



## SAFETY DATA SHEET PERMOST UNI

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

#### 1.1. Product identifier

**Product name** PERMOST UNI  
**Product number** PBPTTE0007XXA

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

**Identified uses** Biocidal products (e.g. disinfectants, pest control).

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

**Supplier** Hockley International Ltd  
Hockley House  
3 Longstone Road  
Ashbrook Office Park  
Manchester  
M22 5LB  
TEL: +44 (0) 161 209 7400  
FAX: +44 (0) 161 209 7401  
sds@hockley.co.uk

#### 1.4. Emergency telephone number

**Emergency telephone** +44 (0) 161 209 7400 9am - 5pm GMT

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification

**Physical hazards** Not Classified  
**Health hazards** Asp. Tox. 1 - H304  
**Environmental hazards** Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410

**Classification (67/548/EEC or 1999/45/EC)** Xn; R65. N; R50/53

#### 2.2. Label elements

##### Pictogram



##### Signal word

Danger

##### Hazard statements

H304 May be fatal if swallowed and enters airways.  
H410 Very toxic to aquatic life with long lasting effects.  
EUH208 Contains PERMETHRIN (25:75) TECHNICAL. May produce an allergic reaction.

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### Precautionary statements

P273 Avoid release to the environment.  
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.  
 P331 Do NOT induce vomiting.  
 P391 Collect spillage.  
 P405 Store locked up.  
 P501 Dispose of contents/container in accordance with national regulations.

### Contains

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

<b>DISTILLATES (PETROLEUM), HYDROTREATED LIGHT</b>		<b>60-100%</b>
CAS number: 64742-47-8	EC number: 265-149-8	REACH registration number: 01-2119484819-18-XXXX
<b>Classification</b> Asp. Tox. 1 - H304	<b>Classification (67/548/EEC or 1999/45/EC)</b> Xn;R65. R66.	
<b>PIPERONYL BUTOXIDE</b>		<b>&lt;1%</b>
CAS number: 51-03-6	EC number: 200-076-7	
M factor (Acute) = 1	M factor (Chronic) = 1	
<b>Classification</b> Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	<b>Classification (67/548/EEC or 1999/45/EC)</b> N;R50/53.	
<b>PERMETHRIN (25:75) TECHNICAL</b>		<b>2.5 g/l min</b>
CAS number: 52645-53-1	EC number: 258-067-9	
M factor (Acute) = 1000	M factor (Chronic) = 1000	
<b>Classification</b> Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Sens. 1 - H317 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	<b>Classification (67/548/EEC or 1999/45/EC)</b> Xn; R20/22. N; R50/53. R43	
<b>TETRAMETHRIN</b>		<b>1 g/l min</b>
CAS number: 7696-12-0	EC number: 231-711-6	
M factor (Acute) = 100	M factor (Chronic) = 100	
<b>Classification</b> Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	<b>Classification (67/548/EEC or 1999/45/EC)</b> N; R50/53	

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<b>2,6-DI-TERT-BUTYL-P-CRESOL</b>			<b>&lt;1%</b>
CAS number: 128-37-0	EC number: 204-881-4	REACH registration number: 01-2119480433-40-XXXX	
M factor (Acute) = 1	M factor (Chronic) = 1		
<b>Classification</b>		<b>Classification (67/548/EEC or 1999/45/EC)</b>	
Aquatic Acute 1 - H400		N;R50/53.	
Aquatic Chronic 1 - H410			

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>General information</b>	Remove affected person from source of contamination. CAUTION! First aid personnel must be aware of own risk during rescue! Place unconscious person on the side in the recovery position and ensure breathing can take place.
<b>Inhalation</b>	Move affected person to fresh air at once. Get medical attention. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration.
<b>Ingestion</b>	Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention immediately. If breathing stops, provide artificial respiration.
<b>Skin contact</b>	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.
<b>Eye contact</b>	Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention immediately. Continue to rinse.

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

<b>Inhalation</b>	Coughing. Difficulty in breathing.
<b>Ingestion</b>	Burning sensation. Diarrhoea. Nausea, vomiting.
<b>Skin contact</b>	Burning sensation. Redness.
<b>Eye contact</b>	Redness. Pain.

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

<b>Notes for the doctor</b>	If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat symptomatically.
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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.

