

Revision Date 10/07/2014

Revision 6

Supersedes date 13/01/2012



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 No. 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

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

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards	Not classified.
Human health	Asp. Tox. 1 - H304
Environment	Aquatic Acute 1 - H400; Aquatic Chronic 1 - H410

Classification (1999/45/EEC)

Xn;R65. N;R50/53.

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

2.2. Label elements

Contains DISTILLATES (PETROLEUM), HYDROTREATED LIGHT
PERMETHRIN

Label In Accordance With (EC) No. 1272/2008



Signal Word

Danger

Hazard Statements

H304	May be fatal if swallowed and enters airways.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements

P273	Avoid release to the environment.
P301+310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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P331	Do NOT induce vomiting.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local regulations.

Supplemental label information

EUH208 Contains permethrin. May produce an allergic reaction.

2.3. Other hazards

This product does not contain any PBT or vPvB substances.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**3.2. Mixtures**

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT		60-100%
CAS-No.: 64742-47-8	EC No.: 265-149-8	Registration Number: 01-2119484819-18-0001
Classification (EC 1272/2008) EUH066 Asp. Tox. 1 - H304	Classification (67/548/EEC) Xn;R65. R66.	
PIPERONYL BUTOXIDE		< 1%
CAS-No.: 51-03-6	EC No.: 200-076-7	
Classification (EC 1272/2008) Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC) N;R50/53.	
PERMETHRIN		2.5 g/l min
CAS-No.: 52645-53-1	EC No.: 258-067-9	
Classification (EC 1272/2008) Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Sens. 1 - H317 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC) Xn;R20/22. N;R50/53. R43.	
TETRAMETHRIN		1 g/l min
CAS-No.: 7696-12-0	EC No.: 231-711-6	
Classification (EC 1272/2008) Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC) N;R50/53.	
2,6-DI-TERT-BUTYL-P-CRESOL		< 1%
CAS-No.: 128-37-0	EC No.: 204-881-4	Registration Number: 01-2119480433-40-XXXX
Classification (EC 1272/2008) Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	Classification (67/548/EEC) N;R50/53.	

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

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SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

General information

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.

Inhalation

Move the exposed 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.

Ingestion

DO NOT INDUCE VOMITING! Rinse mouth thoroughly. Get medical attention immediately! If breathing stops, provide artificial respiration.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention promptly if symptoms occur after washing.

Eye contact

Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Get medical attention immediately. Continue to rinse.

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

Inhalation

Coughing. Difficulty in breathing.

Ingestion

Burning sensation. Diarrhoea. Nausea, vomiting.

Skin contact

Burning sensation. Redness.

Eye contact

Redness. Pain.

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

If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat Symptomatically.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products

When heated, toxic and corrosive vapours/gases may be formed. Hydrogen chloride (HCl). Oxides of: Carbon. Nitrogen.

Specific hazards

Dike and collect extinguishing water. Avoid releasing to the environment. Do not discharge into drains, water courses or onto the ground.

5.3. Advice for firefighters

Special Fire Fighting Procedures

In case of fire and/or explosion do not breathe fumes

Protective equipment for fire-fighters

Wear full protective clothing (EN 469). Self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

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

Do not discharge into drains, water courses or onto the ground. Stop leak if possible without risk.

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6.3. Methods and material for containment and cleaning up

Absorb with sand or other inert absorbent. Dike far ahead of larger spills for later disposal. Ensure that waste and contaminated materials are collected and removed from the work area as soon as possible in a suitably labelled container. This material and its container must be disposed of as hazardous waste.

6.4. 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**

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. Do not allow to enter 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

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)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters**

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
2,6-DI-TERT-BUTYL-P-CRESOL	WEL		10 mg/m ³			

WEL = Workplace Exposure Limit.

