

### Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 11/11/2019 Revision date: 4/23/2024 Supersedes version of: 3/12/2024 Version: 1.10

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

#### **1.1. Product identifier**

Product form	
Product name	
CAS-No.	
Product code	
Product group	

: Mixture

- : PEPPERMINT YAKIMA NATURAL
- : 8006-90-4
- : 50-6225-14
  - : Trade product

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

#### 1.2.1. Relevant identified uses

No additional information available

#### 1.2.2. Uses advised against

#### No additional information available

1.3. Details of the supplier of the safety data sheet

The Lebermuth Company 4004 Technology Drive 46628 South Bend, IN United States T 574-259-7000, F 574-258-7450 info@lebermuth.com, www.lebermuth.com

**1.4. Emergency telephone number** 

Emergency number

: CHEMTREC - USA: 800-424-9300 International: +1 703-527-3887 / 1-800-424-9300 CCN 13010

#### **SECTION 2: Hazards identification**

2.1. Classification of the substance or mixture

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

Skin corrosion/irritation, Category 2	H315
Skin sensitisation, Category 1	H317
Aspiration hazard, Category 1	H304
Hazardous to the aquatic environment – Chronic Hazard,	H412
Category 3	
Full text of H- and EUH-statements: see section 16	

#### Adverse physicochemical, human health and environmental effects

Toxic to aquatic life with long lasting effects. Causes skin irritation. May cause an allergic skin reaction. May be fatal if swallowed and enters airways. Harmful to aquatic life with long lasting effects.

#### 2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2	008 [CLP]
Hazard pictograms (CLP)	
	GHS07 GHS08
Signal word (CLP)	: Danger
Contains	: alpha-pinene; beta-pinene; terpinen-4-ol; carvone; l-Limonene; alpha-terpinene; terpinolene; eucalyptol; isomenthone; l-Menthone; linalool; beta-caryophyllene; Menthone
Hazard statements (CLP)	: H304 - May be fatal if swallowed and enters airways. H315 - Causes skin irritation.

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Precautionary statements (CLP)	<ul> <li>H317 - May cause an allergic skin reaction.</li> <li>H412 - Harmful to aquatic life with long lasting effects.</li> <li>P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.</li> <li>P264 - Wash hands, forearms and face thoroughly after handling.</li> <li>P272 - Contaminated work clothing should not be allowed out of the workplace.</li> <li>P273 - Avoid release to the environment.</li> <li>P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.</li> <li>P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.</li> <li>P302+P352 - IF ON SKIN: Wash with plenty of water.</li> <li>P321 - Specific treatment (see supplemental first aid instruction on this label).</li> </ul>
	<ul> <li>P331 - Do NOT induce vomiting.</li> <li>P332+P313 - If skin irritation occurs: Get medical advice/attention.</li> <li>P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.</li> <li>P362+P364 - Take off contaminated clothing and wash it before reuse.</li> <li>P405 - Store locked up.</li> <li>P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.</li> </ul>

#### 2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	PINENE (80-56-8), BETA-PINENE (127-91-3), CAMPHENE (79-92-5), I-Limonene (5989- 54-8), P-CYMENE (99-87-6), EUCALYPTOL (470-82-6)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	PINENE (80-56-8), BETA-PINENE (127-91-3), CAMPHENE (79-92-5), I-Limonene (5989- 54-8), P-CYMENE (99-87-6), EUCALYPTOL (470-82-6)

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 substance(s) are 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 %

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

#### Not applicable

### 3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
MENTHOL	CAS-No.: 2216-51-5 EC-No.: 218-690-9	10 – 25	Skin Irrit. 2, H315
MENTHOL	CAS-No.: 89-78-1 EC-No.: 201-939-0	10 – 25	Skin Irrit. 2, H315
L-MENTHONE	CAS-No.: 14073-97-3 EC-No.: 237-926-1	10 – 25	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Skin Sens. 1B, H317
Menthone	CAS-No.: 10458-14-7 EC-No.: 233-944-9	10 – 25	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Skin Sens. 1B, H317
MENTHYL ACETATE	CAS-No.: 16409-45-3 EC-No.: 240-459-6	5 – 10	Aquatic Chronic 2, H411

