

# Lemon & Litsea RD CC-16234

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830  
Issue date: 3/15/2022 Version: 1.0



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

#### 1.1. Product identifier

Product form : Mixture  
Product name : Lemon & Litsea RD CC-16234  
UFI : AM1E-U486-K009-7EVJ  
Product code : CC-16234  
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

Candle Craft  
Weiherwiese 10  
65510 Idstein - Germany  
T 49-6126-9363 -0  
info@candlecraft.de - www.candlecraft.de

#### 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]

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment — Chronic Hazard, Category 2	H411

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

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

Flammable liquid and vapour. Causes skin irritation. Causes serious eye damage. Toxic to aquatic life with long lasting effects. May cause an allergic skin reaction.

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### 2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

GHS07

GHS09

Signal word (CLP) :

Danger

Contains :

Linalool, Orange oil, Litsea cubeba oil, Citral, Lemongrass oil, Citronellol Pure, Iso E Super, Geraniol, Nerol, Lemon oil, Linalyl acetate, Geranyl acetate, Eucalyptus oil, Citronella oil, Ginger oil, Lime oil distilled

Hazard statements (CLP) :

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements (CLP) :

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.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

### 2.3. Other hazards

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

## 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]
Linalool	CAS-No.: 78-70-6 EC-No.: 201-134-4 EC Index-No.: 603-235-00-2 REACH-no: 01-2119474016-42	2.875 – 5.75	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Citronellol Pure	CAS-No.: 106-22-9 EC-No.: 203-375-0 REACH-no: 01-2119453995-23	1.5345 – 3.115	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Citral	CAS-No.: 5392-40-5 EC-No.: 226-394-6 EC Index-No.: 605-019-00-3 REACH-no: 01-2119462829-23	1.5115 – 3.069	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Orange oil	CAS-No.: 8008-57-9 EC-No.: 232-433-8; 600-006-9; 616-926-9 REACH-no: 01-2119493353-35	1.5 – 3	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Litsea cubeba oil	CAS-No.: 68855-99-2 EC-No.: 290-018-7	1.5 – 3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Lemongrass oil	CAS-No.: 8007-02-1 EC-No.: 616-903-3	1.5 – 3	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1B, H317 Aquatic Chronic 2, H411
Iso E Super	CAS-No.: 54464-57-2 EC-No.: 259-174-3 REACH-no: 01-2119489989-04	1.15 – 2.3	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 1, H410
Geraniol	CAS-No.: 106-24-1 EC-No.: 203-377-1 EC Index-No.: 603-241-00-5 REACH-no: 01-2119552430-49	0.575 – 1.61	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317
Nerol	CAS-No.: 106-25-2 EC-No.: 203-378-7	0.345 – 1.15	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Lemon oil	CAS-No.: 8008-56-8 EC-No.: 284-515-8;616-925-3	0.575 – 1.15	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Repr. 2, H361 Aquatic Chronic 2, H411
Linalyl acetate	CAS-No.: 115-95-7 EC-No.: 204-116-4 REACH-no: 01-2119454789-19	0.575 – 1.15	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Geranyl acetate	CAS-No.: 105-87-3 EC-No.: 203-341-5 REACH-no: 01-2119973480-35	0.5 – 1	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Citronellyl acetate (mixed Isomers)	CAS-No.: 150-84-5 EC-No.: 205-775-0	0.5 – 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411
Eucalyptus oil	CAS-No.: 8000-48-4 EC-No.: 283-406-2;286-249-8;616-775-9 REACH-no: 01-2119978250-37	0.3 – 0.6	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Citronella oil	CAS-No.: 8000-29-1 EC-No.: 289-753-6;616-771-7	0.2 – 0.4	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
zingiber officinale (ginger) root oil	CAS-No.: 8007-08-7 EC-No.: 283-634-2, 616-904-9	0.175 – 0.35	Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Cedarwood oil, Virginia	CAS-No.: 8000-27-9 EC-No.: 285-370-3;616-769-6	0.175 – 0.35	Asp. Tox. 1, H304 Aquatic Chronic 1, H410
Lime oil distilled	CAS-No.: 8008-26-2 EC-No.: 290-010-3 REACH-no: 01-2120138646-51	0.05 – 0.1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Repr. 2, H361 Asp. Tox. 1, H304 Aquatic Chronic 1, H410
Diphenyl oxide substance with a Community workplace exposure limit	CAS-No.: 101-84-8 EC-No.: 202-981-2 REACH-no: 01-2119472545-33	0 – 0.05	Eye Irrit. 2, H319 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	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: 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	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
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 : Water spray. Dry powder. Foam. Carbon dioxide.

