as chronic effects from short and long-term exposure:**

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

#### **11.1.6. Interactive effects:**

No data available.

#### **11.1.7. Absence of specific data:**

No information.

#### **11.2. Information on other hazards:**

##### **Endocrine disrupting properties:**

Endocrine disrupting property: Based on available data, does not contain endocrine disruptors.

##### **Other information:**

There are no toxicological tests available for this product. Classification is based on the properties of relevant components.

## **SECTION 12: ECOLOGICAL INFORMATION**

#### **12.1. Toxicity:**

Toxic to aquatic life with long lasting effects.

Information about the components:

**2-(2H-Benzotriazol-2-yl)-p-cresol** (CAS: 2440-22-4):

LC50 (Oncorhynchus mykiss): &gt;0.17 mg/l/96 h (OECD 203)

EC50 (Daphnia magna): &gt;1000 mg/l/24 h (OECD 202)

EC50 (Desmodesmus subspicatus): &gt;100 mg/l/72 h (Directive 88/302/EEC, part C, p. 89)

NOEC (Desmodesmus subspicatus): 33 mg/l/72 h (OECD 201)

EC20 (activated sludge): &gt;100 mg/l/3 h (OECD 209)

NOEC (Daphnia magna): 0.013 mg/l/21 d (OECD 211)

**Ethyl phenyl(2,4,6-trimethylbenzoyl) phosphinate** (CAS: 84434-11-7):

EC50 (algae/aquatic plant): 1.01 mg/l/72 h (OECD 201)

LC50 (fish, Danio rerio): 1.89 mg/l/96h

LC50 (crustaceans): 2.26 mg/l/48h (OECD 202)

**Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate** (CAS: 7534-94-3):

LC50 (Danio rerio): 1.79 mg/l/96 h (OECD 203)

ErC50 (Pseudokirchneriella subcapitata): 2.28 mg/l/72 h (OECD 201)

NOEC (Daphnia magna): 0.233 mg/l/21 days (OECD 211)

ErC10 (Pseudokirchneriella subcapitata): 0.751 mg/l/72 h (OECD 201)

**Pentaerythritol, ethoxylated, esters with acrylic acid** (CAS: 51728-26-8):

EC50 (algae/aquatic plants): &gt;100 mg/l/72 h (OECD 201)

LC50 (Danio rerio): 1.76 mg/l/96 h (OECD 203)

EC50 (microorganisms): &gt;100 mg/l (OECD 209)

EC50 (crustacea): &gt;90.94 mg/l/48 h (OECD 202)

**Propylidyne-trimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine** (CAS: 159034-91-0):

EC50 (algae/aquatic plants): 47 mg/l/72 h (OECD 201)

LC50 (fish): &gt;100 mg/l/96 h (OECD 203)

EC50 (microorganisms): &gt;100 mg/l/3 h (OECD 209)

EC50 (microorganisms): 22 mg/l/3 h (OECD 209)

EC50 (crustacea): &gt;100 mg/l/48 h (OECD 202)

**(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate** (CAS: 66492-51-1):

EC50 (algae/aquatic plants): 34 mg/l/72 (OECD 201)

LC50 (Oncorhynchus mykiss): 4 mg/l/96 h

EC50 (crustacea): 20 mg/l/48 h (OECD 202)

**2-Ethyl-2-[[[1-oxoallyl]oxy]methyl]-1,3-propanediyl diacrylate** (CAS: 15625-89-5):

EC50 (algae/aquatic plants): 4.9 mg/l/72 (OECD 201)

LC50 (fish): 1.47 mg/l/96 h (OECD 203)

EC50 (microorganisms): 625 mg/l (OECD 209)

EC50 (crustacea): 19.9 mg/l/48 h (OECD 202)

**7,7,9 (or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl-bismethacrylate** (CAS: 72869-86-4):

EC50 (algae): &gt; 0.68 mg/l/72h (OECD 201, Freshwater Alga and Cyanobacteria, Growth Inhibition Test)

EC50 (Daphnia magna): &gt; 1.2 mg/l/48h (OECD 202, Daphnia sp. Acute Immobilisation Test)

EC50 (fish): 10.1 mg/l/96h (OECD 203, Fish, Acute Toxicity Test)

**12.2. Persistence and degradability:**

Information about the components:

**1,3-Propanediol, 2-ethyl-2-(hydroxymethyl)-, polymer with oxirane, 4-(dimethylamino)-benzoate** (CAS: 2067275-86-7):

Not readily biodegradable.

5.1 % / 28 days (OECD 301 B)

**2-(2H-Benzotriazol-2-yl)-p-cresol** (CAS: 2440-22-4):

Poorly biodegradable.

0 % / 28 days (OECD 301B; ISO 9439; 92/69/EEC, C.4-C)

**Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate** (CAS: 7534-94-3):

Readily biodegradable: 70 % / 28 days (OECD 310)

**Pentaerythritol, ethoxylated, esters with acrylic acid** (CAS: 51728-26-8):

27 % / 28 day (OECD 301F). Not readily biodegradable.

