

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

#### 1.1. Product identifier

Product form	: Mixture
Trade name	: PINE #EU15194F
UFI	: SG2C-E122-D00R-GW15
Product code	: EU15194F
Type of product	: Perfumes, fragrances
Product group	: Trade product

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

##### 1.2.1. Relevant identified uses

Main use category	: Professional use, Industrial use
Industrial/Professional use spec	: Industrial For professional use only
Use of the substance/mixture	: Perfumes, fragrances
Function or use category	: Odour agents

##### 1.2.2. Uses advised against

No additional information available

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

FRENCH COLOR & FRAGRANCE International GmbH  
Mittlerer Weg 35  
DE 79424 Auggen  
Germany  
T 49-7631-931-8900  
[SDS@frenchcolor.com](mailto:SDS@frenchcolor.com), [www.frenchcolor.com](http://www.frenchcolor.com)

#### 1.4. Emergency telephone number

Emergency number : 1-800-255-3924; +01-813-248-0585; China: +400-120-0751; Mexico: +01-800-099-0731;  
Brazil: +0-800-591-6042; India: +000-800-100-4086

### SECTION 2: Hazards identification

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

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

Serious eye damage/eye irritation, Category 1	H318
Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment – Chronic Hazard, Category 3	H412

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

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

Causes serious eye damage. Harmful to aquatic life with long lasting effects. May cause an allergic skin reaction.

#### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

GHS07

Signal word (CLP) :

Danger

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Hazard statements (CLP)	: H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P272 - Contaminated work clothing should not be allowed out of the workplace. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P302+P352 - IF ON SKIN: Wash with plenty of 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.
Extra phrases	: For professional users only.

### 2.3. Other hazards

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

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]
Verdox	CAS-No.: 88-41-5 EC-No.: 201-828-7 REACH-no: 01-2119970713-33	5 – 10	Aquatic Chronic 2, H411
Camphor substance with national workplace exposure limit(s) (AT, BE, BG, DK, ES, FI, FR, GB, GR, HR, IE, LT, PL, PT, RO, SK, NO, CH)	CAS-No.: 76-22-2 EC-No.: 200-945-0	1.5 – 3	Flam. Sol. 2, H228 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 2, H371 Aquatic Chronic 2, H411
Pine Needle Oil	CAS-No.: 8002-09-3 EC-No.: 306-895-7	0.8 – 1.5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Citrus medica limonum (Lemon) peel oil	CAS-No.: 8008-56-8 EC-No.: 284-515-8	0.5 – 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Repr. 2, H361 Aquatic Chronic 2, H411
Terpinyl acetate	CAS-No.: 80-26-2 EC-No.: 201-265-7	0.5 – 1	Aquatic Chronic 2, H411

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Aldehyde C-16	CAS-No.: 77-83-8 EC-No.: 201-061-8 REACH-no: 01-2119967770-28	0.4 – 0.75	Skin Sens. 1B, H317 Aquatic Chronic 2, H411
Triplal (Vertocitral)	CAS-No.: 68039-49-6 EC-No.: 268-264-1	0.2 – 0.4	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Isononyl aldehyde	CAS-No.: 5435-64-3 EC-No.: 226-603-0	0.2 – 0.3	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Eye Irrit. 2, H319
Aldehyde C-11	CAS-No.: 112-44-7 EC-No.: 203-972-6 REACH-no: 01-2119990746-20	0.2 – 0.3	Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Aldehyde C-12	CAS-No.: 112-54-9 EC-No.: 203-983-6	0.1 – 0.2	Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1B, H317
Allyl amyl glycolate	CAS-No.: 67634-00-8 EC-No.: 266-803-5	0.1 – 0.2	Acute Tox. 4 (Oral), H302 Acute Tox. 2 (Inhalation), H330 Aquatic Chronic 1, H410
benzyl benzoate	CAS-No.: 120-51-4 EC-No.: 204-402-9 EC Index-No.: 607-085-00-9 REACH-no: 01-2119976371-33	0.1 – 0.18	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

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	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Wash with plenty of water/.... If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label). Wash contaminated clothing before reuse. Gently wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. 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 immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects	: May cause damage to organs. Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after skin contact	: May cause an allergic skin reaction.

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Symptoms/effects after eye contact : Serious damage to eyes.

### 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 : Sand. Water spray. Dry powder. Foam. Carbon dioxide.  
Unsuitable extinguishing media : Do not use a heavy water stream.