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

Fire hazard	: Flammable liquid and vapour.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

### 5.3. Advice for firefighters

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

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### 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. No open flames, no sparks, and no smoking. 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".

#### 6.2. Environmental precautions

Avoid release to the environment.

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

For containment : Collect spillage.  
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.  
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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.  
Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace.

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

Technical measures : Ground/bond container and receiving equipment.  
Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed.  
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.

#### 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

Citral (5392-40-5)

Belgium - Occupational Exposure Limits

OEL TWA	32 mg/m <sup>3</sup> (vapor and aerosol)
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<b>Citral (5392-40-5)</b>	
OEL TWA [ppm]	5 ppm (vapor and aerosol)
OEL chemical category	Skin
<b>Ireland - Occupational Exposure Limits</b>	
OEL TWA [2]	5 ppm
OEL STEL [ppm]	15 ppm (calculated)
<b>Poland - Occupational Exposure Limits</b>	
NDS (OEL TWA)	27 mg/m <sup>3</sup>
NDSch (OEL STEL)	54 mg/m <sup>3</sup>
<b>Portugal - Occupational Exposure Limits</b>	
OEL TWA [ppm]	5 ppm
OEL chemical category	Sensitizer, A4 - Not Classifiable as a Human Carcinogen, skin - potential for cutaneous exposure
<b>Spain - Occupational Exposure Limits</b>	
VLA-ED (OEL TWA) [2]	5 ppm (inhalable fraction and vapor)
OEL chemical category	Sensitizer, skin - potential for cutaneous absorption
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL TWA [ppm]	5 ppm (inhalable fraction and vapor)
ACGIH chemical category	Not Classifiable as a Human Carcinogen, Skin - potential significant contribution to overall exposure by the cutaneous route, dermal sensitizer
<b>Diphenyl oxide (101-84-8)</b>	
<b>EU - Indicative Occupational Exposure Limit (IOEL)</b>	
IOEL TWA	7 mg/m <sup>3</sup>
IOEL TWA [ppm]	1 ppm
IOEL STEL	14 mg/m <sup>3</sup>
IOEL STEL [ppm]	2 ppm
<b>Austria - Occupational Exposure Limits</b>	
MAK (OEL TWA)	7 mg/m <sup>3</sup>
MAK (OEL TWA) [ppm]	1 ppm
MAK (OEL STEL)	14 mg/m <sup>3</sup>
MAK (OEL STEL) [ppm]	2 ppm
<b>Belgium - Occupational Exposure Limits</b>	
OEL TWA	7 mg/m <sup>3</sup> (vapor)
OEL TWA [ppm]	1 ppm (vapor)
OEL STEL	14 mg/m <sup>3</sup> (vapor)
OEL STEL [ppm]	2 ppm (vapor)
<b>Bulgaria - Occupational Exposure Limits</b>	
OEL TWA	7 mg/m <sup>3</sup>
OEL TWA [ppm]	1 ppm
OEL STEL	14 mg/m <sup>3</sup>