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

Industry	Inhalation.	Short Term	Systemic Effects	2 mg/m ³
Consumer	Oral	Long Term	Systemic Effects	0.3 mg/kg/day

PNEC

Freshwater	0.0041	mg/l
Marinewater	0.0041	mg/l
Sediment (Freshwater)	0.731	mg/kg
Sediment (Marinewater)	0.731	mg/kg
Soil	0.35	mg/kg

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 ³
Industry	Dermal	Short Term	Local Effects	444 µg/cm ²
Industry	Inhalation.	Short Term	Local Effects	3.875 mg/m ³
Industry	Dermal	Long Term	Systemic Effects	27.778 mg/kg/day
Industry	Inhalation.	Long Term	Systemic Effects	3.875 mg/m ³
Industry	Dermal	Long Term	Local Effects	444 µg/cm ²
Industry	Inhalation.	Long Term	Local Effects	0.222 mg/m ³

PNEC

Freshwater	0.003	mg/l
Marinewater	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

DISTILLATES (PETROLEUM), HYDROTREATED LIGHT (CAS: 64742-47-8)DNEL

Consumer	Oral	Long Term	19	mg/kg/day
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8.2. Exposure controls

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Engineering measures

Provide adequate ventilation.

Respiratory equipment

Respiratory protection may be required. If ventilation is insufficient, suitable respiratory protection must be provided. Use respiratory equipment with particle filter, type P1. (EN 140/143)

Hand protection

Wear protective gloves (EN 374).

Eye protection

Avoid contact with eyes. Wear approved safety goggles (EN 166).

Other Protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals.

Thermal hazards

No data available.

Environmental Exposure Controls

Do not release into the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

<u>Appearance</u>	Liquid
<u>Colour</u>	Colourless.
<u>Odour</u>	Mild.
<u>Initial boiling point and boiling range (°C)</u>	
Not available.	
<u>Melting point (°C)</u>	
Not available.	
<u>Relative density</u>	0.795 - 0.815
<u>Vapour density (air=1)</u>	
Not available.	
<u>Vapour pressure</u>	
Not available.	
<u>Evaporation rate</u>	
Not available.	
<u>pH-Value, Conc. Solution</u>	5 - 7
<u>Viscosity</u>	
Not available.	
<u>Solubility Value (G/100G H₂O@20°C)</u>	
Not available.	
<u>Decomposition temperature (°C)</u>	
Not available.	
<u>Odour Threshold, Lower</u>	
Not available.	
<u>Odour Threshold, Upper</u>	
Not available.	
<u>Flash point (°C)</u>	> 60 °C ISO 3679
<u>Auto Ignition Temperature (°C)</u>	
Not available.	
<u>Flammability Limit - Lower(%)</u>	
Not available.	
<u>Flammability Limit - Upper(%)</u>	
Not available.	
<u>Partition Coefficient (N-Octanol/Water)</u>	
Not relevant	
<u>Explosive properties</u>	
Not available.	

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Oxidising properties

Not available.

9.2. Other information

Not available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

None known.

Hazardous Polymerisation

Will not polymerise.

10.4. Conditions to avoid

Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials To Avoid

Strong oxidising substances. Strong acids. Strong alkalis.

10.6. Hazardous decomposition products

None under normal conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Toxicological information

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

Acute toxicity:

Acute Toxicity (Oral LD50)

Calculation method.

Based on available data the classification criteria are not met.

Acute Toxicity (Dermal LD50)

Calculation method.

Based on available data the classification criteria are not met.

Acute Toxicity (Inhalation LC50)

Calculation method.

Based on available data the classification criteria are not met.

Skin Corrosion/Irritation:

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

Serious eye damage/irritation:

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

Respiratory or skin sensitisation:

Respiratory sensitisation

Data lacking.

Skin sensitisation

Calculation method.

Based on available data the classification criteria are not met.

Germ cell mutagenicity:

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Genotoxicity - In Vitro

Calculation method.

Genotoxicity - In Vivo

Calculation method.

Based on available data the classification criteria are not met.

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:

Calculation method.

Harmful: may cause lung damage if swallowed.

Toxicological information on ingredients.

PERMOST UNI
TETRAMETHRIN (CAS: 7696-12-0)

Acute toxicity:

Acute Toxicity (Oral LD50)

> 2000 mg/kg Rat

Based on available data the classification criteria are not met.

Acute Toxicity (Dermal LD50)

> 2000 mg/kg Rat

Based on available data the classification criteria are not met.

Acute Toxicity (Inhalation LC50)

> 5.63 mg/l (dust/mist) Rat 4 hours

Based on available data the classification criteria are not met.

Skin Corrosion/Irritation:

Based on available data the classification criteria are not met.

Serious eye damage/irritation:

Based on available data the classification criteria are not met.

Respiratory or 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.

This substance has no evidence of carcinogenic properties.

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:

Not relevant, due to the form of the product.

