

10 Hour Chrono

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 11/07/2016 Revision date: 20/09/2022 Supersedes version of: 17/07/2020 Version: 3.0

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

1.1. Product identifier

Product form : Mixture
Product name : 10 Hour Chrono
UFI : XUNT-0H1U-AJ05-JFTN
Other means of identification : Bed bugs 0%

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Anti-bedbug insecticide et miticide
Function or use category : Biocide

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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69009 LYON
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bh.diffusion@hotmail.com - www.tranquilleo.fr

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD 2090 Msida	+356 2545 6508	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Eye Irrit. 2 H319
Skin Sens. 1 H317
Aquatic Acute 1 H400
Aquatic Chronic 1 H410
Full text of hazard classes, H- and EUH-statements: see section 16

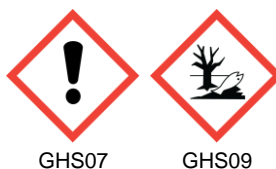
Adverse physicochemical, human health and environmental effects

May cause an allergic skin reaction. Causes serious eye irritation. Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS07

GHS09

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Signal word (CLP)	: Warning
Contains	: Permethrin (ISO), Geraniol, (R)-p-mentha-1,8-diene, pin-2(3)-ene, Linalyl acetate, p-menth-1-en-4-ol, (-)-pin-2(10)-ene, Linalool
Hazard statements (CLP)	: H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P103 - Read carefully and follow all instructions. P273 - Avoid release to the environment. P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Other hazards which do not result in classification : None, to our knowledge.

To our knowledge, contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Piperonyl butoxide (ISO) (51-03-6)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
Permethrin (ISO) (52645-53-1)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
Geraniol (106-24-1)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
Diethyl phthalate (84-66-2)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
Linalool (78-70-6)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
Linalyl acetate (115-95-7)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
(R)-p-mentha-1,8-diene (5989-27-5)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
Bornan-2-one (76-22-2)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
p-menth-1-en-4-ol (562-74-3)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
pin-2(3)-ene (80-56-8)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
p-cymene (99-87-6)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
7-methyl-3-methyleneocta-1,6-diene (123-35-3)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
p-mentha-1,4-diene (99-85-4)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
(-)-pin-2(10)-ene (127-91-3, 18172-67-3)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII

To our knowledge, the mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

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Component	
Piperonyl butoxide (ISO)(51-03-6)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
Permethrin (ISO)(52645-53-1)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
Geraniol(106-24-1)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
Diethyl phthalate(84-66-2)	ED: not yet assessed
Linalool(78-70-6)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
Linalyl acetate(115-95-7)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
(R)-p-mentha-1,8-diene(5989-27-5)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
Bornan-2-one(76-22-2)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
p-menth-1-en-4-ol(562-74-3)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
pin-2(3)-ene(80-56-8)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
p-cymene(99-87-6)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
7-methyl-3-methyleneocta-1,6-diene(123-35-3)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
p-mentha-1,4-diene(99-85-4)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
(-)-pin-2(10)-ene(127-91-3, 18172-67-3)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