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

<b>Specific hazards</b>	Contain and collect extinguishing water. Avoid releasing into the environment. Do not discharge into drains or watercourses or onto the ground.
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**Hazardous combustion products** Heating may generate the following products: Toxic and corrosive gases or vapours. Hydrogen chloride (HCl). Oxides of: Carbon. Nitrogen.

### 5.3. Advice for firefighters

**Protective actions during firefighting** In case of fire and/or explosion do not breathe fumes

**Special protective equipment for firefighters** Wear full protective clothing (EN 469). Wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

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

**Personal precautions** Wear protective clothing as described in Section 8 of this safety data sheet. Provide adequate ventilation. Warn everybody of potential hazards and evacuate if necessary.

### 6.2. Environmental precautions

**Environmental precautions** Do not discharge into drains or watercourses or onto the ground. Stop leak if possible without risk.

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

**Methods for cleaning up** Absorb spillage with sand or other inert absorbent. Dike far ahead of larger spills for later disposal. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. This material and its container must be disposed of as hazardous waste.

### 6.4. Reference to other sections

**Reference to other sections** For personal protection, see Section 8. For waste disposal, see section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** Handle and open container with care. Wear protective clothing as described in Section 8 of this safety data sheet. Do not release into the environment. Avoid the spillage or runoff entering drains, sewers or watercourses. Do not eat, drink or smoke when using the product. Wash hands after handling. Remove contaminated clothing. Wash contaminated clothing before reuse.

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

**Storage precautions** Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store away from incompatible materials listed in section 10 of this safety data sheet. Keep out of the reach of children.

### 7.3. Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

## SECTION 8: Exposure Controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

#### **2,6-DI-TERT-BUTYL-P-CRESOL**

Long-term exposure limit (8-hour TWA): WEL 10 mg/m<sup>3</sup>

WEL = Workplace Exposure Limit

#### **ODOURLESS KEROSENE (CAS: 64742-47-8)**

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**DNEL** Consumer - Oral; Long term : 19 mg/kg/day

### PIPERONYL BUTOXIDE (CAS: 51-03-6)

**DNEL** Industry - Dermal; Short term systemic effects: 55.556 mg/kg/day  
 Industry - Inhalation; Short term systemic effects: 7.75 mg/m<sup>3</sup>  
 Industry - Dermal; Short term local effects: 444 µg/cm<sup>2</sup>  
 Industry - Inhalation; Short term local effects: 3.875 mg/m<sup>3</sup>  
 Industry - Dermal; Long term systemic effects: 27.778 mg/kg/day  
 Industry - Inhalation; Long term systemic effects: 3.875 mg/m<sup>3</sup>  
 Industry - Dermal; Long term local effects: 444 µg/cm<sup>2</sup>  
 Industry - Inhalation; Long term local effects: 0.222 mg/m<sup>3</sup>

**PNEC**

- Fresh water; 0.003 mg/l
- Marine water; 0.0003 mg/l
- Intermittent release; 0.0003 mg/l
- STP; 10 mg/l
- Sediment (Freshwater); 0.0194 mg/kg
- Sediment (Marinewater); 0.00194 mg/kg
- Soil; 0.136 mg/kg
- Oral; 12.53 mg/kg food

### 2,6-DI-TERT-BUTYL-P-CRESOL (CAS: 128-37-0)

**DNEL** Industry - Inhalation; Short term systemic effects: 2 mg/m<sup>3</sup>  
 Consumer - Oral; Long term systemic effects: 0.3 mg/kg/day  
 Industry - Inhalation; Long term systemic effects: 3.5

**PNEC**

- Fresh water; 0.0041 mg/l
- Marine water; 0.0041 mg/l
- Sediment (Freshwater); 0.731 mg/kg
- Sediment (Marinewater); 0.731 mg/kg
- Soil; 0.35 mg/kg

## 8.2. Exposure controls

<b>Appropriate engineering controls</b>	Provide adequate ventilation.
<b>Eye/face protection</b>	Avoid contact with eyes. Wear approved safety goggles (EN 166).
<b>Hand protection</b>	Wear protective gloves (EN 374).
<b>Other skin and body protection</b>	Wear appropriate clothing to prevent any possibility of skin contact.
<b>Hygiene measures</b>	No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products.
<b>Respiratory protection</b>	Respiratory protection may be required if excessive airborne contamination occurs. If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Particulate filter, type P1. (EN 140/143)
<b>Thermal hazards</b>	No data available.
<b>Environmental exposure controls</b>	Do not release into the environment.

