

LIME BASIL & MANDARIN FR20987

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 4/28/2023 Revision date: 6/5/2024 Supersedes version of: 4/28/2023 Version: 2.0

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

1.1. Product identifier

Product form : Mixture
Product name : LIME BASIL & MANDARIN FR20987
Product code : FR20987
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 : For professional use only
Industrial
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

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 2 H319
Skin sensitisation, Category 1 H317
Aspiration hazard, Category 1 H304
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 skin irritation. Causes serious eye irritation. Toxic to aquatic life with long lasting effects. 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. 1272/2008 [CLP]

Hazard pictograms (CLP) :



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	GHS07	GHS08
Signal word (CLP)	: Danger	
Contains	: Grapefruit oil; Petitgrain oil; Tangerine oil; Thyme oil, white; Orange oil ; Linalool; Hydroxy; Helional; Patchouli oil; Vertenex; Geranyl propionate; Black pepper oil; Basil oil; Vertofix; Triplal (Vertocitral); Lime oil distilled ; Vetiver oil	
Hazard statements (CLP)	: 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. H412 - Harmful to aquatic life with long lasting effects.	
Precautionary statements (CLP)	: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P264 - Wash hands, forearms and face thoroughly after handling. 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. P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.	
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]
Linalool	CAS-No.: 78-70-6 EC-No.: 201-134-4 EC Index-No.: 603-235-00-2 REACH-no: 01-2119474016-42	4.5 – 9	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Orange oil	CAS-No.: 8008-57-9 EC-No.: 232-433-8 REACH-no: 01-2119493353-35	3.55 – 7.1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Tangerine oil	CAS-No.: 8016-85-1 EC-No.: 297-672-2	1.75 – 3.4	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Methyl ionone (mixture of isomers)	CAS-No.: 1335-46-2 EC-No.: 215-635-0	0.9 – 1.7	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Dihydromyrcenol	CAS-No.: 18479-58-8 EC-No.: 242-362-4 REACH-no: 01-2119457274-37	0.7 – 1.4	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Hydroxy	CAS-No.: 107-75-5 EC-No.: 203-518-7 REACH-no: 01-2119973482-31	0.7 – 1.3	Eye Irrit. 2, H319 Skin Sens. 1B, H317
Helional	CAS-No.: 1205-17-0 EC-No.: 214-881-6 REACH-no: 01-2120740119-58	0.6 – 1.2	Skin Sens. 1B, H317 Repr. 2, H361 Aquatic Chronic 2, H411
Grapefruit oil	CAS-No.: 8016-20-4 EC-No.: 600-007-4	0.5 – 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Patchouli oil	CAS-No.: 8014-09-3 EC-No.: 616-944-7 EC Index-No.: 616-944-7	0.4 – 0.7	Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Vertenex	CAS-No.: 32210-23-4 EC-No.: 250-954-9 REACH-no: 01-2119976286-24	0.2 – 0.3	Skin Sens. 1B, H317
Geranyl propionate	CAS-No.: 105-90-8 EC-No.: 203-344-1	0.1 – 0.2	Aquatic Chronic 2, H411 Skin Sens. 1B, H317 Skin Irrit. 2, H315
Geranyl isobutyrate	CAS-No.: 2345-26-8 EC-No.: 219-062-7	0.1 – 0.2	Aquatic Chronic 1, H410 Aquatic Acute 1, H400
Black pepper oil	CAS-No.: 8006-82-4 EC-No.: 284-524-7;616-894-6	0.1 – 0.2	Aquatic Acute 1, H400 Aquatic Chronic 2, H411 Asp. Tox. 1, H304 Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317
Basil oil	CAS-No.: 8015-73-4 EC-No.: 616-962-5	0.1 – 0.2	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Skin Sens. 1, H317 Muta. 2, H341 Carc. 2, H351 Aquatic Chronic 3, H412
Benzyl acetate substance with national workplace exposure limit(s) (BE, DK, ES, IE, LT, LV, PT, RO)	CAS-No.: 140-11-4 EC-No.: 205-399-7 REACH-no: 01-2119638272-42	0.1 – 0.2	Aquatic Chronic 3, H412
Vertofix	CAS-No.: 32388-55-9 EC-No.: 251-020-3 REACH-no: 01-2119969651-28	0.1 – 0.2	Skin Sens. 1B, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Triplal (Vertocitral)	CAS-No.: 68039-49-6 EC-No.: 268-264-1	0.1 – 0.2	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Lime oil distilled	CAS-No.: 8008-26-2 EC-No.: 290-010-3 REACH-no: 01-2120138646-51	0.1 – 0.2	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Repr. 1A, H360FD Asp. Tox. 1, H304 Aquatic Chronic 1, H410
Petitgrain oil	CAS-No.: 8014-17-3 EC-No.: 277-143-2 REACH-no: 01-2120748358-44	0.05 – 0.1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411
Thyme oil, white	CAS-No.: 8007-46-3 EC-No.: 284-535-7;616-910-1	0.05 – 0.1	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Vetiver oil	CAS-No.: 8016-96-4 EC-No.: 616-993-4 REACH-no: 01-2120119716-55	0.1 – 0.1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 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. Call a physician immediately. 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. Allow affected person to breathe fresh air. Allow the victim to rest.
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. 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. 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.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Do not induce vomiting. Call a physician immediately. Immediately call a POISON CENTER/doctor. Obtain emergency medical attention.