Comments : Polymer including in the matrix a biocide and a perfume

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Piperonyl butoxide (ISO) (Active substance (Biocide))	CAS-No.: 51-03-6 EC-No.: 200-076-7 REACH-no: 01-2119537431-46	6	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Permethrin (ISO) (Active substance (Biocide))	CAS-No.: 52645-53-1 EC-No.: 258-067-9 EC Index-No.: 613-058-00-2	6	Acute Tox. 4 (Inhalation), H332 (ATE=4.63 mg/l/4h) Acute Tox. 4 (Oral), H302 (ATE=554 mg/kg bodyweight) Skin Sens. 1, H317 Aquatic Acute 1, H400 (M=1000) Aquatic Chronic 1, H410 (M=1000)
Geraniol (Active substance (Biocide))	CAS-No.: 106-24-1 EC-No.: 203-377-1 EC Index-No.: 603-241-00-5 REACH-no: 01-2119552430-49, 01-2119560621-44	< 2	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317
Diethyl phthalate substance with national workplace exposure limit(s) (IE)	CAS-No.: 84-66-2 EC-No.: 201-550-6 REACH-no: 01-2119486682-27	1 - 5	Not classified
Linalool	CAS-No.: 78-70-6 EC-No.: 201-134-4 EC Index-No.: 603-235-00-2 REACH-no: 01-2119474016-42	1 - 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Linalyl acetate	CAS-No.: 115-95-7 EC-No.: 204-116-4 REACH-no: 01-2119454789-19	1 - 5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
(R)-p-mentha-1,8-diene	CAS-No.: 5989-27-5 EC-No.: 227-813-5 EC Index-No.: 601-096-00-2 REACH-no: 01-2119529223-47	< 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Bornan-2-one substance with national workplace exposure limit(s) (IE)	CAS-No.: 76-22-2 EC-No.: 200-945-0 REACH-no: 01-2119966156-31	< 1	Flam. Sol. 2, H228 Acute Tox. 4 (Inhalation), H332 (ATE=1.5 mg/l/4h) Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 2, H371

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
p-menth-1-en-4-ol	CAS-No.: 562-74-3 EC-No.: 209-235-5	< 1	Acute Tox. 4 (Oral), H302 (ATE=1300 mg/kg bodyweight) Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H336
pin-2(3)-ene	CAS-No.: 80-56-8 EC-No.: 201-291-9	< 1	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
p-cymene	CAS-No.: 99-87-6 EC-No.: 202-796-7 REACH-no: 01-2120807345-59	< 1	Flam. Liq. 3, H226 Acute Tox. 3 (Inhalation), H331 (ATE=3 mg/l/4h) Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 2, H361 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
7-methyl-3-methyleneocta-1,6-diene	CAS-No.: 123-35-3 EC-No.: 204-622-5 REACH-no: 01-2119514321-56	< 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
p-mentha-1,4-diene	CAS-No.: 99-85-4 EC-No.: 202-794-6 REACH-no: 01-2120780478-40	< 1	Flam. Liq. 3, H226 Repr. 2, H361 Aquatic Chronic 2, H411
(-)-pin-2(10)-ene	CAS-No.: 127-91-3, 18172-67-3 EC-No.: 204-872-5; 242-060-2 REACH-no: 01-2119519230-54	< 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Move the affected person to the fresh air. Get medical advice and attention if you feel unwell.
- First-aid measures after skin contact : Wash off with plenty of water. In case of redness or irritation, call a doctor.
- First-aid measures after eye contact : Immediately rinse with water for a prolonged period while holding the eyelids wide open. If irritation persists, consult an eye specialist.
- First-aid measures after ingestion : Rinse mouth out with water. Never attempt to induce vomiting. Get medical advice and attention if you feel unwell.

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

- Symptoms/effects after skin contact : May cause an allergic skin reaction.

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Symptoms/effects after eye contact : Eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Carbon dioxide (CO₂). Foam. Powder.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Carbon oxides (CO, CO₂). Various hydrocarbon fragments.

5.3. Advice for firefighters

Firefighting instructions : Contain the extinguishing fluids by bunding (the product is hazardous for the environment). Cool down the containers exposed to heat with a water spray.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Avoid contact with skin.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Do not allow product to spread into the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Mechanically recover the product.
Methods for cleaning up : Wash contaminated area with large amounts of water.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Avoid dust formation.

Hygiene measures : Do not drink, eat or smoke in the workplace. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep in a cool, well-ventilated place. Keep away from heat. Keep away from sources of ignition. Protect from sunlight.

Incompatible products : Strong oxidizing agents.

Packaging materials : Original packaging.