## SECTION 9: Physical and Chemical Properties

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

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<b>Appearance</b>	Liquid.
<b>Colour</b>	Colourless.
<b>Odour</b>	Mild.
<b>Odour threshold</b>	Not available. Not available.
<b>pH</b>	pH (concentrated solution): 5 - 7
<b>Melting point</b>	Not available.
<b>Initial boiling point and range</b>	Not available.
<b>Flash point</b>	> 60°C ISO 3679
<b>Evaporation rate</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	0.795 - 0.815 @ °C
<b>Solubility(ies)</b>	Not available.
<b>Partition coefficient</b>	Not relevant.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition Temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not available.
<b>Oxidising properties</b>	Not available.

### 9.2. Other information

<b>Other information</b>	Not available.
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## SECTION 10: Stability and reactivity

### 10.1. Reactivity

<b>Reactivity</b>	No data available.
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### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended.
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### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	None known. Will not polymerise.
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### 10.4. Conditions to avoid

<b>Conditions to avoid</b>	Avoid exposure to high temperatures or direct sunlight.
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### 10.5. Incompatible materials

<b>Materials to avoid</b>	Strong oxidising agents. Strong acids. Strong alkalis.
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### 10.6. Hazardous decomposition products

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**Hazardous decomposition products** Does not decompose when used and stored as recommended.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

**Toxicological effects** Classification according to Regulation (EC) No 1272/2008.

##### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** Calculation method. Based on available data the classification criteria are not met.

##### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** Calculation method. Based on available data the classification criteria are not met.

##### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** Calculation method. Based on available data the classification criteria are not met.

##### Skin corrosion/irritation

**Animal data** Calculation method. Based on available data the classification criteria are not met.

##### Serious eye damage/irritation

**Serious eye damage/irritation** Calculation method. Based on available data the classification criteria are not met.

##### Respiratory sensitisation

**Respiratory sensitisation** No specific test data are available.

##### Skin sensitisation

**Skin sensitisation** Based on available data the classification criteria are not met. Contains permethrin. May produce an allergic skin reaction.

##### Germ cell mutagenicity

**Genotoxicity - in vitro** Calculation method.

**Genotoxicity - in vivo** Calculation method. : Based on available data the classification criteria are not met.

##### Carcinogenicity

**Carcinogenicity** Calculation method. Based on available data the classification criteria are not met.

##### Reproductive toxicity

**Reproductive toxicity - fertility** Calculation method.

**Reproductive toxicity - development** Calculation method. Based on available data the classification criteria are not met.

##### Specific target organ toxicity - single exposure

**STOT - single exposure** Calculation method. Based on available data the classification criteria are not met.

##### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Calculation method. Based on available data the classification criteria are not met.

##### Aspiration hazard

**Aspiration hazard** Calculation method. May be fatal if swallowed and enters airways.

##### Toxicological information on ingredients.

#### DISTILLATES (PETROLEUM), HYDROTREATED LIGHT

##### Acute toxicity - oral

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<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	5,001.0
<b>Species</b>	Rat
<b>Notes (oral LD<sub>50</sub>)</b>	REACH dossier information. Based on available data the classification criteria are not met.
<b>ATE oral (mg/kg)</b>	5,001.0
<b><u>Acute toxicity - dermal</u></b>	
<b>Acute toxicity dermal (LD<sub>50</sub> mg/kg)</b>	2,001.0
<b>Species</b>	Rabbit
<b>Notes (dermal LD<sub>50</sub>)</b>	REACH dossier information. Based on available data the classification criteria are not met.
<b>ATE dermal (mg/kg)</b>	2,001.0
<b><u>Acute toxicity - inhalation</u></b>	
<b>Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l)</b>	5.28
<b>Species</b>	Rat
<b>Notes (inhalation LC<sub>50</sub>)</b>	REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Skin corrosion/irritation</u></b>	
<b>Animal data</b>	Erythema/eschar score: No erythema (0). Oedema score: No oedema (0). REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Serious eye damage/irritation</u></b>	
<b>Serious eye damage/irritation</b>	Not irritating. REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	Buehler test: - Guinea pig: REACH dossier information. Not sensitising. Based on available data the classification criteria are not met.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vitro</b>	Gene mutation:: Negative. REACH dossier information. Based on available data the classification criteria are not met.
<b>Genotoxicity - in vivo</b>	Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	- NOAEL 750 mg/kg/day, Oral, Rat P REACH dossier information. This substance has no evidence of toxicity to reproduction. Based on available data the classification criteria are not met.