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

Symptoms/effects	: Suspected of damaging fertility or the unborn child. Not expected to present a significant hazard under anticipated conditions of normal use.
Symptoms/effects after inhalation	: May cause an allergic skin reaction.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction. Causes skin irritation.
Symptoms/effects after eye contact	: Eye irritation.

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

5.2. Special hazards arising from the substance or mixture

Fire hazard : Combustible liquid.
Explosion hazard : May form flammable/explosive vapour-air 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 attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Evacuate unnecessary personnel. No open flames, no sparks, and no smoking.

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". Equip cleanup crew with proper 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

For containment : Collect spillage.
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. 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. See Section 8. Exposure controls and personal protection.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Precautions for safe handling : 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. No open flames. No smoking. 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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
- 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. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed.
- Storage conditions : Store in a well-ventilated place. Keep cool. Keep in fireproof place. 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. Store locked up.
- Incompatible products : Strong bases. Strong acids.
- Incompatible materials : Heat sources. Sources of ignition. Direct sunlight.
- 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

Benzyl acetate (140-11-4)	
Belgium - Occupational Exposure Limits	
OEL TWA	62 mg/m ³
	10 ppm
Denmark - Occupational Exposure Limits	
OEL TWA	61 mg/m ³
	10 ppm
OEL STEL	122 mg/m ³
	20 ppm
Ireland - Occupational Exposure Limits	
OEL TWA	10 ppm
OEL STEL	30 ppm (calculated)
Latvia - Occupational Exposure Limits	
OEL TWA	5 mg/m ³

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Benzyl acetate (140-11-4)	
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	5 mg/m ³
Portugal - Occupational Exposure Limits	
OEL TWA	10 ppm
OEL chemical category	A4 - Not Classifiable as a Human Carcinogen
Romania - Occupational Exposure Limits	
OEL TWA	50 mg/m ³
	8 ppm
OEL STEL	80 mg/m ³
	13 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	62 mg/m ³
	10 ppm
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	10 ppm
ACGIH chemical category	Not Classifiable as a Human Carcinogen

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.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses. Chemical goggles or safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

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Hand protection:

Protective gloves. Wear protective gloves.

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. [In case of inadequate ventilation] wear respiratory protection. 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.

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. characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable, Combustible liquid
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 74 °C
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	: 0.003699979 mm Hg (calculated value)
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: ≈ 0.918
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

VOC content : 15.1 % (calculated value)(CARB VOC) (%w/w)

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

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10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Not established.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Open flame. Overheating. Direct sunlight. Heat. Sparks. Extremely high or low temperatures. Avoid contact with hot surfaces. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. May release flammable gases. fume. Carbon monoxide. Carbon dioxide.

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

Grapefruit oil (8016-20-4)

LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
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Petitgrain oil (8014-17-3)

LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
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Thyme oil, white (8007-46-3)

LD50 oral rat	2840 mg/kg (Source: NLM_CIP)
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LD50 oral	1800 mg/kg bodyweight
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Orange oil (8008-57-9)

LD50 oral rat	4400 mg/kg (Source: NZ_CCID)
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LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)
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Linalool (78-70-6)

LD50 oral	2790 mg/kg
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Methyl ionone (mixture of isomers) (1335-46-2)

LD50 oral rat	> 5000 mg/kg
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LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)
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LD50 dermal	2900 mg/kg bodyweight
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Dihydromyrcenol (18479-58-8)

LD50 oral rat	3600 mg/kg (Source: NLM_CIP)
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LD50 oral	3020 mg/kg
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LD50 dermal rabbit	> 5 g/kg (Source: CHEMVIEW)
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Hydroxy (107-75-5)

LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
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LD50 dermal rabbit	> 2000 mg/kg (Source: ECHA_API)
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Helional (1205-17-0)	
LD50 dermal rabbit	> 2000 mg/kg (Source: ECHA_API)
Patchouli oil (8014-09-3)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
Vertenex (32210-23-4)	
LD50 oral rat	5 g/kg (Source: NLM_CIP)
LD50 oral	3370 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)
Geranyl propionate (105-90-8)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
Geranyl isobutyrate (2345-26-8)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
Basil oil (8015-73-4)	
LD50 oral rat	1400 mg/kg (Source: NLM_CIP)
LD50 oral	1340 mg/kg
Benzyl acetate (140-11-4)	
LD50 oral rat	2490 mg/kg (Source: JAPAN_GHS)
LD50 oral	2490 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: JAPAN_GHS)
Vertofix (32388-55-9)	
LD50 oral	4500 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)
Triplal (Vertocitral) (68039-49-6)	
LD50 oral	2330 mg/kg
Lime oil distilled (8008-26-2)	
LD50 oral rat	5600 mg/kg
LD50 dermal rabbit	> 5000 mg/kg
Vetiver oil (8016-96-4)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Benzyl acetate (140-11-4)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: May be fatal if swallowed and enters airways.

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Orange oil (8008-57-9)

Hydrocarbon	Yes
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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 : Toxic to aquatic life with long lasting effects. Harmful 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) : Harmful to aquatic life with long lasting effects.

Linalool (78-70-6)

EC50 96h - Algae [1]	88.3 mg/l (Species: <i>Desmodesmus subspicatus</i>)
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Methyl ionone (mixture of isomers) (1335-46-2)

LC50 - Fish [1]	2.3 mg/l (Exposure time: 96 h - Species: <i>Danio rerio</i> [static] Source: ECHA)
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Vertenex (32210-23-4)

LC50 - Fish [1]	8.6 mg/l (Exposure time: 96 h - Species: <i>Cyprinus carpio</i> [semi-static] Source: ECHA)
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12.2. Persistence and degradability

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Persistence and degradability	Not established.
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Grapefruit oil (8016-20-4)

Persistence and degradability	Rapidly degradable
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Petitgrain oil (8014-17-3)

Persistence and degradability	Rapidly degradable
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Tangerine oil (8016-85-1)

Persistence and degradability	Rapidly degradable
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Thyme oil, white (8007-46-3)

Persistence and degradability	Rapidly degradable
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Orange oil (8008-57-9)

Persistence and degradability	Rapidly degradable
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Linalool (78-70-6)

Persistence and degradability	Rapidly degradable
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Methyl ionone (mixture of isomers) (1335-46-2)

Persistence and degradability	Rapidly degradable
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Dihydromyrcenol (18479-58-8)	
Persistence and degradability	Rapidly degradable
Hydroxy (107-75-5)	
Persistence and degradability	Rapidly degradable
Helional (1205-17-0)	
Persistence and degradability	Rapidly degradable
Patchouli oil (8014-09-3)	
Persistence and degradability	Rapidly degradable
Vertenex (32210-23-4)	
Persistence and degradability	Rapidly degradable
Geranyl propionate (105-90-8)	
Persistence and degradability	Rapidly degradable
Geranyl isobutyrate (2345-26-8)	
Persistence and degradability	Rapidly degradable
Black pepper oil (8006-82-4)	
Persistence and degradability	Rapidly degradable
Basil oil (8015-73-4)	
Persistence and degradability	Rapidly degradable
Benzyl acetate (140-11-4)	
Persistence and degradability	Rapidly degradable
Vertofix (32388-55-9)	
Persistence and degradability	Rapidly degradable
Triplal (Vertocitral) (68039-49-6)	
Persistence and degradability	Rapidly degradable
Lime oil distilled (8008-26-2)	
Persistence and degradability	Rapidly degradable
Vetiver oil (8016-96-4)	
Persistence and degradability	Rapidly degradable
12.3. Bioaccumulative potential	
LIME BASIL & MANDARIN #16738F	
Bioaccumulative potential	Not established.
Petitgrain oil (8014-17-3)	
Partition coefficient n-octanol/water (Log Pow)	3.38 – 4.88
Methyl ionone (mixture of isomers) (1335-46-2)	
Partition coefficient n-octanol/water (Log Pow)	(>4.5 - <5 - at 23 °C (at pH 6.2)