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7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Bornan-2-one (76-22-2)	
Ireland - Occupational Exposure Limits	
Local name	Bornan-2-one [Camphor, synthetic]
OEL TWA [1]	12 mg/m ³
OEL TWA [2]	2 ppm
OEL STEL	18 mg/m ³
OEL STEL [ppm]	3 ppm
Regulatory reference	Chemical Agents Code of Practice 2021
Diethyl phthalate (84-66-2)	
Ireland - Occupational Exposure Limits	
Local name	Diethyl phthalate
OEL TWA [1]	5 mg/m ³
OEL STEL	10 mg/m ³
Regulatory reference	Chemical Agents Code of Practice 2021

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Prolonged and/or repeated handling: Safety glasses. (EN 166)

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable working clothes

Hand protection:

Protective gloves. (EN 374). Breakthrough time : refer to the recommendations of the supplier

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8.2.2.3. Respiratory protection

Respiratory protection:

Not required for normal conditions of use. In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: White.
Odour	: perfumed.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: The product is not flammable
Explosive properties	: Not explosive.
Oxidising properties	: Non oxidizing material according to EC criteria.
Explosive limits	: Not applicable.
Lower explosion limit	: Not applicable.
Upper explosion limit	: Not applicable.
Flash point	: Not applicable.
Auto-ignition temperature	: Not applicable.
Decomposition temperature	: Not available
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: Not applicable.
Solubility	: Water: Insoluble
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20 °C	: Not applicable.
Particle size	: Not available
Particle size distribution	: Not available
Particle shape	: Not available
Particle aspect ratio	: Not available
Particle aggregation state	: Not available
Particle agglomeration state	: Not available
Particle specific surface area	: Not available
Particle dustiness	: Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

To our knowledge, the product does not present any particular risk, under normal conditions of use.

10.2. Chemical stability

The product is stable at normal handling and storage conditions.

10.3. Possibility of hazardous reactions

None to our knowledge.

10.4. Conditions to avoid

High temperature.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

On combustion or on thermal decomposition (pyrolysis) releases : Carbon oxides (CO, CO₂). Various hydrocarbon fragments.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

Permethrin (ISO) (52645-53-1)

LD50 oral rat	554 mg/kg (OECD 401 method)
LD50 dermal rat	> 2000 mg/kg (OECD 402 method)
LC50 inhalation rat	4.63 mg/l/4h (OECD 403 method)

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic) : Very toxic to aquatic life with long lasting effects.

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Piperonyl butoxide (ISO) (51-03-6)	
LC50 fish	3.94 mg/l/96h (Cyprinodon variegatus (sheepshead minnow)) (OECD 203 method)
EC50 Daphnia	0.51 mg/l/48 h (Daphnia magna) (OECD 202 method)
ErC50 algae	3.89 mg/l/72 h (Raphidocelis subcapitata) (OECD 201 method)
NOEC chronic fish	0.18 mg/l 35 days (Pimephales promelas) (EPA OPP 72-4)
NOEC chronic crustacea	0.03 mg/l/ 21 days (Daphnia magna) (EPA OPP 72-4)
NOEC chronic algae	0.824 mg/l/72 h (Raphidocelis subcapitata) (OECD 201 method)
Permethrin (ISO) (52645-53-1)	
LC50 fish	0.0089 mg/l/96h (Oncorhynchus mykiss (Rainbow trout)) (OECD 203 method)
EC50 Daphnia	0.00127 mg/l/48 h (Daphnia magna) (OECD 202 method)
ErC50 algae	> 1.13 mg/l/72 h (Pseudokirchneriella subcapitata) (OECD 201 method)
NOEC chronic fish	0.00041 mg/l 35 days (Danio rerio) (OECD 210 method)
NOEC chronic algae	> 0.0131 mg/l/72 h (Pseudokirchneriella subcapitata) (OECD 201 method)
(R)-p-mentha-1,8-diene (5989-27-5)	
LC50 fish	0.72 mg/l/96h (Pimephales promelas) (OECD 203 method)
EC50 Daphnia	0.307 mg/l/48 h (Daphnia magna) (OECD 202 method)
ErC50 algae	0.32 mg/l/72 h (Pseudokirchnerella subcapitata) (OECD 201 method)
NOEC chronic fish	0.08 mg/l/ 28 days Quantitative structure-activity relationship (QSAR)(OECD 210 method)
NOEC chronic crustacea	0.08 mg/l/ 21 days (Daphnia magna)(OECD 211 method)
NOEC chronic algae	0.05 mg/l/72 h (Pseudokirchnerella subcapitata) (OECD 201)
pin-2(3)-ene (80-56-8)	
LC50 fish	0.27 mg/l/96h (Cyprinus carpio) (OECD 203 method)
EC50 Daphnia	0.475 mg/l/48 h (Daphnia magna) (OECD 202 method)
NOEC chronic algae	0.131 mg/l/72 h (Pseudokirchneriella subcapitata)(OECD 201 method)
(-)-pin-2(10)-ene (127-91-3, 18172-67-3)	
LC50 fish	0.502 mg/l/96h (Pimephales promelas)(OECD 203 method)
EC50 Daphnia	1.25 mg/l/48 h (Daphnia magna)(OECD 202 method)
ErC50 algae	0.7 mg/l/72 h (OECD 201 method)(Pseudokirchneriella subcapitata)Quantitative structure-activity relationship (QSAR)