**Propylidyne-trimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine** (CAS: 159034-91-0):

6 % / 28 day (OECD 301D). Not readily biodegradable.

**7,7,9 (or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl-bismethacrylate** (CAS: 72869-86-4):

Not easily biodegradable.

**12.3. Bioaccumulative potential:**

No data available about the product.

Information about the components:

**2-(2H-Benzotriazol-2-yl)-p-cresol** (CAS: 2440-22-4):

May be accumulated in organisms.

BCF (Cyprinus carpio): 548 – 895 (70 days) (OECD 305 C)

BCF (Cyprinus carpio): 44 – 220 (56 days) (OECD 305 C)

**Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate** (CAS: 7534-94-3):

Low potential for bioaccumulation

Partition coefficient: n-octanol/water: log Kow: 5.09 (OECD 117)

**Pentaerythritol, ethoxylated, esters with acrylic acid** (CAS: 51728-26-8):

log Pow: 2.29

**Propylidyne-trimethanol, ethoxylated, esters with acrylic acid, reaction products with diethylamine** (CAS: 159034-91-0):

log Pow: 1.86

**(5-Ethyl-1,3-dioxan-5-yl)methyl acrylate** (CAS: 66492-51-1):

Partition coefficient: 1.9

**2-Ethyl-2-[[[(1-oxoallyl)oxy]methyl]-1,3-propanediyl diacrylate** (CAS: 15625-89-5):

Partition coefficient: 4.35

**7,7,9 (or 7,9,9)-Trimethyl-4,13-dioxo-3,14-dioxo-5,12-diazahexadecane-1,16-diyl-bismethacrylate** (CAS: 72869-86-4):

Partition coefficient: 3.39

#### 12.4. **Mobility in soil:**

Information about the components:

**2-(2H-Benzotriazol-2-yl)-p-cresol** (CAS: 2440-22-4):

Volatility: The substance will not evaporate into the atmosphere from the water surface.

Adsorption in soil: Adsorption to solid soil phase is expected.

**Exo-1,7,7-trimethylbicyclo[2.2.1]hept-2-yl methacrylate** (CAS: 7534-94-3):

Vapour pressure: 0.075 hPa, 20 °C, (OECD 104)

Absorption/ Desorption: log Koc: 3.71 (OECD 121)

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

Based on available data, the product does not contain ingredients that meet the criteria for PBT or vPvB substances.

Other information:

**2-(2H-Benzotriazol-2-yl)-p-cresol** (CAS: 2440-22-4) - Under assessment as Persistent, Bioaccumulative and Toxic

#### 12.6. **Endocrine disrupting properties:**

Endocrine disrupting property: Based on available data, does not contain endocrine disruptors.

#### 12.7. **Other adverse effects:**

The product must not enter sewers, ground water, surface water or soil.

## SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1. **Waste treatment methods:**

Disposal according to the local regulations.

##### 13.1.1. **Information regarding the disposal of the product:**

**Product:**

Dispose of in accordance with applicable regulations.

No special recommendation from the manufacturer.

Do not dispose of together with household waste. Do not empty into drains.

**List of Waste Code:**

No waste disposal key according to the List of Waste Code (LoW code) can be determined for this product, as only the purpose of application defined by the user enables an allocation. The LoW code number has to be determined after a discussion with a waste disposal specialist.

##### 13.1.2. **Information regarding the disposal of the packaging:**

Dispose of in accordance with applicable regulations.

##### 13.1.3. **Physical/chemical properties that may affect waste treatment options shall be specified:**

No data available.

##### 13.1.4. **Sewage disposal:**

No data available.

##### 13.1.5. **Special precautions for any recommended waste treatment:**

No data available.

## SECTION 14: TRANSPORT INFORMATION

#### 14.1. **UN number or ID number:**

ADR/RID, IMDG, IATA:

- UN 3082
- 14.2. **UN proper shipping name:**  
ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., MARINE POLLUTANT  
IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
- 14.3. **Transport hazard class(es):**  
9
- 14.4. **Packing group:**  
III
- 14.5. **Environmental hazards:**  
Marine pollutant: Yes.
- 14.6. **Special precautions for user:**  
No relevant information available.
- 14.7. **Maritime transport in bulk according to IMO instruments:**  
Not applicable.

## SECTION 15: REGULATORY INFORMATION

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

**REGULATION (EC) No 1907/2006** OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive (EC) No 1999/45 and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive (EEC) No 76/769 and Commission Directives (EEC) No 91/155, (EEC) No 93/67, (EC) No 93/105 and (EC) No 2000/21

**REGULATION (EC) No 1272/2008** OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives (EEC) No 67/548 and (EC) No 1999/45, and amending Regulation (EC) No 1907/2006

**COMMISSION REGULATION (EU) 2020/878** of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

Does not contain any substances listed in Annex XIV of Regulation (EC) 1907/2006 (REACH). (List of substances subject to authorisation).