PERMOST UNI
PERMETHRIN (CAS: 52645-53-1)

Acute toxicity:

Acute Toxicity (Oral LD50)

1600 mg/kg Rat

Harmful if swallowed.

Acute Toxicity (Dermal LD50)

> 2000 mg/kg Rat

Based on available data the classification criteria are not met.

Acute Toxicity (Inhalation LC50)

> 24 mg/l (dust/mist) Rat 4 hours

Harmonised classification.

Harmful if inhaled.

Skin Corrosion/Irritation:

Based on available data the classification criteria are not met.

Serious eye damage/irritation:

Based on available data the classification criteria are not met.

Respiratory or skin sensitisation:

May cause an allergic skin reaction.

Germ cell mutagenicity:

Non-genotoxic.

Based on available data the classification criteria are not met.

Carcinogenicity:

No indication of human carcinogenicity.

Based on available data the classification criteria are not met.

Reproductive Toxicity:

No reproductive or developmental effects occurred at non-parentally toxic doses.

Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure:

Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure:

Based on available data the classification criteria are not met.

Aspiration hazard:

Based on available data the classification criteria are not met.

PERMOST UNI
PIPERONYL BUTOXIDE (CAS: 51-03-6)

Acute toxicity:

Acute Toxicity (Oral LD50)

5360 mg/kg Rat

REACH dossier information

Based on available data the classification criteria are not met.

Acute Toxicity (Dermal LD50)

> 2000 mg/kg Rabbit

REACH dossier information

Based on available data the classification criteria are not met.

Acute Toxicity (Inhalation LC50)

> 5.9 mg/l (dust/mist) Rat 4 hours

REACH dossier information

Based on available data the classification criteria are not met.

Skin Corrosion/Irritation:

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:

Not Irritating. REACH dossier information Based on available data the classification criteria are not met.

Respiratory or skin sensitisation:

Respiratory sensitisation

Data lacking.

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:

REACH dossier information

Negative.

Based on available data the classification criteria are not met.

Genotoxicity - In Vivo

Chromosome aberration:

REACH dossier information

Negative.

Based on available data the classification criteria are not met.

Carcinogenicity:

Carcinogenicity

NOAEL 30 mg/kg/day Oral Rat

REACH dossier information

Based on available data the classification criteria are not met.

Reproductive Toxicity:

Reproductive Toxicity - Fertility

Two-generation study: NOAEL 1000 ppm Oral Rat P

REACH dossier information

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Based on available data the classification criteria are not met.

Reproductive Toxicity - Development

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.

Specific target organ toxicity - single exposure:

STOT - Single exposure

Data lacking.

Specific target organ toxicity - repeated exposure:

STOT - Repeated exposure

NOAEL 15.5 mg/kg Oral

REACH dossier information

Based on available data the classification criteria are not met.

Aspiration hazard:

Not relevant, due to the form of the product.

PERMOST UNI
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT (CAS: 64742-47-8)

Acute toxicity:

Acute Toxicity (Oral LD50)

> 5000 mg/kg Rat

REACH dossier information

Based on available data the classification criteria are not met.

Acute Toxicity (Dermal LD50)

> 2000 mg/kg Rabbit

REACH dossier information

Based on available data the classification criteria are not met.

Acute Toxicity (Inhalation LC50)

> 5.28 mg/l (vapours)

REACH dossier information

Based on available data the classification criteria are not met.

Skin Corrosion/Irritation:

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:

Not Irritating. REACH dossier information Based on available data the classification criteria are not met.

Respiratory or skin sensitisation:

Respiratory sensitisation

Data lacking.

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

Gene Mutation:

REACH dossier information

Negative.

Based on available data the classification criteria are not met.

Genotoxicity - In Vivo

Chromosome aberration:

REACH dossier information

Negative.

Based on available data the classification criteria are not met.

Carcinogenicity:

REACH dossier information

Based on available data the classification criteria are not met.

Reproductive Toxicity:

Reproductive Toxicity - Fertility

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.

Reproductive Toxicity - Development

Developmental toxicity: NOAEL > 364 ppm Inhalation.

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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:

Viscosity

Kinematic viscosity \leq 20.5 mm²/s.

REACH dossier information

May be fatal if swallowed and enters airways.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

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

Ecological information on ingredients.

TETRAMETHRIN (CAS: 7696-12-0)

Very toxic to aquatic life with long lasting effects.