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<b>Diphenyl oxide (101-84-8)</b>	
OEL STEL [ppm]	2 ppm
<b>Croatia - Occupational Exposure Limits</b>	
GVI (OEL TWA) [1]	7 mg/m <sup>3</sup>
GVI (OEL TWA) [2]	1 ppm
KGVI (OEL STEL)	14 mg/m <sup>3</sup>
KGVI (OEL STEL) [ppm]	2 ppm
<b>Cyprus - Occupational Exposure Limits</b>	
OEL TWA	7 mg/m <sup>3</sup>
OEL TWA [ppm]	1 ppm
OEL STEL	14 mg/m <sup>3</sup>
OEL STEL [ppm]	2 ppm
<b>Czech Republic - Occupational Exposure Limits</b>	
PEL (OEL TWA)	5 mg/m <sup>3</sup>
<b>Denmark - Occupational Exposure Limits</b>	
OEL TWA [1]	7 mg/m <sup>3</sup>
OEL TWA [2]	1 ppm
<b>Estonia - Occupational Exposure Limits</b>	
OEL TWA	7 mg/m <sup>3</sup>
OEL TWA [ppm]	1 ppm
OEL STEL	14 mg/m <sup>3</sup>
OEL STEL [ppm]	2 ppm
<b>Finland - Occupational Exposure Limits</b>	
HTP (OEL TWA) [1]	7 mg/m <sup>3</sup>
HTP (OEL TWA) [2]	1 ppm
HTP (OEL STEL)	14 mg/m <sup>3</sup>
HTP (OEL STEL) [ppm]	2 ppm
<b>France - Occupational Exposure Limits</b>	
VME (OEL TWA)	7 mg/m <sup>3</sup>
VME (OEL TWA) [ppm]	1 ppm
OEL chemical category	Risk of cutaneous absorption
<b>Germany - Occupational Exposure Limits (TRGS 900)</b>	
AGW (OEL TWA) [1]	7.1 mg/m <sup>3</sup> (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed-vapor)
AGW (OEL TWA) [2]	1 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed-vapor)
<b>Gibraltar - Occupational Exposure Limits</b>	
OEL TWA	7 mg/m <sup>3</sup>
OEL TWA [ppm]	1 ppm
OEL STEL	14 mg/m <sup>3</sup>
OEL STEL [ppm]	200 ppm

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<b>Diphenyl oxide (101-84-8)</b>	
<b>Greece - Occupational Exposure Limits</b>	
OEL TWA	7 mg/m <sup>3</sup>
OEL TWA [ppm]	1 ppm
OEL STEL	14 mg/m <sup>3</sup>
OEL STEL [ppm]	2 ppm
<b>Hungary - Occupational Exposure Limits</b>	
AK (OEL TWA)	7 mg/m <sup>3</sup>
CK (OEL STEL)	14 mg/m <sup>3</sup>
<b>Ireland - Occupational Exposure Limits</b>	
OEL TWA [1]	7 mg/m <sup>3</sup> (vapour)
OEL TWA [2]	1 ppm (vapour)
OEL STEL	14 mg/m <sup>3</sup> (vapour)
OEL STEL [ppm]	2 ppm (vapour)
<b>Italy - Occupational Exposure Limits</b>	
OEL TWA	7 mg/m <sup>3</sup>
OEL TWA [ppm]	1 ppm
<b>Latvia - Occupational Exposure Limits</b>	
OEL TWA	7 mg/m <sup>3</sup>
OEL TWA [ppm]	1 ppm
<b>Lithuania - Occupational Exposure Limits</b>	
IPRV (OEL TWA)	7 mg/m <sup>3</sup>
IPRV (OEL TWA) [ppm]	1 ppm
TPRV (OEL STEL)	14 mg/m <sup>3</sup>
TPRV (OEL STEL) [ppm]	2 ppm
<b>Luxembourg - Occupational Exposure Limits</b>	
OEL TWA	7 mg/m <sup>3</sup>
OEL TWA [ppm]	1 ppm
OEL STEL	14 mg/m <sup>3</sup>
OEL STEL [ppm]	2 ppm
<b>Malta - Occupational Exposure Limits</b>	
OEL TWA	7 mg/m <sup>3</sup>
OEL TWA [ppm]	1 ppm
OEL STEL	14 mg/m <sup>3</sup>
OEL STEL [ppm]	2 ppm
<b>Netherlands - Occupational Exposure Limits</b>	
TGG-8u (OEL TWA)	7 mg/m <sup>3</sup>
TGG-15min (OEL STEL)	14 mg/m <sup>3</sup>
<b>Poland - Occupational Exposure Limits</b>	
NDS (OEL TWA)	7 mg/m <sup>3</sup>