12.2. Persistence and degradability

Piperonyl butoxide (ISO) (51-03-6)	
Persistence and degradability	Not readily biodegradable. (OECD 301D method).
Permethrin (ISO) (52645-53-1)	
Persistence and degradability	Not rapidly degradable.
Biodegradation	5 % (28 days) (OECD 301B method)
(R)-p-mentha-1,8-diene (5989-27-5)	
Persistence and degradability	Readily biodegradable. (OECD 301D method).

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pin-2(3)-ene (80-56-8)	
Persistence and degradability	Readily biodegradable.
(-)-pin-2(10)-ene (127-91-3, 18172-67-3)	
Persistence and degradability	Readily biodegradable.
Biodegradation	76 % (28 days) (OECD 301D method)

12.3. Bioaccumulative potential

Piperonyl butoxide (ISO) (51-03-6)	
BCF	91 – 380 (OECD method 305E)
Partition coefficient n-octanol/water (Log Pow)	4.8
Bioaccumulative potential	Potentially bioaccumulable.
Permethrin (ISO) (52645-53-1)	
BCF	290 – 620 (Perméthrine EHC 94, OMS 1990 et Hansen et al, 1983)
(R)-p-mentha-1,8-diene (5989-27-5)	
Partition coefficient n-octanol/water (Log Pow)	4.38 (OECD 117 method)
pin-2(3)-ene (80-56-8)	
Partition coefficient n-octanol/water (Log Kow)	4.46 (Quantitative structure-activity relationship (QSAR))

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component	
Piperonyl butoxide (ISO) (51-03-6)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
Permethrin (ISO) (52645-53-1)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
Geraniol (106-24-1)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
Diethyl phthalate (84-66-2)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
Linalool (78-70-6)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
Linalyl acetate (115-95-7)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
(R)-p-mentha-1,8-diene (5989-27-5)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
Bornan-2-one (76-22-2)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
p-menth-1-en-4-ol (562-74-3)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
pin-2(3)-ene (80-56-8)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
p-cymene (99-87-6)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII

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Component	
7-methyl-3-methyleneocta-1,6-diene (123-35-3)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
p-mentha-1,4-diene (99-85-4)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII
(-)-pin-2(10)-ene (127-91-3, 18172-67-3)	This substance does not meet the PBT criteria of REACH regulation, annex XIII This substance does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

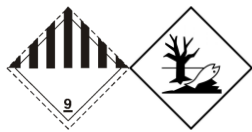




: Dispose of in accordance with relevant local regulations.

Additional information

: Empty the packaging completely prior to disposal. Recycle or dispose of in compliance with current legislation.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 3077	UN 3077	UN 3077	UN 3077	UN 3077
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Permethrin (ISO) ; Piperonyl butoxide (ISO))	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Permethrin (ISO) ; Piperonyl butoxide (ISO))	Environmentally hazardous substance, solid, n.o.s. (Permethrin (ISO) ; Piperonyl butoxide (ISO))	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Permethrin (ISO) ; Piperonyl butoxide (ISO))	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Permethrin (ISO) ; Piperonyl butoxide (ISO))
14.3. Transport hazard class(es)				
9	9	9	9	9
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes

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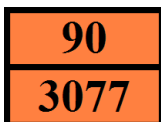
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14.6. Special precautions for user

