

# SAFETY DATA SHEET



PENTOPROTECT TL 2040-00 - All variants

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

### 1.1 Product identifier

**Product name** : PENTOPROTECT TL 2040-00 - All variants

### 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 Sens. 1, H317  
Aquatic Acute 1, H400  
Aquatic Chronic 3, H412

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

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

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

### 2.2 Label elements

**Hazard pictograms** :



**Signal word** : Warning

**Hazard statements** : H317 - May cause an allergic skin reaction.  
H410 - Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

**Prevention** : P280 - Wear protective gloves.  
P273 - Avoid release to the environment.  
P261 - Avoid breathing vapour.

**Response** : P391 - Collect spillage.  
P362 + P364 - Take off contaminated clothing and wash it before reuse.

**Storage** : Not applicable.

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

## SECTION 2: Hazards identification

<b>Hazardous ingredients</b>	: Contains: 1,2-benzisothiazol-3(2H)-one; 4,5-dichloro-2-octyl-2H-isothiazol-3-one and 2-Octyl-2H-isothiazol-3-one
<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
1,2-benzisothiazol-3(2H)-one	EC: 220-120-9 CAS: 2634-33-5 Index: 613-088-00-6	<0.1	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400	ATE [Oral] = 1020 mg/kg Skin Sens. 1, H317: C ≥ 0.05% M [Acute] = 1	[1]
pyrithione zinc	REACH #: 01-2119511196-46 EC: 236-671-3 CAS: 13463-41-7 Index: 613-333-00-7	<0.1	Acute Tox. 3, H301 Acute Tox. 2, H330 Eye Dam. 1, H318 Repr. 1B, H360D STOT RE 1, H372 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 221 mg/kg ATE [Inhalation (dusts and mists)] = 0.14 mg/l M [Acute] = 1000 M [Chronic] = 10	[1]
3-iodo-2-propynyl-butyl carbamate	EC: 259-627-5 CAS: 55406-53-6 Index: 616-212-00-7	<0.1	Acute Tox. 4, H302 Acute Tox. 3, H331 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 1, H372 (larynx) Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 400 mg/kg ATE [Inhalation (dusts and mists)] = 0.67 mg/l M [Acute] = 10 M [Chronic] = 1	[1]
4,5-dichloro-2-octyl-2H-isothiazol-3-one	EC: 264-843-8 CAS: 64359-81-5 Index: 613-335-00-8	≤0.0096	Acute Tox. 4, H302 Acute Tox. 2, H330 Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 EUH071	ATE [Oral] = 567 mg/kg ATE [Inhalation (dusts and mists)] = 0.16 mg/l Skin Corr. 1, H314: C ≥ 5% Skin Irrit. 2, H315: 0.025% ≤ C < 5% Eye Dam. 1, H318: C ≥ 3% Eye Irrit. 2, H319: 0.025% ≤ C < 3%	[1]

Date of issue/Date of revision : 11/03/2024 Date of previous issue : No previous validation Version : 1 2/20

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## SECTION 3: Composition/information on ingredients

2-Octyl-2H-isothiazol-3-one	EC: 247-761-7 CAS: 26530-20-1 Index: 613-112-00-5	<0.001	Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 2, H330 Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 EUH071  <b>See Section 16 for the full text of the H statements declared above.</b>	Skin Sens. 1, H317: C ≥ 0.0015% M [Acute] = 100 M [Chronic] = 100  ATE [Oral] = 125 mg/kg ATE [Dermal] = 311 mg/kg ATE [Inhalation (dusts and mists)] = 0.27 mg/l Skin Sens. 1, H317: C ≥ 0.0015% M [Acute] = 100 M [Chronic] = 100	[1]
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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

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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : 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. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : 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. Get medical attention if adverse health effects persist or are severe. 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. 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** : No specific data.

## SECTION 4: First aid measures

- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

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

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

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

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life. This material is harmful to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : No specific data.