Acute Toxicity - Fish

LC50 96 hours = 0.033 mg/l Brachydanio rerio (Zebra Fish)

Acute Toxicity - Aquatic Invertebrates

EC50 48 hours = 0.47 mg/l Daphnia magna

Acute Toxicity - Aquatic Plants

IC50 72 hours = 1.36 mg/l Scenedesmus subspicatus

PERMETHRIN (CAS: 52645-53-1)

Acute Toxicity - Fish

LC50 96 hours = 0.62 µg/l Salmo gairdneri (Rainbow trout)

Acute Toxicity - Aquatic Invertebrates

EC50 96 hours = 0.62 µg/l Daphnia magna

Acute Toxicity - Aquatic Plants

ErC50 96 hours = 92 µg/l Skeletonema costatum

PIPERONYL BUTOXIDE (CAS: 51-03-6)

Acute Toxicity - Fish

LC50 96 hours = 3.94 mg/l

REACH dossier information

Acute Toxicity - Aquatic Invertebrates

EC50 48 hours = 0.51 mg/l Daphnia magna

REACH dossier information

Acute Toxicity - Aquatic Plants

ErC50 72 hours = 3.89 mg/l Selenastrum capricornutum

REACH dossier information

Chronic Toxicity - Fish Early life Stage

NOEC 35 days = 0.18 mg/l Pimephales promelas (Fat-head Minnow)

REACH dossier information

Chronic Toxicity - Aquatic Invertebrates

NOEC 21 days = 0.03 mg/l

REACH dossier information

12.2. Persistence and degradability

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Ecological information on ingredients.

Degradability

The product is moderately biodegradable.

Degradability

This product is expected to be not readily biodegradable.

Biodegradation

Soil DT50 < 28 days

Degradability

The product is not readily biodegradable.

Phototransformation

Air. Degradation (50%) = 3.6 hours

REACH dossier information

Water DT50 = 8.4 hours

REACH dossier information

Stability (Hydrolysis)

pH7 Half-life: > 500 days @ 25°C

REACH dossier information

TETRAMETHRIN (CAS: 7696-12-0)

PERMETHRIN (CAS: 52645-53-1)

PIPERONYL BUTOXIDE (CAS: 51-03-6)

12.3. Bioaccumulative potential

Partition coefficient

Not relevant

Ecological information on ingredients.

Bioaccumulation factor

BCF 634

Partition coefficient

log Kow 4.6

Bioaccumulation factor

BCF < 750

Partition coefficient

log Kow 6.5

Bioaccumulation factor

BCF = 380 Lepomis macrochirus (Bluegill)

REACH dossier information

Partition coefficient

log Pow = 4.8

REACH dossier information

TETRAMETHRIN (CAS: 7696-12-0)

PERMETHRIN (CAS: 52645-53-1)

PIPERONYL BUTOXIDE (CAS: 51-03-6)

12.4. Mobility in soil

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Ecological information on ingredients.

Mobility:

Not considered mobile.

Adsorption/Desorption Coefficient

Soil Koc 1423

TETRAMETHRIN (CAS: 7696-12-0)

PERMETHRIN (CAS: 52645-53-1)

Mobility:

Not considered mobile.

Adsorption/Desorption Coefficient

Soil Koc > 5000

PIPERONYL BUTOXIDE (CAS: 51-03-6)

Mobility:

Semi-mobile.

Adsorption/Desorption Coefficient

Soil Koc = 830

REACH dossier information

12.5. Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB substances.

Ecological information on ingredients.

Not Classified as PBT/vPvB by current EU criteria.

TETRAMETHRIN (CAS: 7696-12-0)

Not Classified as PBT/vPvB by current EU criteria.

PERMETHRIN (CAS: 52645-53-1)

Not Classified as PBT/vPvB by current EU criteria.

PIPERONYL BUTOXIDE (CAS: 51-03-6)

12.6. Other adverse effects

Not available.

Ecological information on ingredients.

Not available.

TETRAMETHRIN (CAS: 7696-12-0)

Not known.

PERMETHRIN (CAS: 52645-53-1)

Not available.