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
EUCALYPTOL	CAS-No.: 470-82-6 EC-No.: 207-431-5	1 – 5	Flam. Liq. 3, H226 Skin Sens. 1B, H317
(+)-Neomenthol	CAS-No.: 2216-52-6 EC-No.: 218-691-4	1 – 5	Skin Irrit. 2, H315
MENTHOFURAN	CAS-No.: 494-90-6 EC-No.: 207-795-5	1 – 5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Aquatic Chronic 2, H411
ISOMENTHONE	CAS-No.: 491-07-6 EC-No.: 207-727-4	1 – 5	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Skin Sens. 1B, H317
Menthyl acetate	CAS-No.: 89-48-5 EC-No.: 201-911-8	1 – 5	Aquatic Chronic 2, H411
I-Limonene	CAS-No.: 5989-54-8 EC-No.: 227-815-6 EC Index-No.: 601-029-00-7	1-5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
BETA-CARYOPHYLLENE	CAS-No.: 87-44-5 EC-No.: 201-746-1	1 – 5	Skin Sens. 1B, H317 Asp. Tox. 1, H304
PULEGONE	CAS-No.: 89-82-7 EC-No.: 201-943-2	1 – 5	Acute Tox. 4 (Oral), H302
BETA-PINENE substance with national workplace exposure limit(s) (BE, ES)	CAS-No.: 127-91-3 EC-No.: 204-872-5	0.1 – 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
PINENE substance with national workplace exposure limit(s) (BE, ES)	CAS-No.: 80-56-8 EC-No.: 201-291-9	0.1 – 1	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
4-TERPINEOL	CAS-No.: 562-74-3 EC-No.: 209-235-5	0.1 – 1	Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1, H317 STOT SE 3, H336
GAMMA-TERPINENE	CAS-No.: 99-85-4 EC-No.: 202-794-6	0.1 – 1	Flam. Liq. 3, H226 Repr. 2, H361 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
P-CYMENE	CAS-No.: 99-87-6 EC-No.: 202-796-7 EC Index-No.: 601-094-00-1	0.1 – 1	Flam. Liq. 3, H226 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Inhalation:vapour), H331 Repr. 2, H361 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ALPHA-TERPINENE	CAS-No.: 99-86-5 EC-No.: 202-795-1	0.1 – 1	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
LINALOOL	CAS-No.: 78-70-6	0.1 – 1	Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1B, H317
CAMPHENE	CAS-No.: 79-92-5 EC-No.: 201-234-8	0.1 – 1	Flam. Sol. 2, H228 Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
3,7-DIMETHYLOCTA-1,3,6-TRIENE*	CAS-No.: 3338-55-4 EC-No.: 222-081-3	0.1 – 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
BETA-MYRCENE	CAS-No.: 123-35-3 EC-No.: 204-622-5	0.1 – 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
(E)-β-OCIMENE*	CAS-No.: 3779-61-1	0.1 – 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
cis-3-Octen-1-ol	CAS-No.: 20125-84-2	0.1 – 1	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Aquatic Acute 1, H400
CARVONE	CAS-No.: 99-49-0 EC-No.: 218-827-2 EC Index-No.: 606-148-00-8	0.1 – 1	Skin Sens. 1B, H317
	CAS-No.: 586-62-9 EC-No.: 209-578-0	0.1 – 1	Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Chronic 1, H410 Aquatic Acute 1, H400

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 general	: Call a physician immediately.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Do not induce vomiting. Call a physician immediately.

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4.2. Most important symptoms and effects, both acute and delayed		
Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.	
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.	
Symptoms/effects after eye contact	: None under normal conditions.	
Symptoms/effects after ingestion	: Risk of lung oedema.	

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 Unsuitable extinguishing media	<ul><li>Water spray. Dry powder. Foam. Carbon dioxide.</li><li>Do not use a heavy water stream.</li></ul>			
5.2. Special hazards arising from the subs	tance or mixture			
Fire hazard Explosion hazard Hazardous decomposition products in case of fire	<ul> <li>No fire hazard.</li> <li>No direct explosion hazard.</li> <li>Toxic fumes may be released.</li> </ul>			
5.3. Advice for firefighters				
Firefighting instructions Protection during firefighting	<ul> <li>Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.</li> <li>Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.</li> </ul>			

SECTION 6: Accidental release measures			
6.1. Personal precautions, protective equipn	nent and emergency procedures		
General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.		
6.1.1. For non-emergency personnel			
Protective equipment	: Wear recommended personal protective equipment.		
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.		
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".		
Emergency procedures	: Evacuate unnecessary personnel. Stop leak if safe to do so.		
6.2. Environmental precautions			
Avoid release to the environment.			