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

Hazardous decomposition products in case of fire : Toxic fumes may be released.

### 5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. 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 : Ventilate spillage area. Evacuate unnecessary personnel. 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. Avoid breathing dust/fume/gas/mist/vapours/spray. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

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

Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.  
Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

See Section 8. Exposure controls and personal protection. 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. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No open flames. No smoking. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray.

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Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container closed when not in use. Keep in fireproof place. Store in a well-ventilated place. Keep cool.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

Storage temperature : 25 °C

Storage area : Store in a well-ventilated place. Store away from heat.

Special rules on packaging : Store in a closed container.

Packaging materials : Do not store in corrodable metal.

### Switzerland

Storage class (LK) : LK 10/12 - Liquids

### 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

Camphor (76-22-2)	
<b>Austria - Occupational Exposure Limits</b>	
MAK (OEL TWA)	13 mg/m <sup>3</sup>
	2 ppm
<b>Belgium - Occupational Exposure Limits</b>	
OEL TWA	12 mg/m <sup>3</sup>
	2 ppm
OEL STEL	19 mg/m <sup>3</sup>
	3 ppm
<b>Bulgaria - Occupational Exposure Limits</b>	
OEL TWA	12 mg/m <sup>3</sup>
OEL STEL	18 mg/m <sup>3</sup>
<b>Croatia - Occupational Exposure Limits</b>	
GVI (OEL TWA)	13 mg/m <sup>3</sup>
	2 ppm
KGVI (OEL STEL)	19 mg/m <sup>3</sup>
	3 ppm
<b>Denmark - Occupational Exposure Limits</b>	
OEL TWA	12 mg/m <sup>3</sup>
	2 ppm
OEL STEL	24 mg/m <sup>3</sup>

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Camphor (76-22-2)	
	4 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	1.9 mg/m <sup>3</sup>
	0.3 ppm
HTP (OEL STEL)	5.7 mg/m <sup>3</sup>
	0.9 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	12 mg/m <sup>3</sup>
	2 ppm
Greece - Occupational Exposure Limits	
OEL TWA	12 mg/m <sup>3</sup> (inhalable fraction)
OEL STEL	18 mg/m <sup>3</sup>
Ireland - Occupational Exposure Limits	
OEL TWA	12 mg/m <sup>3</sup>
	2 ppm
OEL STEL	18 mg/m <sup>3</sup>
	3 ppm
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	3 mg/m <sup>3</sup>
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	12 mg/m <sup>3</sup>
NDSch (OEL STEL)	18 mg/m <sup>3</sup>
Portugal - Occupational Exposure Limits	
OEL TWA	2 ppm
OEL STEL	3 ppm
OEL chemical category	A4 - Not Classifiable as a Human Carcinogen
Romania - Occupational Exposure Limits	
OEL TWA	1 mg/m <sup>3</sup>
	6 ppm
OEL STEL	3 mg/m <sup>3</sup>
	18 ppm
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	13 mg/m <sup>3</sup>
	2 ppm
NPHV (OEL C)	26 mg/m <sup>3</sup>
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	13 mg/m <sup>3</sup>
	2 ppm
VLA-EC (OEL STEL)	19 mg/m <sup>3</sup>

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Camphor (76-22-2)	
	3 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	13 mg/m <sup>3</sup>
	2 ppm
WEL STEL (OEL STEL)	19 mg/m <sup>3</sup>
	3 ppm
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	12 mg/m <sup>3</sup>
	2 ppm
Korttidsverdi (OEL STEL)	18 mg/m <sup>3</sup> (value calculated)
	4 ppm (value calculated)
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	13 mg/m <sup>3</sup> (aerosol, vapour)
	2 ppm (aerosol, vapour)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	2 ppm (synthetic)
ACGIH OEL STEL	3 ppm (synthetic)
ACGIH chemical category	Not Classifiable as a Human Carcinogen synthetic

### 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

#### Personal protective equipment:

Avoid all unnecessary exposure. Wash hands thoroughly after handling.

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



#### 8.2.2.1. Eye and face protection

##### Eye protection:

Chemical goggles or safety glasses. Safety glasses

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### 8.2.2.2. Skin protection

#### Skin and body protection:

Wear suitable protective clothing

#### Hand protection:

Wear protective gloves.

### 8.2.2.3. Respiratory protection

#### Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Wear appropriate mask

### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Avoid release to the environment.