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**Reproductive toxicity - development** Developmental toxicity: - NOAEL: > 364 ppm, Inhalation, REACH dossier information. Based on available data the classification criteria are not met.

### Specific target organ toxicity - single exposure

**STOT - single exposure** Data lacking.

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** NOAEL 750 mg/kg/day, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.

### Aspiration hazard

**Aspiration hazard** Kinematic viscosity  $\leq 20.5 \text{ mm}^2/\text{s}$ . REACH dossier information. May be fatal if swallowed and enters airways.

## PIPERONYL BUTOXIDE

### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** REACH dossier information. Based on available data the classification criteria are not met.

### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub> mg/kg)** 2,000.0

**Species** Rabbit

**Notes (dermal LD<sub>50</sub>)** REACH dossier information. Based on available data the classification criteria are not met.

### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** REACH dossier information. Based on available data the classification criteria are not met.

**ATE inhalation (dusts/mists mg/l)** 5.9

### Skin corrosion/irritation

**Animal data** Erythema/eschar score: No erythema (0). Oedema score: No oedema (0). REACH dossier information. Based on available data the classification criteria are not met.

### Serious eye damage/irritation

**Serious eye damage/irritation** Not irritating. REACH dossier information. Based on available data the classification criteria are not met.

### Skin sensitisation

**Skin sensitisation** Buehler test: - Guinea pig: REACH dossier information. Not sensitising. Based on available data the classification criteria are not met.

### Germ cell mutagenicity

**Genotoxicity - in vitro** Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.

**Genotoxicity - in vivo** Chromosome aberration: Negative. REACH dossier information. Based on available data the classification criteria are not met.

### Carcinogenicity

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<b>Carcinogenicity</b>	NOAEL 30 mg/kg/day, Oral, Rat REACH dossier information. Based on available data the classification criteria are not met.
<b>IARC carcinogenicity</b>	IARC Group 3 Not classifiable as to its carcinogenicity to humans.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	Two-generation study - NOAEL 1000 ppm, Oral, Rat P REACH dossier information. Based on available data the classification criteria are not met.
<b>Reproductive toxicity - development</b>	Maternal toxicity: - NOAEL: 200 mg/kg/day, Oral, Rat REACH dossier information. No reproductive or developmental effects occurred at non-parentally toxic doses. Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	Data lacking.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	NOAEL 15.5 mg/kg, Oral, REACH dossier information. Based on available data the classification criteria are not met.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Not applicable.

### PERMETHRIN (25:75) TECHNICAL

<b><u>Acute toxicity - oral</u></b>	
<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	1,600.0
<b>Species</b>	Rat
<b>Notes (oral LD<sub>50</sub>)</b>	Harmful if swallowed.
<b>ATE oral (mg/kg)</b>	1,600.0
<b><u>Acute toxicity - dermal</u></b>	
<b>Acute toxicity dermal (LD<sub>50</sub> mg/kg)</b>	2,000.01
<b>Species</b>	Rat
<b>Notes (dermal LD<sub>50</sub>)</b>	Based on available data the classification criteria are not met.
<b>ATE dermal (mg/kg)</b>	2,000.01
<b><u>Acute toxicity - inhalation</u></b>	
<b>Acute toxicity inhalation (LC<sub>50</sub> dust/mist mg/l)</b>	1.5
<b>Species</b>	Rat
<b>Notes (inhalation LC<sub>50</sub>)</b>	Harmonised classification. Harmful if inhaled.
<b>ATE inhalation (dusts/mists mg/l)</b>	1.5
<b><u>Skin corrosion/irritation</u></b>	
<b>Animal data</b>	Based on available data the classification criteria are not met.
<b><u>Serious eye damage/irritation</u></b>	