6.3. Methods and material for containment and cleaning up	
For containment	: Collect spillage. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
Methods for cleaning up	: Take up liquid spill into absorbent material.
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.

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SECTION 7: Handling and storage		
7.1. Precautions for safe handling		
Additional hazards when processed Precautions for safe handling Hygiene measures	<ul> <li>Not expected to present a significant hazard under anticipated conditions of normal use.</li> <li>Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray.</li> <li>Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.</li> </ul>	
7.2. Conditions for safe storage, includ	ling any incompatibilities	
Technical measures Storage conditions Packaging materials	<ul> <li>Keep in a cool, well-ventilated place away from heat.</li> <li>Store locked up.</li> <li>Store always product in container of same material as original container.</li> </ul>	

#### 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

PINENE (80-56-8)		
Belgium - Occupational Exposure Limits		
Local name	Essence de térébenthine et monoterpènes sélectionés # Terpentijn en geselecteerde monoterpenen	
OEL TWA	20 ppm	
Regulatory reference	Koninklijk besluit/Arrêté royal 16/11/2023	
Spain - Occupational Exposure Limits		
Local name	α-pineno (monoterpeno)	
VLA-ED (OEL TWA)	113 mg/m³	
	20 ppm	
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2024. INSHT	
BETA-PINENE (127-91-3)		
Belgium - Occupational Exposure Limits		
Local name	Essence de térébenthine et monoterpènes sélectionés # Terpentijn en geselecteerde monoterpenen	
OEL TWA	20 ppm	
Regulatory reference	Koninklijk besluit/Arrêté royal 16/11/2023	
Spain - Occupational Exposure Limits		
Local name	β-pineno (monoterpeno)	
VLA-ED (OEL TWA)	113 mg/m³	
	20 ppm	
Regulatory reference	Límites de Exposición Profesional para Agentes Químicos en España 2024. INSHT	

#### 8.1.2. Recommended monitoring procedures

No additional information available

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#### 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

#### Personal protective equipment:

Wear recommended personal protective equipment.

#### Personal protective equipment symbol(s):



#### 8.2.2.1. Eye and face protection

Eye protection: Safety glasses

### 8.2.2.2. Skin protection

**Skin and body protection:** Wear suitable protective clothing

Hand protection: Protective gloves

#### 8.2.2.3. Respiratory protection

#### **Respiratory protection:**

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 physi	cal and chemical properties
Physical state	: Liquid
Colour	: Not available
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 71 °C

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#### 9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

Refractive index

: 1.461 (1.459 - 1.465)

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

**10.6. Hazardous decomposition products** 

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

SECTION 11: Toxicological information		
11.1. Information on hazard class	es as defined	l in Regulation (EC) No 1272/2008
Acute toxicity (oral) Acute toxicity (dermal) Acute toxicity (inhalation) (Ε)-β-OCIMENE* (3779-61-1)	:	Not classified Not classified Not classified
LD50 oral PINENE (80-56-8)		5000 mg/kg bodyweight
LD50 oral rat		> 500 mg/kg bodyweight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral, 01 day(s))
LD50 dermal rat		> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Skin, 14 day(s))