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<b>Diphenyl oxide (101-84-8)</b>	
NDSCh (OEL STEL)	14 mg/m <sup>3</sup>
<b>Portugal - Occupational Exposure Limits</b>	
OEL TWA	7 mg/m <sup>3</sup>
OEL TWA [ppm]	1 ppm (vapor)
OEL STEL	14 mg/m <sup>3</sup> (indicative limit value)
OEL STEL [ppm]	2 ppm (indicative limit value-vapor)
<b>Romania - Occupational Exposure Limits</b>	
OEL TWA	5 mg/m <sup>3</sup>
OEL TWA [ppm]	0.7 ppm
OEL STEL	10 mg/m <sup>3</sup>
OEL STEL [ppm]	1.4 ppm
<b>Slovakia - Occupational Exposure Limits</b>	
NPHV (OEL TWA) [1]	7 mg/m <sup>3</sup>
NPHV (OEL TWA) [2]	1 ppm
NPHV (OEL C)	7.1 mg/m <sup>3</sup>
<b>Slovenia - Occupational Exposure Limits</b>	
OEL TWA	7 mg/m <sup>3</sup>
OEL TWA [ppm]	1 ppm
OEL STEL	14 mg/m <sup>3</sup>
OEL STEL [ppm]	2 ppm
<b>Spain - Occupational Exposure Limits</b>	
VLA-ED (OEL TWA) [1]	7.1 mg/m <sup>3</sup> (vapor)
VLA-ED (OEL TWA) [2]	1 ppm (vapor)
VLA-EC (OEL STEL)	14.2 mg/m <sup>3</sup> (vapor)
VLA-EC (OEL STEL) [ppm]	2 ppm (vapor)
<b>Sweden - Occupational Exposure Limits</b>	
NGV (OEL TWA)	7 mg/m <sup>3</sup>
NGV (OEL TWA) [ppm]	1 ppm
KTV (OEL STEL)	14 mg/m <sup>3</sup>
KTV (OEL STEL) [ppm]	2 ppm
<b>United Kingdom - Occupational Exposure Limits</b>	
WEL TWA (OEL TWA) [1]	7.1 mg/m <sup>3</sup> (vapour)
WEL TWA (OEL TWA) [2]	1 ppm (vapour)
WEL STEL (OEL STEL)	21.3 mg/m <sup>3</sup> (calculated-vapour)
WEL STEL (OEL STEL) [ppm]	3 ppm (calculated-vapour)
<b>Norway - Occupational Exposure Limits</b>	
Grenseverdi (OEL TWA) [1]	7 mg/m <sup>3</sup>
Grenseverdi (OEL TWA) [2]	1 ppm
Korttidsverdi (OEL STEL)	14 mg/m <sup>3</sup> (value from the regulation)

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Diphenyl oxide (101-84-8)	
Korttidsverdi (OEL STEL) [ppm]	2 ppm (value from the regulation)
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA) [1]	7 mg/m <sup>3</sup> (aerosol, vapour)
MAK (OEL TWA) [2]	1 ppm (aerosol, vapour)
KZGW (OEL STEL)	14 mg/m <sup>3</sup> (aerosol, vapour)
KZGW (OEL STEL) [ppm]	2 ppm (aerosol, vapour)
OEL chemical category	Category 2 developmental toxin, Category 2 reproductive toxin
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	1 ppm (vapor)
ACGIH OEL STEL [ppm]	2 ppm (vapor fraction)

### 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 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

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### 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	: Liquid
Colour	: light yellow. amber.
Odour	: characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 85 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: ≈ 0.94
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Flammable liquid and vapour.

### 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

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

### 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.

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### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

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

<b>Linalool (78-70-6)</b>	
LD50 oral	2790 mg/kg bodyweight
<b>Orange oil (8008-57-9)</b>	
LD50 oral rat	4400 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
<b>Litsea cubeba oil (68855-99-2)</b>	
LD50 oral rat	> 5 g/kg
LD50 dermal	4800 mg/kg bodyweight
<b>Citral (5392-40-5)</b>	
LD50 oral rat	4960 mg/kg
LD50 dermal rabbit	2250 mg/kg
LD50 dermal	2250 mg/kg bodyweight
<b>Lemongrass oil (8007-02-1)</b>	
LD50 oral rat	> 5 g/kg
<b>Citronellol Pure (106-22-9)</b>	
LD50 oral rat	3450 mg/kg
LD50 oral	3450 mg/kg bodyweight
LD50 dermal rabbit	2650 mg/kg
LD50 dermal	2650 mg/kg bodyweight
<b>Geraniol (106-24-1)</b>	
LD50 oral rat	3600 mg/kg
LD50 oral	3600 mg/kg bodyweight
LD50 dermal rabbit	> 5 g/kg
<b>Nerol (106-25-2)</b>	
LD50 oral rat	4500 mg/kg
LD50 oral	4500 mg/kg bodyweight
LD50 dermal rabbit	> 5 g/kg
<b>Lemon oil (8008-56-8)</b>	
LD50 oral rat	2840 mg/kg
<b>Linalyl acetate (115-95-7)</b>	
LD50 oral rat	14550 mg/kg
LD50 dermal rabbit	> 5000 mg/kg