### 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. Avoid breathing 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.

## SECTION 6: Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.  
See Section 8 for information on appropriate personal protective equipment.  
See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

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

### 7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid release to the environment. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

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

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

#### Seveso Directive - Reporting thresholds

##### Danger criteria

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

### 7.3 Specific end use(s)

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

## SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

### 8.1 Control parameters

#### Occupational exposure limits

## SECTION 8: Exposure controls/personal protection

Product/ingredient name	Exposure limit values
<p>2-Octyl-2H-isothiazol-3-one</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p>	<p><b>Regulation on Limit Values - MAC (Austria, 4/2021). Absorbed through skin. Sensitization potential.</b>                      TWA: 0.05 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction                      CEIL: 0.05 mg/m<sup>3</sup> 15 minutes. Form: Inhalable fraction</p>
<p>1,2-benzisothiazol-3(2H)-one pyrrithione zinc</p>	<p><b>DFG MAC-values list (Germany, 7/2022). Skin sensitiser.</b>  <b>DFG MAC-values list (Germany, 7/2022). Absorbed through skin.</b></p>
<p>3-iodo-2-propynyl-butyl carbamate</p>	<p><b>DFG MAC-values list (Germany, 7/2022). Skin sensitiser.</b>                      PEAK: 0.116 mg/m<sup>3</sup>, 4 times per shift, 15 minutes.                      PEAK: 0.01 ppm, 4 times per shift, 15 minutes.                      TWA: 0.058 mg/m<sup>3</sup> 8 hours.                      TWA: 0.005 ppm 8 hours.  <b>TRGS 900 OEL (Germany, 6/2022). Skin sensitiser.</b>                      PEAK: 0.116 mg/m<sup>3</sup> 15 minutes.                      PEAK: 0.01 ppm 15 minutes.                      TWA: 0.058 mg/m<sup>3</sup> 8 hours.                      TWA: 0.005 ppm 8 hours.</p>
<p>2-Octyl-2H-isothiazol-3-one</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p> <p>No exposure limit value known.</p>	<p><b>TRGS 900 OEL (Germany, 6/2022). Absorbed through skin.</b>                      TWA: 0.05 mg/m<sup>3</sup> 8 hours. Form: Inhalable fraction                      PEAK: 0.1 mg/m<sup>3</sup> 15 minutes. Form: Inhalable fraction  <b>DFG MAC-values list (Germany, 7/2022). Absorbed through skin. Skin sensitiser.</b>                      TWA: 0.05 mg/m<sup>3</sup> 8 hours. Form: inhalable fraction                      PEAK: 0.1 mg/m<sup>3</sup>, 4 times per shift, 15 minutes. Form: inhalable fraction</p>