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BETA-PINENE (127-91-3)	
LD50 oral rat	4700 mg/kg (Rat, Oral)
CAMPHENE (79-92-5)	
LD50 oral	> 5000 mg/kg (Mouse, Male / female, Experimental value, Oral)
LD50 dermal rabbit	> 2000 mg/kg bodyweight (Rabbit, Read-across, Skin)
4-TERPINEOL (562-74-3)	
LD50 oral	1300 mg/kg
3,7-DIMETHYLOCTA-1,3,6-TRIENE* (3338-55-4	\$)
LD50 oral	5000 mg/kg bodyweight
CARVONE (99-49-0)	
LD50 oral	2500 mg/kg bodyweight
LD50 dermal	3800 mg/kg bodyweight
(+)-Neomenthol (2216-52-6)	
LD50 oral	2500 mg/kg bodyweight
LC50 Inhalation - Rat (Dust/Mist)	5.3 mg/l/4h
MENTHOFURAN (494-90-6)	
LD50 oral	500 mg/kg bodyweight
BETA-MYRCENE (123-35-3)	
LD50 oral rat	> 11390 mg/kg bodyweight Animal: rat
LD50 oral	> 3380 mg/kg bodyweight Animal: mouse
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
P-CYMENE (99-87-6)	
LD50 oral rat	4750 mg/kg (Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 oral	4750 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 9.7 mg/l (5 h, Rat, Experimental value, Inhalation)
LC50 Inhalation - Rat (Vapours)	9.7 mg/l/4h
ALPHA-TERPINENE (99-86-5)	
LD50 oral	1680 mg/kg bodyweight
GAMMA-TERPINENE (99-85-4)	
LD50 oral	3650 mg/kg bodyweight
TERPINOLENE (586-62-9)	
LD50 oral rat	4390 mg/kg (Rat)
LD50 oral	3775 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)

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EUCALYPTOL (470-82-6)		
LD50 oral rat	4500 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))	
LD50 oral	2480 mg/kg bodyweight	
LD50 dermal rat	> 2000 mg/kg bodyweight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Dermal, 15 day(s))	
ISOMENTHONE (491-07-6)		
LD50 oral	2219 mg/kg	
PULEGONE (89-82-7)		
LD50 oral	470 mg/kg	
LD50 dermal	3090 mg/kg	
MENTHOL (2216-51-5)		
LD50 oral	2500 mg/kg bodyweight	
LC50 Inhalation - Rat (Dust/Mist)	5.3 mg/l/4h	
L-MENTHONE (14073-97-3)	<u>,</u>	
LD50 oral	2219 mg/kg	
LINALOOL (78-70-6)		
LD50 oral	2790 mg/kg	
Menthone (10458-14-7)	<u> </u>	
LD50 oral	2219 mg/kg	
Skin corrosion/irritation :	Causes skin irritation.	
I-Limonene (5989-54-8)		
рН	No data available in the literature	
Serious eye damage/irritation :	Not classified	
I-Limonene (5989-54-8)		
рН	No data available in the literature	
	May cause an allergic skin reaction.	
5 ,	Not classified Not classified	
BETA-MYRCENE (123-35-3)		
IARC group	2B - Possibly carcinogenic to humans	
PULEGONE (89-82-7)		
IARC group	2B - Possibly carcinogenic to humans	
	Not classified	
	Not classified	
4-TERPINEOL (562-74-3)		
STOT-single exposure	May cause drowsiness or dizziness.	
STOT-repeated exposure :	Not classified	
BETA-MYRCENE (123-35-3)		
LOAEL (oral, rat, 90 days)	250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90- Day Oral Toxicity Study in Rodents)	

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BETA-MYRCENE (123-35-3)		
NOAEL (subchronic, oral, animal/male, 90 days)	500 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	
NOAEL (subchronic, oral, animal/female, 90 days)	250 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	
EUCALYPTOL (470-82-6)		
NOAEL (oral, rat, 90 days)	600 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other:, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents), Guideline: EPA OPPTS 870.3150 (90-Day Oral Toxicity in Non-rodents)	
Aspiration hazard : May be fatal if swallowed and enters airways.		
PINENE (80-56-8)		
Viscosity, kinematic	No data available in the literature	
BETA-PINENE (127-91-3)		
Viscosity, kinematic	2.5 mm²/s (20 °C, Calculated)	
I-Limonene (5989-54-8)		
Viscosity, kinematic	No data available in the literature	
P-CYMENE (99-87-6)		
Viscosity, kinematic	1.03 mm²/s (20 °C, OECD 114: Viscosity of Liquids)	
EUCALYPTOL (470-82-6)		
Viscosity, kinematic	2.1 mm²/s (40 °C, OECD 114: Viscosity of Liquids)	
11.2. Information on other hazards		