#### Other information:

Do not eat, drink or smoke during use. Do not breathe dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product.

## SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Colour	: light yellow. amber. Conforms to standard.
Odour	: characteristic.
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	: 87 °C (closed cup) ASTM D7094
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available
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	: 0.998
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

### 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

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

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



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### 10.2. Chemical stability

Combustible liquid. May form flammable/explosive vapour-air mixture.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

### 10.5. Incompatible materials

Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

## SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified  
Acute toxicity (dermal) : Not classified  
Acute toxicity (inhalation) : Not classified

#### Verdox (88-41-5)

LD50 oral rat	4600 mg/kg (Source: NLM_CIP)
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LD50 oral	4600 mg/kg bodyweight
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#### Camphor (76-22-2)

LD50 oral	1500 mg/kg bodyweight
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LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)
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LC50 Inhalation - Rat (Dust/Mist)	1.5 mg/l/4h
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#### Pine Needle Oil (8002-09-3)

LD50 oral rat	3200 mg/kg
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LD50 oral	3200 mg/kg bodyweight
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LD50 dermal rabbit	400 mg/kg
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LC50 Inhalation - Rat	> 3.79 mg/l/4h
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#### Citrus medica limonum (Lemon) peel oil (8008-56-8)

LD50 oral rat	2840 mg/kg (Source: NLM_CIP)
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#### Terpinyl acetate (80-26-2)

LD50 oral rat	5075 mg/kg (Source: NLM_CIP)
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#### Aldehyde C-16 (77-83-8)

LD50 oral rat	5470 mg/kg (Source: NLM_CIP)
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LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)
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#### Triplal (Vertocitral) (68039-49-6)

LD50 oral	3900 mg/kg bodyweight
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<b>Isononyl aldehyde (5435-64-3)</b>	
LD50 oral rat	> 2000 mg/kg (Source: KR_NIER)
LD50 oral	2500 mg/kg bodyweight
LD50 dermal	5000 mg/kg bodyweight
<b>Aldehyde C-11 (112-44-7)</b>	
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)
<b>Aldehyde C-12 (112-54-9)</b>	
LD50 oral rat	23 g/kg (Source: NLM_CIP)
LD50 dermal rabbit	> 2000 mg/kg (Source: ECHA_API)
<b>Allyl amyl glycolate (67634-00-8)</b>	
LD50 oral	500 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)
LC50 Inhalation - Rat	0.43 mg/l/4h
LC50 Inhalation - Rat (Dust/Mist)	0.5 mg/l/4h
<b>benzyl benzoate (120-51-4)</b>	
LD50 oral rat	500 mg/kg (Source: NLM_CIP)
LD50 oral	1160 mg/kg bodyweight
LD50 dermal rabbit	4000 mg/kg (Source: NLM_CIP)
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
<b>Camphor (76-22-2)</b>	
STOT-single exposure	May cause damage to organs.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
<b>benzyl benzoate (120-51-4)</b>	
Viscosity, kinematic	7.456 mm <sup>2</sup> /s

### 11.2. Information on other hazards

#### 11.2.1. Endocrine disrupting properties

No additional information available

#### 11.2.2. Other information

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.

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Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.

Pine Needle Oil (8002-09-3)	
EC50 - Crustacea [1]	17 – 28 mg/l (Exposure time: 48 h - Species: Daphnia magna [Flow through])
Terpinyl acetate (80-26-2)	
LC50 - Fish [1]	> 11 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: ECHA)
Aldehyde C-16 (77-83-8)	
LC50 - Fish [1]	4.2 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static] Source: ECHA)
benzyl benzoate (120-51-4)	
LC50 - Fish [1]	2.32 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA)
NOEC (chronic)	0.168 mg/l

### 12.2. Persistence and degradability

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Persistence and degradability	Not established.
Verdox (88-41-5)	
Persistence and degradability	Rapidly degradable
Camphor (76-22-2)	
Persistence and degradability	Rapidly degradable
Pine Needle Oil (8002-09-3)	
Persistence and degradability	Rapidly degradable
Citrus medica limonum (Lemon) peel oil (8008-56-8)	
Persistence and degradability	Rapidly degradable
Terpinyl acetate (80-26-2)	
Persistence and degradability	Rapidly degradable
Aldehyde C-16 (77-83-8)	
Persistence and degradability	Rapidly degradable
Triplal (Vertocitral) (68039-49-6)	
Persistence and degradability	Rapidly degradable
Isononyl aldehyde (5435-64-3)	
Persistence and degradability	Rapidly degradable
Aldehyde C-11 (112-44-7)	
Persistence and degradability	Rapidly degradable
Aldehyde C-12 (112-54-9)	
Persistence and degradability	Rapidly degradable