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<b>Geranyl acetate (105-87-3)</b>	
LD50 oral rat	6330 mg/kg
<b>Citronellyl acetate (mixed Isomers) (150-84-5)</b>	
LD50 oral rat	6800 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
<b>Eucalyptus oil (8000-48-4)</b>	
LD50 oral rat	2480 mg/kg
<b>Citronella oil (8000-29-1)</b>	
LD50 oral rat	7200 mg/kg
LD50 oral	4704 mg/kg bodyweight
LD50 dermal	4230 mg/kg bodyweight
<b>zingiber officinale (ginger) root oil (8007-08-7)</b>	
LD50 oral rat	> 5 g/kg
<b>Cedarwood oil, Virginia (8000-27-9)</b>	
LD50 oral rat	> 5 g/kg
<b>Lime oil distilled (8008-26-2)</b>	
LD50 oral rat	5600 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
<b>Diphenyl oxide (101-84-8)</b>	
LD50 oral rat	2450 mg/kg
LD50 oral	2830 mg/kg bodyweight
LD50 dermal rabbit	> 7940 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	1.5 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
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
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general	: Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Toxic to aquatic life with long lasting effects.

<b>Linalool (78-70-6)</b>	
EC50 96h - Algae [1]	88.3 mg/l (Species: Desmodesmus subspicatus)

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<b>Citral (5392-40-5)</b>	
EC50 - Crustacea [1]	7 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	16 mg/l (Species: Desmodesmus subspicatus)
EC50 96h - Algae [1]	19 mg/l (Species: Desmodesmus subspicatus)
<b>Geraniol (106-24-1)</b>	
LC50 - Fish [1]	22 mg/l (Exposure time: 96 h - Species: Danio rerio [static])
<b>Nerol (106-25-2)</b>	
LC50 - Fish [1]	20.3 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static])
<b>Linalyl acetate (115-95-7)</b>	
LC50 - Fish [1]	11 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [flow-through])
<b>Citronellyl acetate (mixed Isomers) (150-84-5)</b>	
LC50 - Fish [1]	6.1 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static])

### 12.2. Persistence and degradability

<b>Eucalyptus oil (8000-48-4)</b>	
Persistence and degradability	Not established.

### 12.3. Bioaccumulative potential

<b>Citral (5392-40-5)</b>	
Partition coefficient n-octanol/water (Log Pow)	2.76 (at 25 °C)
<b>Eucalyptus oil (8000-48-4)</b>	
Bioaccumulative potential	Not established.
<b>Diphenyl oxide (101-84-8)</b>	
BCF - Fish [1]	470
Partition coefficient n-octanol/water (Log Pow)	4.2

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Additional information : Flammable vapours may accumulate in the container.

## SECTION 14: Transport information

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

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### 14.1 UN number

UN-No. (ADR)	: UN 3082
UN-No. (IMDG)	: UN 3082
UN-No. (IATA)	: UN 3082
UN-No. (ADN)	: UN 3082
UN-No. (RID)	: UN 3082

### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (IMDG)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (IATA)	: Environmentally hazardous substance, liquid, n.o.s.
Proper Shipping Name (ADN)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Proper Shipping Name (RID)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Transport document description (ADR)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Iso E Super), 9, III, (-)
Transport document description (IMDG)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Iso E Super), 9, III, MARINE POLLUTANT
Transport document description (IATA)	: UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Iso E Super), 9, III
Transport document description (ADN)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Iso E Super), 9, III
Transport document description (RID)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Iso E Super), 9, III