No additional information available

### SECTION 12: Ecological information

12.1. Toxicity

(acute)	Toxic to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects. Not classified Harmful to aquatic life with long lasting effects.
PINENE (80-56-8)	
LC50 - Fish [1]	0.303 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value, GLP)
EC50 - Crustacea [1]	0.475 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, Locomotor effect)
BETA-PINENE (127-91-3)	
LC50 - Fish [1]	0.557 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Cyprinus carpio, Semi-static system, Fresh water, Weight of evidence, Other isomer)
ErC50 algae	0.826 mg/l (OECD 201: Alga, Growth Inhibition Test, 48 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Weight of evidence, Other isomer)
CAMPHENE (79-92-5)	
LC50 - Fish [1]	0.72 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Brachydanio rerio, Flow-through system, Fresh water, Experimental value, GLP)

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CAMPHENE (79-92-5)		
EC50 - Crustacea [1]	0.72 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, GLP)	
EC50 72h - Algae [1]	> 1000 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)	
I-Limonene (5989-54-8)		
LC50 - Fish [1]	0.71 mg/l (Equivalent or similar to OECD 203, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Similar product)	
EC50 - Crustacea [1]	0.36 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Similar product)	
EC50 96h - Algae [1]	0.904 mg/l (ECOSAR, Algae, Flow-through system, Fresh water, Estimated value)	
BETA-MYRCENE (123-35-3)		
EC50 - Crustacea [1]	1.47 mg/l Test organisms (species): Daphnia magna	
EC50 72h - Algae [1]	0.342 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)	
EC50 72h - Algae [2]	0.31 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)	
P-CYMENE (99-87-6)		
LC50 - Fish [1]	48 mg/l (EPA OPPTS 850.1075, 96 h, Cyprinodon variegatus, Static system, Salt water, Experimental value)	
EC50 - Crustacea [1]	3.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi- static system, Fresh water, Experimental value, GLP)	
EC50 72h - Algae [1]	4.03 mg/l (OECD 201: Alga, Growth Inhibition Test, Selenastrum capricornutum, Static system, Fresh water, Experimental value, GLP)	
EUCALYPTOL (470-82-6)		
LC50 - Fish [1]	57 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, Nominal concentration)	
EC50 - Crustacea [1]	> 100 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)	
EC50 72h - Algae [1]	> 74 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)	
EC50 96h - Algae [1]	> 74 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)	
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)	

### 12.2. Persistence and degradability

PEPPERMINT YAKIMA NATURAL (8006-90-4)		
Persistence and degradability	Rapidly degradable	
(E)-β-OCIMENE* (3779-61-1)		
Persistence and degradability	Rapidly degradable	
cis-3-Octen-1-ol (20125-84-2)		
Persistence and degradability	Rapidly degradable	

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PINENE (80-56-8)	
Persistence and degradability	Readily biodegradable in water.
BETA-PINENE (127-91-3)	
Persistence and degradability	Readily biodegradable in water.
CAMPHENE (79-92-5)	
Persistence and degradability	Not readily biodegradable in water.
4-TERPINEOL (562-74-3)	
Persistence and degradability	Rapidly degradable
3,7-DIMETHYLOCTA-1,3,6-TRIENE* (3338-55-4	4)
Persistence and degradability	Rapidly degradable
CARVONE (99-49-0)	
Persistence and degradability	Rapidly degradable
(+)-Neomenthol (2216-52-6)	
Persistence and degradability	Rapidly degradable
MENTHOFURAN (494-90-6)	
Persistence and degradability	Rapidly degradable
I-Limonene (5989-54-8)	
Persistence and degradability	Readily biodegradable in water.
ThOD	3.29 g O <sub>2</sub> /g substance
BETA-MYRCENE (123-35-3)	
Persistence and degradability	Readily biodegradable in water.
P-CYMENE (99-87-6)	
Persistence and degradability	Readily biodegradable in water.
ALPHA-TERPINENE (99-86-5)	
Persistence and degradability	Rapidly degradable
GAMMA-TERPINENE (99-85-4)	
Persistence and degradability	Rapidly degradable
TERPINOLENE (586-62-9)	
Persistence and degradability	Forming sediments in water,Biodegradability in soil: no data available,Adsorbs into the soil.
ThOD	3.294 g O <sub>2</sub> /g substance
EUCALYPTOL (470-82-6)	
Persistence and degradability	Readily biodegradable in water.
ISOMENTHONE (491-07-6)	
Persistence and degradability	Rapidly degradable
PULEGONE (89-82-7)	
Persistence and degradability	Rapidly degradable