Does not contain any substances included in the candidate list for Substances of Very High Concern (SVHC) according to Regulation (EC) 1907/2006 (REACH).

15.2. **Chemical safety assessment:** No information.

## SECTION 16: OTHER INFORMATION

Information regarding the revision of the safety data sheet: No information.

**Literature references / data sources:**

Information provided by the manufacturer (composition, safety data sheets of the ingredients).

**Methods used for the classification according to Regulation (EC) No 1272/2008:**

Classification	Method
Skin corrosion/irritation, Hazard Category 2 – H315	Based on calculation method
Serious eye damage/eye irritation, Hazard Category 2 – H319	Based on calculation method
Sensitisation - Skin, hazard category 1A – H317	Based on calculation method
Hazardous to the aquatic environment – Chronic Hazard, Category 2 – H411	Based on calculation method

**Relevant hazard statements (code and full text) of Sections 2 and 3:**

**H315** – Causes skin irritation.

**H317** – May cause an allergic skin reaction.

**H319** – Causes serious eye irritation.

**H335** – May cause respiratory irritation.

**H351** – Suspected of causing cancer <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

**H400** – Very toxic to aquatic life.

**H410** – Very toxic to aquatic life with long lasting effects.

**H411** – Toxic to aquatic life with long lasting effects.

**H412** – Harmful to aquatic life with long lasting effects.

**H413** – May cause long lasting harmful effects to aquatic life.

**Training advice:** No data available.

**Full text of the abbreviations in the safety data sheet:**

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: Agreement concerning the International Carriage of Dangerous Goods by Road.

ATE: Acute Toxicity Estimate.

AOX: Adsorbable organic halides.

BCF: Bioconcentration factor.

BOD: Biological Oxygen Demand.

CAS number: Chemical Abstract Service number.

CLP: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

CMR effects: Carcinogenic, mutagenic, reprotoxic effects.

COD: Chemical Oxygen Demand.

CSA: Chemical Safety Assessment.

CSR: Chemical Safety Report.

DNEL: Derived-No-Effect-Level.

ECHA: European Chemical Agency.

EC: European Community.

EC number: EINECS and ELINCS numbers (see also EINECS and ELINCS).

EEC: European Economic Community.

EEA: European Economic Area (EU + Iceland, Liechtenstein and Norway).

EINECS: European Inventory of Existing Commercial Chemical Substances.

ELINCS: European List of Notified Chemical Substances.

EN: European Norm.

EU: European Union.

EuPCS: European Product Categorisation System.

EWC: European Waste Catalogue (replaced by LoW – see below).

GHS: Globally Harmonized System of Classification and Labelling of Chemicals.

IATA: International Air Transport Association.

ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.

IMDG: International Maritime Dangerous Goods.

IMO: International Maritime Organization.

IMSBC: International Maritime Solid Bulk Cargoes.

IUCLID: International Uniform Chemical Information Database.

IUPAC: International Union of Pure and Applied Chemistry.

Kow: n-Octanol - Water Partition Coefficient.

LC<sub>50</sub>: Lethal concentration resulting in 50 % mortality.

LD<sub>50</sub>: Lethal dose resulting in 50 % mortality (median lethal dose).

LoW: List of Waste.

LOEC: Lowest Observed Effect Concentration.

LOEL: Lowest Observed Effect Level.

NOEC: No Observed Effect Concentration.

NOEL: No Observed Effect Level.

NOAEC: No Observed Adverse Effect Concentration.

NOAEL: No Observed Adverse Effect Level.

OECD: Organization for Economic Cooperation and Development.

OSHA: Occupational Safety and Health Administration.

PBT: Persistent, Bioaccumulative and Toxic.

PNEC: Predicted No Effect Concentration.

QSAR: Quantitative Structure Activity Relationship.

REACH: Regulation 1907/2006/EC concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals.

RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.

SCBA: Self Contained Breathing Apparatus.

SDS: Safety Data Sheet.

STOT: Specific Target Organ Toxicity.

SVHC: Substances of Very High Concern.

UN: United Nations.

UVCB: Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials.

VOC: Volatile Organic Compound.

vPvB: very Persistent and very Bioaccumulative.

This safety data sheet had been prepared on the basis of information provided by the manufacturer/supplier and conform to the relevant regulations.

The information, data and recommendations contained herein are provided in good faith, obtained from reliable sources and believed to be true and accurate as of the date issued; however, no representation is made as to the comprehensiveness of the information.

The SDS shall be used only as a guide for handling the product; in the course of handling and using the product other considerations may arise or be required.

Users are cautioned to determine the appropriateness and applicability of the above information to their particular circumstances and purposes and assume all risk associated with the use of this product.

It is the responsibility of the user to fully comply with local, national and international regulations concerning the use of this product.

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Safety data sheet was prepared by:  
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