## SECTION 8: Exposure controls/personal protection

pyrithione zinc	<b>Government regulation SR c. 355/2006 (Slovakia, 9/2020). [Zinc and its inorganic compounds]</b> TWA: 2 mg/m <sup>3</sup> , (Zinc and its inorganic compounds) 8 hours. Form: Inhalable fraction TWA: 0.1 mg/m <sup>3</sup> , (Zinc and its inorganic compounds) 8 hours. Form: Respirable fraction
3-iodo-2-propynyl-butyl carbamate	<b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021).</b> KTV: 0.01 ppm, 4 times per shift, 15 minutes. TWA: 0.005 ppm 8 hours. KTV: 0.116 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. TWA: 0.058 mg/m <sup>3</sup> 8 hours.
2-Octyl-2H-isothiazol-3-one	<b>Regulation on protection of workers from the risks related to exposure to chemical substances at work (Slovenia, 5/2021). Absorbed through skin.</b> TWA: 0.05 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction KTV: 0.1 mg/m <sup>3</sup> , 4 times per shift, 15 minutes. Form: Inhalable fraction
No exposure limit value known.	
No exposure limit value known.	
3-iodo-2-propynyl-butyl carbamate	<b>SUVA (Switzerland, 1/2023). Skin sensitiser.</b> STEL: 0.24 mg/m <sup>3</sup> 15 minutes. Form: vapour and aerosols STEL: 0.02 ppm 15 minutes. Form: vapour and aerosols TWA: 0.01 ppm 8 hours. Form: vapour and aerosols TWA: 0.12 mg/m <sup>3</sup> 8 hours. Form: vapour and aerosols
2-Octyl-2H-isothiazol-3-one	<b>SUVA (Switzerland, 1/2023). Absorbed through skin. Skin sensitiser.</b> TWA: 0.05 mg/m <sup>3</sup> 8 hours. Form: Inhalable fraction STEL: 0.1 mg/m <sup>3</sup> 15 minutes. Form: Inhalable fraction
1,2,4-trimethylbenzene	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). [trimethylbenzenes, all isomers or mixtures]</b> TWA: 25 ppm 8 hours. TWA: 125 mg/m <sup>3</sup> 8 hours.
Triethylamine	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). Absorbed through skin.</b> STEL: 17 mg/m <sup>3</sup> 15 minutes. TWA: 2 ppm 8 hours. TWA: 8 mg/m <sup>3</sup> 8 hours. STEL: 4 ppm 15 minutes.
Xylene	<b>EH40/2005 WELs (United Kingdom (UK), 1/2020). [xylene, o-,m-, p- or mixed isomers] Absorbed through skin.</b> STEL: 441 mg/m <sup>3</sup> 15 minutes. TWA: 50 ppm 8 hours. TWA: 220 mg/m <sup>3</sup> 8 hours. STEL: 100 ppm 15 minutes.

### Biological exposure indices

Product/ingredient name	Exposure indices
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	
No exposure indices known.	





## SECTION 8: Exposure controls/personal protection

	DNEL	Long term Inhalation	1.16 mg/m <sup>3</sup>	Workers	Local
	DNEL	Long term Dermal	2 mg/kg bw/day	Workers	Systemic

### PNECs

No PNECs available

## 8.2 Exposure controls

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

### Individual protection measures

**Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

### Skin protection

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Recommendations : Wear suitable gloves tested to EN374.

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

Not recommended polyvinyl alcohol (PVA) gloves

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Filter type (spray application): A P

**Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

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

### 9.1 Information on basic physical and chemical properties

#### Appearance

**Physical state** : Liquid.

**Colour** : Various

**Odour** : Slight

*Date of issue*/*Date of revision* : 11/03/2024 *Date of previous issue* : No previous validation *Version* : 1 9/20

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## SECTION 9: Physical and chemical properties

**Odour threshold** : Not available.

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

**Initial boiling point and boiling range** :

Ingredient name	°C	°F	Method
water	100	212	

**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** : Not available.

**Decomposition temperature** : Not available.

**pH** : 7 to 9 [Conc. (% w/w): 100%]

**Viscosity** : Not available.

**Solubility(ies)** :

Not available.

**Solubility in water** : Not available.

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

**Vapour pressure** :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
water	17.5	2.3				

**Relative density** : Not available.

**Density** : 1 g/cm<sup>3</sup>

**Vapour density** : Not available.

**Explosive properties** : Not available.

**Oxidising properties** : Not available.

### Particle characteristics

**Median particle size** : Not applicable.

## SECTION 10: Stability and reactivity

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

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

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

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

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

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

# SECTION 11: Toxicological information

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

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
1,2-benzisothiazol-3(2H)-one pyrithione zinc	LD50 Oral	Rat	1020 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	140 mg/m <sup>3</sup>	4 hours
3-iodo-2-propynyl-butyl carbamate	LD50 Dermal	Rabbit	100 mg/kg	-
	LD50 Oral	Rat	177 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	0.67 g/m <sup>3</sup>	4 hours
	LC50 Inhalation Dusts and mists	Rat	0.763 mg/l	4 hours
4,5-dichloro-2-octyl-2H-isothiazol-3-one	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	400 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat - Male, Female	0.26 mg/l	4 hours
2-Octyl-2H-isothiazol-3-one	LD50 Dermal	Rabbit	>652 mg/kg	-
	LD50 Oral	Rat	1585 mg/kg	-
	LD50 Dermal	Rabbit	690 mg/kg	-
	LD50 Oral	Rat	550 mg/kg	-

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

### Acute toxicity estimates

Route	ATE value
Not available.	