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<b>Serious eye damage/irritation</b>	Based on available data the classification criteria are not met.
<b><u>Skin sensitisation</u></b>	
<b>Skin sensitisation</b>	May cause an allergic skin reaction.
<b><u>Germ cell mutagenicity</u></b>	
<b>Genotoxicity - in vivo</b>	: Non-genotoxic. Based on available data the classification criteria are not met.
<b><u>Carcinogenicity</u></b>	
<b>Carcinogenicity</b>	No indication of human carcinogenicity. Based on available data the classification criteria are not met.
<b><u>Reproductive toxicity</u></b>	
<b>Reproductive toxicity - fertility</b>	No reproductive or developmental effects occurred at non-parentally toxic doses. Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - single exposure</u></b>	
<b>STOT - single exposure</b>	Based on available data the classification criteria are not met.
<b><u>Specific target organ toxicity - repeated exposure</u></b>	
<b>STOT - repeated exposure</b>	Based on available data the classification criteria are not met.
<b><u>Aspiration hazard</u></b>	
<b>Aspiration hazard</b>	Based on available data the classification criteria are not met.

## TETRAMETHRIN

<b><u>Acute toxicity - oral</u></b>	
<b>Acute toxicity oral (LD<sub>50</sub> mg/kg)</b>	2,000.0
<b>Species</b>	Rat
<b>Notes (oral LD<sub>50</sub>)</b>	Based on available data the classification criteria are not met.
<b><u>Acute toxicity - dermal</u></b>	
<b>Acute toxicity dermal (LD<sub>50</sub> mg/kg)</b>	2,000.0
<b>Species</b>	Rat
<b>Notes (dermal LD<sub>50</sub>)</b>	Based on available data the classification criteria are not met.
<b><u>Acute toxicity - inhalation</u></b>	
<b>Acute toxicity inhalation (LC<sub>50</sub> dust/mist mg/l)</b>	5.63
<b>Species</b>	Rat
<b>Notes (inhalation LC<sub>50</sub>)</b>	Based on available data the classification criteria are not met.
<b>ATE inhalation (dusts/mists mg/l)</b>	5.63
<b><u>Skin corrosion/irritation</u></b>	
<b>Animal data</b>	Based on available data the classification criteria are not met.

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### Serious eye damage/irritation

**Serious eye damage/irritation** Based on available data the classification criteria are not met.

### Skin sensitisation

**Skin sensitisation** Buehler test: - : Not sensitising. Based on available data the classification criteria are not met.

### Germ cell mutagenicity

**Genotoxicity - in vitro** Ames test: Negative. Based on available data the classification criteria are not met.

**Genotoxicity - in vivo** Chromosome aberration: Negative. Based on available data the classification criteria are not met.

### Carcinogenicity

**Carcinogenicity** Based on available data the classification criteria are not met. There is no evidence that the product can cause cancer.

### Reproductive toxicity

**Reproductive toxicity - development** Teratogenicity: - NOAEL: > 1000 mg/kg, Oral, No reproductive or developmental effects occurred at non-parentally toxic doses.

### Specific target organ toxicity - single exposure

**STOT - single exposure** Data lacking.

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** NOAEL 200 mg/kg, Oral, Based on available data the classification criteria are not met.

### Aspiration hazard

**Aspiration hazard** Not applicable.

## SECTION 12: Ecological Information

### 12.1. Toxicity

**Toxicity** Classification according to Regulation (EC) No 1272/2008. Very toxic to aquatic life with long lasting effects.

### Ecological information on ingredients.

#### PIPERONYL BUTOXIDE

##### Acute aquatic toxicity

**LE(C)<sub>50</sub>** 0.1 < L(E)C<sub>50</sub> ≤ 1

**M factor (Acute)** 1

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours, 96 hours: 3.94 mg/l, REACH dossier information.

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours, 48 hours: 0.51 mg/l, Daphnia magna REACH dossier information.

**Acute toxicity - aquatic plants** ErC<sub>50</sub>, 72 hours, 72 hours: 3.89 mg/l, Selenastrum capricornutum REACH dossier information.

##### Chronic aquatic toxicity

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<b>M factor (Chronic)</b>	1
<b>Chronic toxicity - fish early life stage</b>	NOEC, 35 days, 35 days: 0.18 mg/l, Pimephales promelas (Fat-head Minnow) REACH dossier information.
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 21 days, 21 days: 0.03 mg/l, REACH dossier information.