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Dihydromyrcenol (18479-58-8)	
Partition coefficient n-octanol/water (Log Pow)	3.25 (at 40 °C (at pH 7))
Hydroxy (107-75-5)	
Partition coefficient n-octanol/water (Log Pow)	1.68 (at 25 °C)
Helional (1205-17-0)	
Partition coefficient n-octanol/water (Log Pow)	2.4 (at 25 °C)
Vertenex (32210-23-4)	
Partition coefficient n-octanol/water (Log Pow)	4.8 (at 25 °C)
Benzyl acetate (140-11-4)	
Partition coefficient n-octanol/water (Log Pow)	1.96 (at 25 °C (at pH 7))
Vertofix (32388-55-9)	
BCF - Fish [1]	(3920 dimensionless (organ w.w.))
Partition coefficient n-octanol/water (Log Pow)	5.6 – 5.9

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.
Product/Packaging disposal recommendations	: Dispose of contents/container in accordance with local/national laws and regulations. Dispose in a safe manner in accordance with local/national regulations.
Additional information	: Handle empty containers with care because residual vapours are flammable.
Ecological information	: Avoid release to the environment. Hazardous waste due to toxicity.
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
14.1. UN number or ID number				
UN 3082	UN 3082	UN 3082	UN 3082	Not regulated

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ADR	IMDG	IATA	ADN	RID
14.2. UN proper shipping name				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tangerine oil)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tangerine oil)	Environmentally hazardous substance, liquid, n.o.s. (Tangerine oil)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.	Not regulated
Transport document description				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tangerine oil), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tangerine oil), 9, III	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Tangerine oil), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., 9, III	Not regulated
14.3. Transport hazard class(es)				
9	9	9	9	Not regulated
				Not regulated
14.4. Packing group				
III	III	III	III	Not regulated
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Not regulated
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

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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)	: TP2, TP29
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-F
Stowage category (IMDG)	: A

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
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

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(a)	Grapefruit oil ; Tangerine oil ; Thyme oil, white ; Orange oil ; Black pepper oil ; Lime oil distilled	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

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EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	LIME BASIL & MANDARIN #16738F ; Grapefruit oil ; Petitgrain oil ; Tangerine oil ; Thyme oil, white ; Orange oil ; Linalool ; Methyl ionone (mixture of isomers) ; Dihydromyrcenol ; Hydroxy ; Helional ; Patchouli oil ; Vertenex ; Geranyl propionate ; Black pepper oil ; Basil oil ; Vertofix ; Triplal (Vertocitral) ; Lime oil distilled ; Vetiver oil	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)	LIME BASIL & MANDARIN #16738F ; Grapefruit oil ; Petitgrain oil ; Tangerine oil ; Thyme oil, white ; Orange oil ; Methyl ionone (mixture of isomers) ; Helional ; Patchouli oil ; Geranyl propionate ; Geranyl isobutyrate ; Black pepper oil ; Basil oil ; Benzyl acetate ; Vertofix ; Triplal (Vertocitral) ; Lime oil distilled ; Vetiver oil	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.	Grapefruit oil ; Tangerine oil ; Thyme oil, white ; Orange oil ; Black pepper oil ; Lime oil distilled	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.

VOC Directive (2004/42)

VOC content : 15.1 % (calculated value)(CARB VOC) (%w/w)

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

Water hazard class (WGK) : WGK 3, Highly 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(2) - toxic for aquatic organisms, may have longterm hazardous effects in aquatic environment
SZW-lijst van kankerverwekkende stoffen : Petitgrain oil, Tangerine oil, Thyme oil, white, Orange oil, Black pepper oil, Triplal (Vertocitral) are listed
SZW-lijst van mutagene stoffen : Petitgrain oil, Thyme oil, white, Orange oil, Black pepper oil, Triplal (Vertocitral) 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

Other information : None.

Full text of H- and EUH-statements:	
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
Carc. 2	Carcinogenicity, Category 2
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.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
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.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H360FD	May damage fertility. May damage the unborn child.
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.
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 1A	Reproductive toxicity, Category 1A
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

The data contained in this Material Safety Data Sheet is accurate to the best knowledge of French Color & Fragrance Co., applies to the product as supplied by French Color & Fragrance Co. and does not relate to use in combination with any other material or in any process. Data and information is furnished without warranty expressed or implied, nor does French Color & Fragrance Co. assume responsibility for use or reliance upon this data.

This SDS is current to the date listed above. However, the GHS classifications may change due to hazard communication updates by the overseeing governing body. For the most current SDS information please contact Regulatory@frenchcolor.com