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
1,2-benzisothiazol-3(2H)-one	Skin - Mild irritant	Human	-	48 hours 5 %	-
3-iodo-2-propynyl-butyl carbamate	Eyes - Severe irritant	Rabbit	-	-	-
2-Octyl-2H-isothiazol-3-one	Eyes - Severe irritant	Rabbit	-	100 mg	-

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

### Sensitisation

Product/ingredient name	Route of exposure	Species	Result
3-iodo-2-propynyl-butyl carbamate	skin	Guinea pig	Not sensitizing

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

### Mutagenicity

Product/ingredient name	Test	Experiment	Result
3-iodo-2-propynyl-butyl carbamate	-	Experiment: In vitro Subject: Bacteria	Negative

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

### Carcinogenicity

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

### Reproductive toxicity

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

Date of issue/Date of revision : 11/03/2024 Date of previous issue : No previous validation Version : 1 11/20

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## SECTION 11: Toxicological information

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

### Teratogenicity

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

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

### Specific target organ toxicity (single exposure)

Not available.

### Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
pyrithione zinc	Category 1	-	-
3-iodo-2-propynyl-butyl carbamate	Category 1	-	larynx

### Aspiration hazard

Not available.

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

### Potential acute health effects

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : 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** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

### Potential chronic health effects

Not available.

**Conclusion/Summary** : 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.

## SECTION 11: Toxicological information

### 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
1,2-benzisothiazol-3(2H)-one pyrithione zinc	Acute EC50 0.36 mg/l Marine water	Algae - <i>Skeletonema Costatum</i>	72 hours
	Acute EC50 3.7 mg/l	Daphnia - <i>Daphnia Magna</i>	48 hours
	Acute LC50 1.9 mg/l Fresh water	Fish - <i>Onorhynchus Mykiss</i>	96 hours
	Acute NOEC 0.15 mg/l Marine water	Algae - <i>Skeletonema Costatum</i>	72 hours
	Acute EC50 0.51 µg/l Marine water	Algae - <i>Thalassiosira pseudonana</i>	96 hours
	Acute EC50 38 µg/l Fresh water	Crustaceans - <i>Ilyocypris dentifera</i>	48 hours
	Acute EC50 8.25 ppb Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 2.68 ppb Fresh water	Fish - <i>Pimephales promelas</i>	96 hours
	Chronic EC10 0.36 µg/l Marine water	Algae - <i>Thalassiosira pseudonana</i>	96 hours
	Chronic NOEC 2.7 ppb Fresh water	Daphnia - <i>Daphnia magna</i>	21 days
3-iodo-2-propynyl-butyl carbamate	Acute EC50 0.022 mg/l Fresh water	Algae - <i>Scenedemus subspicatus</i>	72 hours
	Acute EC50 0.16 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 0.067 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
	Acute NOEC 0.049 mg/l Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
	Chronic NOEC 0.05 mg/l Fresh water	Daphnia - <i>Daphnia Magna</i>	21 days
4,5-dichloro-2-octyl-2H- isothiazol-3-one	Acute EC50 0.003 mg/l Fresh water	Algae - <i>Pseudokirchneriella subcapitata</i>	72 hours
	Acute EC50 18 ppb Marine water	Algae - <i>Skeletonema costatum</i>	96 hours
	Acute EC50 0.001 mg/l Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 22 µg/l Fresh water	Crustaceans - <i>Gammarus pulex</i>	48 hours
	Acute LC50 2.7 ppb Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
	Chronic NOEC 19.789 µg/l Marine water	Algae - <i>Nitzschia pungens</i>	96 hours
	Chronic NOEC 0.56 ppb	Fish - <i>Oncorhynchus mykiss</i>	97 days
2-Octyl-2H-isothiazol-3-one	Acute EC50 107 ppb Fresh water	Daphnia - <i>Daphnia magna</i>	48 hours
	Acute LC50 47 ppb Fresh water	Fish - <i>Oncorhynchus mykiss</i>	96 hours
	Chronic NOEC 74 ppb Fresh water	Daphnia - <i>Daphnia magna</i>	21 days
	Chronic NOEC 8.5 ppb	Fish - <i>Pimephales promelas</i>	35 days