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MENTHOL (2216-51-5)	
Persistence and degradability	Rapidly degradable
L-MENTHONE (14073-97-3)	
Persistence and degradability	Rapidly degradable
MENTHYL ACETATE (16409-45-3)	
Persistence and degradability	Rapidly degradable
LINALOOL (78-70-6)	
Persistence and degradability	Rapidly degradable
BETA-CARYOPHYLLENE (87-44-5)	
Persistence and degradability	Rapidly degradable
MENTHOL (89-78-1)	
Persistence and degradability	Rapidly degradable
Menthyl acetate (89-48-5)	
Persistence and degradability	Rapidly degradable
Menthone (10458-14-7)	
Persistence and degradability	Rapidly degradable
12.3. Bioaccumulative potential	
PINENE (80-56-8)	
BCF - Other aquatic organisms [1]	1233.1 – 1248 l/kg (BCFBAF v3.01, Read-across, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.487 (Experimental value, Equivalent or similar to OECD 107, 25 °C)
Bioaccumulative potential	Potential for bioaccumulation (500 $\leq$ BCF $\leq$ 5000).
BETA-PINENE (127-91-3)	
BCF - Fish [1]	1125 I/kg (BCFBAF v3.01, Pisces, Fresh water, QSAR, Other isomer)
Partition coefficient n-octanol/water (Log Pow)	4.425 (Similar product, Read-across, Equivalent or similar to OECD 107, 25 °C)
Bioaccumulative potential	Potential for bioaccumulation (4 $\leq$ Log Kow $\leq$ 5).
CAMPHENE (79-92-5)	
BCF - Fish [1]	432 – 1290 (OECD 305: Bioconcentration: Flow-Through Fish Test, 8 week(s), Cyprinus carpio, Fresh water, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	4.22 (Experimental value, Equivalent or similar to OECD 117, 37 °C)
Bioaccumulative potential	Potential for bioaccumulation (500 $\leq$ BCF $\leq$ 5000).
I-Limonene (5989-54-8)	
BCF - Fish [1]	683 l/kg (Calculated value)
Partition coefficient n-octanol/water (Log Pow)	4.38 (Experimental value, Equivalent or similar to OECD 117, 37 °C)
Bioaccumulative potential	Potential for bioaccumulation (4 $\leq$ Log Kow $\leq$ 5).
BETA-MYRCENE (123-35-3)	
Partition coefficient n-octanol/water (Log Pow)	5.285 (Literature, 25 °C)
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).

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P-CYMENE (99-87-6)	
Partition coefficient n-octanol/water (Log Pow)	4.8 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 20 °C)
Bioaccumulative potential	Potential for bioaccumulation ( $4 \le Log \text{ Kow} \le 5$ ).
TERPINOLENE (586-62-9)	
Partition coefficient n-octanol/water (Log Pow)	4.23
EUCALYPTOL (470-82-6)	
BCF - Other aquatic organisms [1]	112 l/kg (Literature study, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	3.4 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
12.4. Mobility in soil	
PINENE (80-56-8)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.009 – 3.853 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Low potential for mobility in soil. May be harmful to plant growth, blooming and fruit formation.
BETA-PINENE (127-91-3)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.009 – 3.836 (log Koc, Calculated value, Other isomer)
Ecology - soil	Low potential for mobility in soil.
CAMPHENE (79-92-5)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	3.081 (log Koc, SRC PCKOCWIN v1.66, Calculated value)
Ecology - soil	Low potential for mobility in soil.
I-Limonene (5989-54-8)	
Surface tension	No data available in the literature
Ecology - soil	Low potential for mobility in soil.
BETA-MYRCENE (123-35-3)	
Ecology - soil	No (test)data on mobility of the substance available.
P-CYMENE (99-87-6)	
Surface tension	No data available in the literature
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	4.17 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Ecology - soil	Low potential for mobility in soil.
EUCALYPTOL (470-82-6)	
Surface tension	61.5 mN/m (20 °C, 1 g/l, EU Method A.5: Surface tension)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.33 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Ecology - soil	Low potential for adsorption in soil.