PIPERONYL BUTOXIDE (CAS: 51-03-6)

SECTION 13: DISPOSAL CONSIDERATIONS

General information

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

13.1. Waste treatment methods

Contact specialist disposal companies. Waste is suitable for incineration. Do NOT reuse empty containers. Empty containers can be sent for disposal or recycling.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

UN No. (ADR/RID/ADN) 3082

UN No. (IMDG) 3082

UN No. (ICAO) 3082

14.2. UN proper shipping name

Proper Shipping Name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

PERMOST UNIProper Shipping Name (contains Permethrin and Tetramethrin)**14.3. Transport hazard class(es)**

<u>ADR/RID/ADN Class</u>	9
<u>ADR Label No.</u>	9
<u>IMDG Class</u>	9
<u>ICAO Class/Division</u>	9
<u>Transport Labels</u>	

**14.4. Packing group**

<u>ADR/RID/ADN Packing group</u>	III
<u>IMDG Packing group</u>	III
<u>ICAO Packing group</u>	III

14.5. Environmental hazardsEnvironmentally Hazardous Substance/Marine Pollutant**14.6. Special precautions for user**

Not applicable.

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

Not applicable.

SECTION 15: REGULATORY INFORMATION**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**Uk Regulatory References

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).

EU Legislation

Dangerous Substance 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 with amendments. 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 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

National Regulations

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.

Health and Environmental Listings

Regulation EC 2037/2000 on substances that deplete the ozone layer. None of the ingredients are listed. Regulation EC 689/2008 concerning the export and import of dangerous chemicals. The following ingredients are listed: Permethrin

PERMOST UNI

Authorisations (Title VII Regulation 1907/2006)

No specific authorisations are noted for this product.

Restrictions (Title VIII Regulation 1907/2006)

No specific restrictions of use are noted for this product.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms used in the safety data sheet

PBT - Persistent, bioaccumulative and toxic. vPvB - Very persistent and very bioaccumulative EN - European standard adopted by the European Committee for Standardisation.

Information Sources

International Chemical Safety Card. The International Union of Pure and Applied Chemistry (IUPAC) pesticide properties database - <http://sitem.herts.ac.uk/aeru/iupac/index.htm> 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 www.inchem.org. Disseminated REACH registration dossier - <http://apps.echa.europa.eu/registered/registered-sub.aspx> Supplier safety data sheet (SDS).

Revision Comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision Date 10/07/2014

Revision 6

Supersedes date 13/01/2012

Date 10/07/2014

Risk Phrases In Full

R20/22 Harmful by inhalation and if swallowed.
R65 Harmful: may cause lung damage if swallowed.
R43 May cause sensitisation by skin contact.
R66 Repeated exposure may cause skin dryness or cracking.
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Hazard Statements In Full

H332 Harmful if inhaled.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.
EUH066 Repeated exposure may cause skin dryness or cracking.
H410 Very toxic to aquatic life with long lasting effects.
H400 Very toxic to aquatic life.

Disclaimer

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.