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

### 12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
1,2-benzisothiazol-3(2H)-one	EU	24 % - 28 days	-	-

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

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

### 12.3 Bioaccumulative potential

## SECTION 12: Ecological information

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
1,2-benzisothiazol-3(2H)-one	-	3.2	Low
pyrithione zinc	0.9	11	Low
3-iodo-2-propynyl-butyl carbamate	>1	-	Low
2-Octyl-2H-isothiazol-3-one	2.45	-	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.

**European waste catalogue (EWC)** : 08.01.19

#### 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. (Solvent naphtha (petroleum), light arom.)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Solvent naphtha (petroleum), light arom.)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pyrithione zinc)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (pyrithione zinc)

**Date of issue/Date of revision** : 11/03/2024 **Date of previous issue** : No previous validation **Version** : 1 **14/20**

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**Label No** : 78404

## SECTION 14: Transport information

14.3 Transport hazard class(es)	9	9	9	9
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	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.

**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]
PENTOPROTECT TL 2040-00	≥90	3

**Labelling** :

#### Other EU regulations

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

## SECTION 15: Regulatory information

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

**Explosive precursors** : Not applicable.

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

Not listed.

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

Not listed.

**Persistent Organic Pollutants**

Not listed.

**Seveso Directive**

This product is controlled under the Seveso Directive.

**Danger criteria**

Category
E1

### **National regulations**

#### **Austria**

**VbF class** : Not regulated.

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

#### **Czech Republic**

**Storage code** : IV

#### **Denmark**

**Danish fire class** : IV-1

**MAL-code** : 00-1

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

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

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

MAL-code: 00-1

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

- Arm protectors must be worn.

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

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



## SECTION 15: Regulatory information

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

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

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

\*See Regulations.

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

**List of undesirable substances** : Not listed

### Finland

### France

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

### Germany

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

### Hazardous incident ordinance

This product is controlled under the Germany Hazardous Incident Ordinance.

### Danger criteria

Category	Reference number
E1	1.3.1

**Hazard class for water** : 3

**Technical instruction on air quality control** : TA-Luft Number 5.2.5: 10.1%

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

### Italy

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

### Netherlands

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

Ingredient name	Carcinogen	Mutagen	Reproductive toxicity - Fertility	Reproductive toxicity - Development	Harmful via breastfeeding
Solvent naphtha (petroleum), light arom.	Listed	Listed	-	-	-

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

### Norway

### Sweden

### Switzerland

**VOC content** : Exempt.

### International regulations

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

Not listed.

## SECTION 15: Regulatory information

### 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 Sens. 1, H317	Calculation method
Aquatic Acute 1, H400	Calculation method
Aquatic Chronic 3, H412	Calculation method

### Full text of abbreviated H statements

H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H360D	May damage the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH071	Corrosive to the respiratory tract.

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

## SECTION 16: Other information

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

**Date of issue/ Date of revision** : 11/03/2024

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

**Version** : 1

PENTOPROTECT TL 2040-00

All variants

### Notice to reader

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