### PERMETHRIN (25:75) TECHNICAL

#### Acute aquatic toxicity

<b>LE(C)<sub>50</sub></b>	$0.0001 < L(E)C_{50} \leq 0.001$
<b>M factor (Acute)</b>	1000
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours, 96 hours: 0.62 µg/l, Salmo gairdneri (Rainbow trout)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 96 hours, 96 hours: 0.62 µg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	ErC <sub>50</sub> , 96 hours, 96 hours: 92 µg/l, Skeletonema costatum

#### Chronic aquatic toxicity

<b>M factor (Chronic)</b>	1000
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### TETRAMETHRIN

<b>Toxicity</b>	Very toxic to aquatic life with long lasting effects.
<b>Acute aquatic toxicity</b>	
<b>LE(C)<sub>50</sub></b>	$0.001 < L(E)C_{50} \leq 0.01$
<b>M factor (Acute)</b>	100
<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours, 96 hours: 0.033 mg/l, Brachydanio rerio (Zebra Fish)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 48 hours, 48 hours: 0.47 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	IC <sub>50</sub> , 72 hours, 72 hours: 1.36 mg/l, Scenedesmus subspicatus
<b>Chronic aquatic toxicity</b>	
<b>M factor (Chronic)</b>	100

#### 12.2. Persistence and degradability

#### Ecological information on ingredients.

### PIPERONYL BUTOXIDE

<b>Persistence and degradability</b>	The product is not readily biodegradable.
<b>Phototransformation</b>	Air. - Degradation (%) 50: = 3.6 hours REACH dossier information. water - DT <sub>50</sub> : = 8.4 hours REACH dossier information.

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**Stability (hydrolysis)** pH7 - Half-life >: 500 days @ 25°C @ °C  
REACH dossier information.

### PERMETHRIN (25:75) TECHNICAL

**Persistence and degradability** This product is not expected to be readily biodegradable.

**Biodegradation** Soil - DT<sub>50</sub> : < 28 days

### TETRAMETHRIN

**Persistence and degradability** The product is moderately biodegradable.

### 12.3. Bioaccumulative potential

**Partition coefficient** Not relevant.

### Ecological information on ingredients.

#### PIPERONYL BUTOXIDE

**Bioaccumulative potential** BCF: = 380, Lepomis macrochirus (Bluegill) REACH dossier information.

**Partition coefficient** log Pow: = 4.8 REACH dossier information.

### PERMETHRIN (25:75) TECHNICAL

**Bioaccumulative potential** BCF: < 750,

**Partition coefficient** log Kow: 6.5

### TETRAMETHRIN

**Bioaccumulative potential** BCF: 634,

**Partition coefficient** log Kow: 4.6

### 12.4. Mobility in soil

### Ecological information on ingredients.

#### PIPERONYL BUTOXIDE

**Mobility** Semi-mobile.

**Adsorption/desorption coefficient** Soil - Koc: = 830 @ °C REACH dossier information.

### PERMETHRIN (25:75) TECHNICAL

**Mobility** Not considered mobile.

**Adsorption/desorption coefficient** Soil - Koc: > 5000 @ °C

### TETRAMETHRIN

**Mobility** Not considered mobile.

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Adsorption/desorption coefficient      Soil - Koc: 1423 @ °C

### 12.5. Results of PBT and vPvB assessment

**Results of PBT and vPvB assessment**      This product does not contain any substances classified as PBT or vPvB.

### Ecological information on ingredients.

#### PIPERONYL BUTOXIDE

**Results of PBT and vPvB assessment**      This substance is not classified as PBT or vPvB according to current EU criteria.

#### PERMETHRIN (25:75) TECHNICAL

**Results of PBT and vPvB assessment**      This substance is not classified as PBT or vPvB according to current EU criteria.

#### TETRAMETHRIN

**Results of PBT and vPvB assessment**      This substance is not classified as PBT or vPvB according to current EU criteria.

### 12.6. Other adverse effects

**Other adverse effects**      Not available.

### Ecological information on ingredients.

#### PIPERONYL BUTOXIDE

**Other adverse effects**      Not available.

#### PERMETHRIN (25:75) TECHNICAL

**Other adverse effects**      Not known.

#### TETRAMETHRIN

**Other adverse effects**      Not available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**General information**      Waste is classified as hazardous waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

**Disposal methods**      Dispose of waste via a licensed waste disposal contractor. Waste is suitable for incineration. Do NOT reuse empty containers. Empty containers can be sent for disposal or recycling.