Piperonyl Butoxide (EC 200-07-6) - Exposure Scenario

Exposure Scenario n.3: USE OF END-PRODUCTS by professional users
Identified use: synergist for insecticide formulations
Related use descriptors: SU22; PROC11; ERC8a/8d
Market sector: PC8; PC27; PC35
Products characteristics
Physical state of the mixtures at 20°C and 1.013 Pa: liquid Content of the substance in the mixtures: up to 200g/l
Amounts used
Range concentrations used: 1.35×10^{-3} - 2.7×10^{-2} g/m ² ; for outdoor applications; 5×10^{-3} - 1.8×10^{-2} g/m ² (for indoor applications)
Frequency and duration of use
Frequency: continuous use/release (> 150 d/y) Duration: 1-7 h/d
Operational conditions affecting workers exposure
Application temperature: ambient temperature Outdoor application: by spraying using vehicle-mounted application equipment Indoor application: the operator moves backwards in respect of spraying emission
Organisational measures to prevent /limit releases, dispersion and exposure
Regular training of workers (RMM library code: 23 - Organisational - competence and training); Good Hygiene Practices and Housekeeping (RMM library code: W27.01 - Good Hygiene Practices and Housekeeping)
Conditions and measures related to personal protection, hygiene and health evaluation
Protective Gloves - chemical resistant (RMM library code: CW29.01 - Personal protective equipment: hand protection); Gas/vapours filter mask: (RMM Library code: CW30.01 - Personal protective equipment: respiratory protection) Protective clothing (RMM library code: W28.01- Personal protective equipment: body protection)
Conditions and measures related to external treatment of waste for disposal
Waste disposal (residual product and containers): in authorized landfills or incineration plants (RMM library code: E14.05 - Reduction of waste, disposal of waste)
Exposure estimation and reference to its source
<u>Workers-Outdoor application</u> Dermal systemic exposure: 4.7×10^{-2} mg/kg bw/day (based on data provided in the Bayesian Exposure Assessment Toolkit); RCR = 1.69×10^{-3} ; Inhalation exposure: 2.8×10^{-3} mg/m ³ ; RCR = 7×10^{-4} ;
<u>Workers-Indoor application</u> Dermal systemic exposure: 8.1×10^{-3} mg/kg bw/day (based on experimental studies for professional indoor fogging application); RCR = 3×10^{-4} ; Inhalation exposure: 9.75×10^{-2} mg/m ³ ; RCR = 2.52×10^{-2} ;
<u>Environment-Outdoor application</u> (estimated by EUSES programme) PEC freshwater: 6.98×10^{-5} mg/l; RCR = 2.33×10^{-2} PEC freshwater sediment: 2.15×10^{-3} mg/kg dw; RCR = 1.11×10^{-1} PEC freshwater food chain (in fish): 3.43×10^{-3} mg/kg food; RCR = 2.74×10^{-4} PEC terrestrial food chain (in earthworms): 1.29×10^{-1} mg/kg dw; RCR = 1.03×10^{-2} PEC agricultural soil: 4.94×10^{-3} mg/kg dw; RCR = 3.63×10^{-2} PEC for micro-organisms in the STP: 5.76×10^{-3} mg/l; RCR = 5.76×10^{-4}
<u>Environment-Indoor application</u> (estimated by EUSES programme) PEC freshwater: 4.45×10^{-4} mg/l; RCR = 1.48×10^{-1} PEC freshwater sediment: 1.37×10^{-2} mg/kg dw; RCR = 7.06×10^{-1} PEC freshwater food chain (in fish): 4.76×10^{-3} mg/kg food; RCR = 3.8×10^{-4} PEC terrestrial food chain (in earthworms): 1.77×10^{-1} mg/kg dw; RCR = 1.41×10^{-2} PEC agricultural soil: 2.49×10^{-2} mg/kg dw; RCR = 1.83×10^{-1} PEC for micro-organisms in the STP: 4.45×10^{-2} mg/l; RCR = 4.45×10^{-3}

Odourless Kerosine (EC 265-149-8) – Generic Exposure Scenario

9.20 Use of Kerosine in Agrochemicals – Professional

9.20.1 Exposure Scenario

Section 1 Exposure Scenario Title Kerosine	
Title	
Use in Agrochemicals	
Use Descriptor	
Sector(s) of Use	22
Process Categories	1, 2, 4, 8a, 8b, 11, 13 <i>Further information on the mapping and allocation of PROC codes is contained in Table 9.1</i>
Environmental Release Categories	8a, 8d
Specific Environmental Release Category	ESVOC SpERC 8.11a.v1
Processes, tasks, activities covered	
Use as an agrochemical excipient for application by manual or machine spraying, smokes and fogging; including equipment clean-downs and disposal.	
Assessment Method	
See Section 3.	
Section 2 Operational conditions and risk management measures	
Section 2.1 Control of worker exposure	
Product characteristics	
Physical form of product	Liquid
Vapour pressure (kPa)	Liquid, vapour pressure 0.5 - 10 kPa at STP. OC4.
Concentration of substance in product	Covers percentage substance in the product up to 100 % (unless stated differently) G13
Frequency and duration of use/exposure	Covers daily exposures up to 8 hours (unless stated differently) G2
Other Operational Conditions affecting exposure	Assumes use at not more than 20°C above ambient temperatures, unless stated differently. G15. Assumes a good basic standard of occupational hygiene is implemented G1
Contributing Scenarios	Specific Risk Management Measures and Operating Conditions
General measures (skin irritants) G19.	Avoid direct skin contact with product. Identify potential areas for indirect skin contact. Wear gloves (tested to EN374) if hand contact with substance likely. Clean up contamination/spills as soon as they occur. Wash off skin contamination immediately. Provide basic employee training to prevent / minimise exposures and to report any skin effects that may develop. E3
CS22 Transfer from/pouring from containers	No other specific measures identified. EI20
CS23 Mixing in containers	No other specific measures identified. EI20
CS24 Spraying/fogging by manual application	No other specific measures identified. EI20
CS25 Spraying/fogging by machine application	No other specific measures identified. EI20
CS27 Ad hoc manual application via trigger sprays, dipping, etc.	No other specific measures identified. EI20
CS39 Equipment cleaning and maintenance	No other specific measures identified. EI20
CS85 Bulk Product Storage	No other specific measures identified. EI20
Additional information on the basis for the allocation of the identified OCs and RMMs is contained in Appendices 1 to 3	