Overland transport

Classification code (ADR)	: M7
Special provisions (ADR)	: 274, 335, 375, 601
Limited quantities (ADR)	: 5kg
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P002, IBC08, LP02, R001
Special packing provisions (ADR)	: PP12, B3
Mixed packing provisions (ADR)	: MP10
Portable tank and bulk container instructions (ADR)	: T1, BK1, BK2, BK3
Portable tank and bulk container special provisions (ADR)	: TP33
Tank code (ADR)	: SGAV, LGBV
Vehicle for tank carriage	: AT
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V13
Special provisions for carriage - Bulk (ADR)	: VC1, VC2
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV13
Hazard identification number (Kemler No.)	: 90
Orange plates	:



Tunnel restriction code (ADR) : -

Transport by sea

Special provisions (IMDG)	: 274, 335, 966, 967, 969
Limited quantities (IMDG)	: 5 kg
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP02, P002
Special packing provisions (IMDG)	: PP12
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B3
Tank instructions (IMDG)	: BK1, BK2, BK3, T1
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW23
MFAG-No	: 171

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y956
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 956
PCA max net quantity (IATA)	: 400kg
CAO packing instructions (IATA)	: 956
CAO max net quantity (IATA)	: 400kg
Special provisions (IATA)	: A97, A158, A179, A197, A215
ERG code (IATA)	: 9L

Inland waterway transport

Classification code (ADN)	: M7
Special provisions (ADN)	: 274, 335, 375, 601
Limited quantities (ADN)	: 5 kg
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T* B**
Equipment required (ADN)	: PP, A***
Number of blue cones/lights (ADN)	: 0

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Additional requirements/Remarks (ADN) : * Only in the molten state. ** For carriage in bulk see also 7.1.4.1. *** Only in the case of transport in bulk.

Rail transport

Classification code (RID) : M7
Special provisions (RID) : 274, 335, 375, 601
Limited quantities (RID) : 5kg
Excepted quantities (RID) : E1
Packing instructions (RID) : P002, IBC08, LP02, R001
Special packing provisions (RID) : PP12, B3
Mixed packing provisions (RID) : MP10
Portable tank and bulk container instructions (RID) : T1, BK1, BK2, BK3
Portable tank and bulk container special provisions (RID) : TP33
Tank codes for RID tanks (RID) : SGAV, LGBV
Transport category (RID) : 3
Special provisions for carriage – Packages (RID) : W13
Special provisions for carriage – Bulk (RID) : VC1, VC2
Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW31
Colis express (express parcels) (RID) : CE11
Hazard identification number (RID) : 90

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no REACH substances with Annex XVII restrictions

REACH Annex XIV (Authorisation List)

Contains no REACH Annex XIV substances

REACH Candidate List (SVHC)

Contains no substance on the REACH candidate list

PIC Regulation (Prior Informed Consent)

Substances subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals: Permethrin (ISO) (52645-53-1)

POP Regulation (Persistent Organic Pollutants)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Biocide Regulation (528/2012)

Type of product (Biocide) : 18 - Insecticides, acaricides and products to control other arthropods

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on drug precursors)

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15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Indication of changes:

This sheet was updated (refer to the date at the top of this page). SDS EU format according to COMMISSION REGULATION (EU) 2020/878. SDS changed sections : 1, 2, 3, 8, 11, 12, 15, 16.

Data sources : SDS of suppliers. ECHA - European Chemicals Agency. INRS (Institut National de Recherche et de Sécurité).

Other information : This safety data sheet has been written in conformity with the Annex II of the Regulation (EC) 1907/2006 (REACH).

Full text of H- and EUH-statements:	
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Flam. Sol. 2	Flammable solids, Category 2
H226	Flammable liquid and vapour.
H228	Flammable solid.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H371	May cause damage to organs.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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Full text of H- and EUH-statements:	
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B
STOT SE 2	Specific target organ toxicity – Single exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Eye Irrit. 2	H319	Calculation method
Skin Sens. 1	H317	Calculation method
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 1	H410	Calculation method

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.