### 14.3. Transport hazard class(es)

#### ADR

Transport hazard class(es) (ADR) : 9  
Danger labels (ADR) : 9



#### IMDG

Transport hazard class(es) (IMDG) : 9  
Danger labels (IMDG) : 9



#### IATA

Transport hazard class(es) (IATA) : 9  
Danger labels (IATA) : 9



#### ADN

Transport hazard class(es) (ADN) : 9  
Danger labels (ADN) : 9



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### RID

Transport hazard class(es) (RID) : 9  
Danger labels (RID) : 9



### 14.4. Packing group

Packing group (ADR) : III  
Packing group (IMDG) : III  
Packing group (IATA) : III  
Packing group (ADN) : III  
Packing group (RID) : III

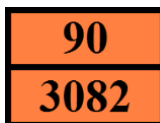
### 14.5. Environmental hazards

Dangerous for the environment : Yes  
Marine pollutant : Yes  
Other information : No supplementary information available

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR) : M6  
Special provisions (ADR) : 274, 335, 375, 601  
Limited quantities (ADR) : 5I  
Excepted quantities (ADR) : E1  
Packing instructions (ADR) : P001, IBC03, LP01, R001  
Special packing provisions (ADR) : PP1  
Mixed packing provisions (ADR) : MP19  
Portable tank and bulk container instructions (ADR) : T4  
Portable tank and bulk container special provisions (ADR) : TP1, TP29  
Tank code (ADR) : LGBV  
Vehicle for tank carriage : AT  
Transport category (ADR) : 3  
Special provisions for carriage - Packages (ADR) : V12  
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13  
Hazard identification number (Kemler No.) : 90  
Orange plates :



Tunnel restriction code (ADR) : -  
EAC code : •3Z

#### Transport by sea

Special provisions (IMDG) : 274, 335, 969  
Limited quantities (IMDG) : 5 L  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : LP01, P001  
Special packing provisions (IMDG) : PP1  
IBC packing instructions (IMDG) : IBC03  
Tank instructions (IMDG) : T4  
Tank special provisions (IMDG) : TP1, TP29  
EmS-No. (Fire) : F-A  
EmS-No. (Spillage) : S-F  
Stowage category (IMDG) : A



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### Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y964
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 964
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L
Special provisions (IATA)	: A97, A158, A197, A215
ERG code (IATA)	: 9L

### Inland waterway transport

Classification code (ADN)	: M6
Special provisions (ADN)	: 274, 335, 375, 601
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

### Rail transport

Classification code (RID)	: M6
Special provisions (RID)	: 274, 335, 375, 601
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Special packing provisions (RID)	: PP1
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1, TP29
Tank codes for RID tanks (RID)	: LGBV
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Special provisions for carriage - Loading, unloading and handling (RID)	: CW13, CW31
Colis express (express parcels) (RID)	: CE8
Hazard identification number (RID)	: 90

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

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

EU restriction list (REACH Annex XVII)	
Reference code	Applicable on
3(a)	Orange oil ; Lemon oil ; Eucalyptus oil ; Lime oil distilled
3(b)	Lemon & Litsea RD CC-16234 ; Linalool ; Orange oil ; Litsea cubeba oil ; Citral ; Lemongrass oil ; Citronellol Pure ; Iso E Super ; Geraniol ; Nerol ; Lemon oil ; Linalyl acetate ; Geranyl acetate ; Citronellyl acetate (mixed Isomers) ; Eucalyptus oil ; Citronella oil ; zingiber officinale (ginger) root oil ; Cedarwood oil, Virginia ; Lime oil distilled
3(c)	Lemon & Litsea RD CC-16234 ; Orange oil ; Litsea cubeba oil ; Lemongrass oil ; Iso E Super ; Lemon oil ; Geranyl acetate ; Citronellyl acetate (mixed Isomers) ; Eucalyptus oil ; Citronella oil ; zingiber officinale (ginger) root oil ; Cedarwood oil, Virginia ; Lime oil distilled
40.	Orange oil ; Lemon oil ; Eucalyptus oil ; Lime oil distilled

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Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance 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.

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

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.

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.

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 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

Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen : Orange oil ,Lemon oil ,Eucalyptus oil,Citronella oil,Ginger oil,Cedarwood oil, Virginia are listed

SZW-lijst van mutagene stoffen : Orange oil ,Lemon oil ,Eucalyptus oil,Citronella oil,Ginger oil,Cedarwood oil, Virginia are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen –

Vruchtbaarheid

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

#### Switzerland

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

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

### Full text of H- and EUH-statements:

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
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.

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Full text of H- and EUH-statements:	
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
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

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.