Odourless Kerosine (EC 265-149-8) – Generic Exposure Scenario

Section 2.2 Control of environmental exposure	
Product characteristics	
Substance is complex UVCB [PrC3]. Predominantly hydrophobic [PrC4a].	
Amounts used	
Fraction of EU tonnage used in region	0.1
Regional use tonnage (tonnes/year)	3.1e2
Fraction of Regional tonnage used locally	0.002
Annual site tonnage (tonnes/year)	6.2e-1
Maximum daily site tonnage (kg/day)	1.7
Frequency and duration of use	
Continuous release [FD2].	
Emission days (days/year)	365
Environmental factors not influenced by risk management	
Local freshwater dilution factor	10
Local marine water dilution factor	100
Other given operational conditions affecting environmental exposure	
Release fraction to air from wide dispersive use (regional only)	0.9
Release fraction to wastewater from wide dispersive use	0.01
Release fraction to soil from wide dispersive use (regional only)	0.09
Technical conditions and measures at process level (source) to prevent release	
Common practices vary across sites thus conservative process release estimates used [TCS1].	
Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil	
Risk from environmental exposure is driven by freshwater [TCR1a].	
No wastewater treatment required [TCR6].	
Treat air emission to provide a typical removal efficiency of (%)	N/A
Treat onsite wastewater (prior to receiving water discharge) to provide the required removal efficiency \geq (%)	0
If discharging to domestic sewage treatment plant, provide the required onsite wastewater removal efficiency of \geq (%)	0
Organisation measures to prevent/limit release from site	
Do not apply industrial sludge to natural soils [OMS2]. Sludge should be incinerated, contained or reclaimed [OMS3].	
Conditions and measures related to municipal sewage treatment plant	
Estimated substance removal from wastewater via domestic sewage treatment (%)	94.7
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs (%)	94.7
Maximum allowable site tonnage (M_{Safe}) based on release following total wastewater treatment removal (kg/d)	2.1e2
Assumed domestic sewage treatment plant flow (m^3/d)	2000
Conditions and measures related to external treatment of waste for disposal	
External treatment and disposal of waste should comply with applicable local and/or national regulations [ETW3].	
Conditions and measures related to external recovery of waste	
External recovery and recycling of waste should comply with applicable local and/or national regulations [ERW1].	
Additional information on the basis for the allocation of the identified OCs and RMMs is contained in Petrorisk file in IUCLID Section 13 - "LocalCSR" worksheet.	
Section 3 Exposure Estimation	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated. G21.	

Odourless Kerosine (EC 265-149-8) – Generic Exposure Scenario

3.2. Environment
The Hydrocarbon Block Method has been used to calculate environmental exposure with the Petrorisk model [EE2].
Section 4 Guidance to check compliance with the Exposure Scenario
4.1. Health
Available hazard data do not enable the derivation of a DNEL for dermal irritant effects. G32 . Risk Management Measures are based on qualitative risk characterisation. G37 .
Available hazard data do not support the need for a DNEL to be established for other health effects. G36 . Users are advised to consider national Occupational Exposure Limits or other equivalent values. G38 .
Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels. G23 .
4.2. Environment
Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures [DSU1]. Required removal efficiency for wastewater can be achieved using onsite/offsite technologies, either alone or in combination [DSU2]. Required removal efficiency for air can be achieved using onsite technologies, either alone or in combination [DSU3]. Further details on scaling and control technologies are provided in SpERC factsheet (http://cefic.org/en/reach-for-industries-libraries.html) [DSU4].

9.20.2 Exposure Estimation

9.20.2.1 Human Health

See Appendix 2.a and 2.b.

9.20.2.2 Environment

See PETRORISK file in IUCLID Section 13 - "LocalCSR" worksheet