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12.5. Results of PBT and vPvB assessment	
Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	PINENE (80-56-8), BETA-PINENE (127-91-3), CAMPHENE (79-92-5), I-Limonene (5989- 54-8), P-CYMENE (99-87-6), EUCALYPTOL (470-82-6)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	PINENE (80-56-8), BETA-PINENE (127-91-3), CAMPHENE (79-92-5), I-Limonene (5989- 54-8), P-CYMENE (99-87-6), EUCALYPTOL (470-82-6)
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	
Regional waste regulation Waste treatment methods Sewage disposal recommendations Product/Packaging disposal recommendations Additional information	<ul> <li>Disposal must be done according to official regulations.</li> <li>Dispose of contents/container in accordance with licensed collector's sorting instructions.</li> <li>Disposal must be done according to official regulations.</li> <li>Disposal must be done according to official regulations.</li> <li>Do not re-use empty containers.</li> </ul>
SECTION 14: Transport information	)

14.1. UN number or ID number

Not regulated for transport

	Ŭ	
Packing group (ADR) Packing group (IMDG)	: Not regulated : Not regulated	
14.4. Packing group		
RID Transport hazard class(es) (RID)	: Not regulated	
ADN Transport hazard class(es) (ADN)	: Not regulated	
IATA Transport hazard class(es) (IATA)	: Not regulated	
IMDG Transport hazard class(es) (IMDG)	: Not regulated	
ADR Transport hazard class(es) (ADR)	: Not regulated	
14.3. Transport hazard class(es)		
Proper Shipping Name (ADR) Proper Shipping Name (IMDG) Proper Shipping Name (IATA) Proper Shipping Name (ADN) Proper Shipping Name (RID)	<ul> <li>Not regulated</li> <li>Not regulated</li> <li>Not regulated</li> <li>Not regulated</li> <li>Not regulated</li> <li>Not regulated</li> </ul>	
14.2. UN proper shipping name		

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5 - 5 ( - )	
Packing group (IATA) Packing group (ADN) Packing group (RID)	<ul> <li>Not regulated</li> <li>Not regulated</li> <li>Not regulated</li> </ul>
14.5. Environmental hazards	
Other information	: No supplementary information available
14.6. Special precautions for user	
Overland transport Not regulated	
Transport by sea Not regulated	
Air transport Not regulated	
Inland waterway transport Not regulated	
Rail transport Not regulated	
14.7. Maritime transport in bulk according	g 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)**

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3(b)	PEPPERMINT YAKIMA NATURAL
3(c)	PEPPERMINT YAKIMA NATURAL

#### **REACH Annex XIV (Authorisation List)**

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

#### **REACH Candidate List (SVHC)**

Contains no substance(s) listed on the REACH Candidate List

#### PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

#### **POP Regulation (Persistent Organic Pollutants)**

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

#### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

#### Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

#### **Explosives Precursors Regulation (2019/1148)**

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

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#### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2. National regulations

Not listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on the Canadian DSL (Domestic Substances List)

#### Germany

Water hazard class (WGK)	<ul> <li>Not classified according to Regulation Governing Systems for Handling Substances Hazardous to Waters (AwSV).</li> </ul>
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject to the Hazardous Incident Ordinance (12. BImSchV)
Netherlands	
SZW-lijst van kankerverwekkende stoffen	: None of the components are listed
SZW-lijst van mutagene stoffen	: None of the components are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	: None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	: None of the components are listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	: None of the components are listed
Denmark	
Class for fire hazard	: Class III-1
Store unit	: 50 liter
Classification remarks	: Flammable according to the Danish Ministry of Justice; Emergency management guidelines for the storage of flammable liquids must be followed
Danish National Regulations	Young people below the age of 18 years are not allowed to use the product
15.2. Chemical safety assessment	

No chemical safety assessment has been carried out

### **SECTION 16: Other information**

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
ΙΑΤΑ	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose

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Abbreviations and acronyms:	
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
РВТ	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Inhalation:vapour)	Acute toxicity (inhalation:vapour) 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
Asp. Tox. 1	Aspiration hazard, 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.
H319	Causes serious eye irritation.

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Full text of H- and EUH-statements:	
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
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 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

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.