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### Allyl amyl glycolate (67634-00-8)

Persistence and degradability	Rapidly degradable
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### benzyl benzoate (120-51-4)

Persistence and degradability	May cause long-term adverse effects in the environment.
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## 12.3. Bioaccumulative potential

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Bioaccumulative potential	Not established.
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### Camphor (76-22-2)

Partition coefficient n-octanol/water (Log Pow)	2.414 (at 25 °C)
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### Terpinyl acetate (80-26-2)

Partition coefficient n-octanol/water (Log Pow)	4.4 (at 30 °C (at pH 7)
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### Aldehyde C-16 (77-83-8)

Partition coefficient n-octanol/water (Log Pow)	2.4 (at 25 °C (cis isomer)
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### Isononyl aldehyde (5435-64-3)

Partition coefficient n-octanol/water (Log Pow)	3.3 (at 26 °C (at pH 3.8-4.3)
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### Aldehyde C-11 (112-44-7)

Partition coefficient n-octanol/water (Log Pow)	4.47 (at 25 °C)
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### Aldehyde C-12 (112-54-9)

Partition coefficient n-octanol/water (Log Pow)	4.9 (at 35 °C)
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### Allyl amyl glycolate (67634-00-8)

Partition coefficient n-octanol/water (Log Pow)	1.96 (at 25 °C (at pH 2.3)
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### benzyl benzoate (120-51-4)

Partition coefficient n-octanol/water (Log Pow)	3.97 (at 25 °C)
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Bioaccumulative potential	Not established.
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## 12.4. Mobility in soil

No additional information available

## 12.5. Results of PBT and vPvB assessment

No additional information available

## 12.6. Endocrine disrupting properties

No additional information available

## 12.7. Other adverse effects

Additional information : Avoid release to the environment.

# SECTION 13: Disposal considerations

## 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

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Product/Packaging disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container in accordance with local/national laws and regulations.
Ecological information	: Avoid release to the environment.
HP Code	: HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye. HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

### SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Not applicable

#### Transport by sea

Not applicable

#### Air transport

Not applicable

#### Inland waterway transport

Not applicable

#### Rail transport

Not applicable

### 14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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### 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	Entry title or description
3(a)	Citrus medica limonum (Lemon) peel oil ; Isononyl aldehyde	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	PINE #EU15194F ; Pine Needle Oil ; Citrus medica limonum (Lemon) peel oil ; Aldehyde C-16 ; Triplal (Vertocitral) ; Isononyl aldehyde ; Aldehyde C-11 ; Aldehyde C-12 ; Allyl amyl glycolate ; benzyl benzoate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	PINE #EU15194F ; Verdox ; Pine Needle Oil ; Citrus medica limonum (Lemon) peel oil ; Terpinyl acetate ; Aldehyde C-16 ; Triplal (Vertocitral) ; Aldehyde C-11 ; Allyl amyl glycolate ; benzyl benzoate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
40.	Camphor ; Citrus medica limonum (Lemon) peel oil ; Isononyl aldehyde	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

###### 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

#### Germany

- Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG).  
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).
- Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1).
- Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

#### Netherlands

- ABM category : A(3) - hazardous for aquatic organisms, may have longterm hazardous effects in aquatic environment
- SZW-lijst van kankerverwekkende stoffen : Pine Needle Oil ,Lemon oil ,Triplal (Vertocitral),Allyl amyl glycolate are listed
- SZW-lijst van mutagene stoffen : Pine Needle Oil ,Lemon oil ,Triplal (Vertocitral),Allyl amyl glycolate 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  
Pregnant/breastfeeding women working with the product must not be in direct contact with 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
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods

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Abbreviations and acronyms:	
LC50	Median lethal concentration
LD50	Median lethal dose
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
PBT	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

Other information : None.

Full text of H- and EUH-statements:	
Acute Tox. 2 (Inhalation)	Acute toxicity (inhal.), Category 2
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) 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.



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Full text of H- and EUH-statements:	
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.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
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.
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

The classification complies with : ATP 12

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.