## SECTION 14: Transport information

## PERMOST UNI

### General

Environmentally Hazardous Substance Mark NOT required for single packagings and combination packagings containing inner packagings < 5L for liquids, or < 5kg for solids. (ADR special provision 375, IMDG code 2.10.2.7, IATA special provision A197)

Marine pollutants packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids are not subject to any other provisions of the Code relevant to marine pollutants 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. In the case of marine pollutants also meeting the criteria for inclusion in another hazard class all provisions of this Code relevant to any additional hazards continue to apply.

#### 14.1. UN number

UN No. (ADR/RID)	3082
UN No. (IMDG)	3082
UN No. (ICAO)	3082
UN No. (ADN)	3082

#### 14.2. UN proper shipping name

Proper shipping name (ADR/RID)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PERMETHRIN and TETRAMETHRIN)
Proper shipping name (IMDG)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PERMETHRIN and TETRAMETHRIN)
Proper shipping name (ICAO)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PERMETHRIN and TETRAMETHRIN)
Proper shipping name (ADN)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains PERMETHRIN and TETRAMETHRIN)

#### 14.3. Transport hazard class(es)

ADR/RID class	9
ADR/RID classification code	M6
ADR/RID label	9
IMDG class	9
ICAO class/division	9
ADN class	9

#### Transport labels



#### 14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ADN packing group	III
ICAO packing group	III



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### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant



### 14.6. Special precautions for user

Not available.

### 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not relevant.

## SECTION 15: Regulatory information

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

<b>National regulations</b>	HSE approval no. 6399. PCS approval no. 96763. This safety data sheet does not form part of the label approved under the Control of Pesticide Regulations 1986. Following the instructions on the pesticide product label for the specified uses should ensure that the product is used safely and efficaciously for those uses.
<b>EU legislation</b>	Dangerous Substances Directive 67/548/EEC. Dangerous Preparations Directive 1999/45/EC. 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 (as amended). 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) (as amended).
<b>Health and environmental listings</b>	Regulation (EC) No 2037/2000 of the European Parliament and of the Council of 29 June 2000 on substances that deplete the ozone layer (as amended). None of the ingredients are listed. Regulation (EC) 689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals (as amended). The following ingredients are listed: Permethrin
<b>Authorisations (Title VII Regulation 1907/2006)</b>	No specific authorisations are known for this product.
<b>Restrictions (Title VIII Regulation 1907/2006)</b>	No specific restrictions on use are known for this product.

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

## SECTION 16: Other information

<b>Abbreviations and acronyms used in the safety data sheet</b>	PBT - Persistent, bioaccumulative and toxic. vPvB - Very persistent and very bioaccumulative EN - European standard adopted by the European Committee for Standardisation.
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## PERMOST UNI

<b>Key literature references and sources for data</b>	International Chemical Safety Card. The International Union of Pure and Applied Chemistry (IUPAC) pesticide properties database - <a href="http://sitem.herts.ac.uk/aeru/iupac/index.htm">http://sitem.herts.ac.uk/aeru/iupac/index.htm</a> United Kingdom National Poison Information Service monograph. International Programme on Chemical Safety (IPCS) Environmental Health Criteria. World Health Organisation (WHO)/Food and Agriculture Organisation of the United Nations (FAO) Joint Meeting on Pesticide Residues monographs and evaluations. World Health Organisation (WHO)/Food and Agriculture Organisation of the United Nations (FAO) Pesticide Data Sheet. Available from <a href="http://www.inchem.org">www.inchem.org</a> . Disseminated REACH registration dossier - <a href="http://apps.echa.europa.eu/registered/registered-sub.aspx">http://apps.echa.europa.eu/registered/registered-sub.aspx</a> Supplier safety data sheet (SDS). European Chemicals Agency, <a href="http://echa.europa.eu/">http://echa.europa.eu/</a>
<b>Revision comments</b>	NOTE: Lines within the margin indicate significant changes from the previous revision.
<b>Revision date</b>	11/03/2016
<b>Revision</b>	7
<b>Supersedes date</b>	10/07/2014
<b>SDS number</b>	10107
<b>Risk phrases in full</b>	R20/22 Harmful by inhalation and if swallowed. R43 May cause sensitisation by skin contact. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R65 Harmful: may cause lung damage if swallowed.
<b>Hazard statements in full</b>	H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H317 May cause an allergic skin reaction. H332 Harmful if inhaled. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. EUH208 Contains PERMETHRIN (25:75) TECHNICAL. May produce an allergic reaction.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.