



A R O M O L O G Y

BITTER ORANGE E.O. IVORY COAST

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 3/21/2016 Revision date: 7/16/2026 Supersedes version of: 7/9/2025 Version: 15.0

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

1.1. Product identifier

Product form : Substance
Trade name : BITTER ORANGE E.O. IVORY COAST
EC No (EC/EINECS/ELINCS) : 227-813-5
CAS : 5989-27-5
REACH registration No. : 01-2119529223-47
Product code : 021373
Formula : C10H16
Other means of identification : Orange oil, bitter (CAS: 72968-50-4, EC: 277-143-2)

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

Relevant identified uses

Main use category : Industrial use
Use of the substance/mixture : Flavor ingredient
Fragrance ingredient

1.3. Details of the supplier of the safety data sheet

Aromology Trading LLC
G05 Al Ghazal Building
Nadd Al Hamar
Dubai, United Arab Emirates

Website: www.aromology.com
Email: info@aromology.com
Telephone: +971 505197601

1.4. Emergency telephone number

Country/Area	Organisation	Emergency number
France	ORFILA.	+33 1 45 42 59 59
Ireland	National Poisons Information Centre. Beaumont Hospital. PO Box 1297. Beaumont Road 9 Dublin.	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)
Malta	Medicines & Poisons Info Office. Mater Dei Hospital. Msida MSD 2090 Msida.	112 +356 2545 6508
United Kingdom	National Poisons Information Service (Belfast Centre). Royal Victoria Hospital. Grosvenor Road BT12 6BA Belfast.	0344 892 0111 Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids, Category 3 H226
Skin corrosion/irritation, Category 2 H315
Skin sensitisation, Category 1 H317
Aspiration hazard, Category 1 H304
Hazardous to the aquatic environment – Acute Hazard, Category 1 H400
Hazardous to the aquatic environment – Chronic Hazard, Category 3 H412

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

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Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Danger

Hazard statements (CLP)

: 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.
H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements (CLP) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.
P233 - Keep container tightly closed.
P240 - Ground and bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting equipment.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.

2.3. Other hazards

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

Component	
Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605	Geraniol (106-24-1) ⁽¹⁾

⁽¹⁾ Substance(s) in concentration below 0.1 % and displayed on a voluntary basis

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent
Name : BITTER ORANGE E.O. IVORY COAST
CAS : 5989-27-5
EC No (EC/EINECS/ELINCS) : 227-813-5

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Limonene	CAS: 5989-27-5/138-86-3/5989-54-8 EC No (EC/EINECS/ELINCS): 227-813-5 EC index number: 601-096-00-2	≥ 90	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Myrcene	CAS: 123-35-3 EC No (EC/EINECS/ELINCS): 204-622-5	1 – 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
alpha-Terpineol	CAS: 98-55-5 EC No (EC/EINECS/ELINCS): 202-680-6	0.1 – 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Linalool	CAS: 78-70-6 EC No (EC/EINECS/ELINCS): 201-134-4 EC index number: 603-235-00-2	0.1 – 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
alpha-Pinene	CAS: 80-56-8 EC No (EC/EINECS/ELINCS): 201-291-9	0.1 – 1	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Aquatic Acute 1, H400 Aquatic Chronic 1, H410 Asp. Tox. 1, H304 Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317
1-Octanol	CAS: 111-87-5 EC No (EC/EINECS/ELINCS): 203-917-6	0.1 – 1	Aquatic Chronic 3, H412 Eye Irrit. 2, H319
beta-Pinene	CAS: 127-91-3 EC No (EC/EINECS/ELINCS): 204-872-5	0.1 – 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
beta-Phellandrene	CAS: 555-10-2 EC No (EC/EINECS/ELINCS): 209-081-9	0.1 – 1	Asp. Tox. 1, H304 Flam. Liq. 3, H226 Skin Sens. 1, H317
Linalyl acetate	CAS: 115-95-7 EC No (EC/EINECS/ELINCS): 204-116-4	0.1 – 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Neryl acetate	CAS: 141-12-8 EC No (EC/EINECS/ELINCS): 205-459-2	0.1 – 1	Skin Sens. 1B, H317
Octanal	CAS: 124-13-0 EC No (EC/EINECS/ELINCS): 204-683-8	0.1 – 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 3, H412
1-Decanol	CAS: 112-30-1 EC No (EC/EINECS/ELINCS): 203-956-9	0.1 – 1	Eye Irrit. 2, H319 Aquatic Chronic 3, H412
Decanal	CAS: 112-31-2 EC No (EC/EINECS/ELINCS): 203-957-4	0.1 – 1	Eye Irrit. 2, H319 Aquatic Chronic 3, H412

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
beta-Caryophyllene	CAS: 87-44-5 EC No (EC/EINECS/ELINCS): 201-746-1	0.1 – 1	Asp. Tox. 1, H304 Skin Sens. 1B, H317
Geranyl acetate	CAS: 105-87-3 EC No (EC/EINECS/ELINCS): 203-341-5	0.1 – 1	Skin Sens. 1B, H317 Skin Irrit. 2, H315 Aquatic Chronic 3, H412
trans beta-Ocimene	CAS: 3779-61-1 EC No (EC/EINECS/ELINCS): 223-241-5	0.1 – 1	Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
citral	CAS: 5392-40-5 EC No (EC/EINECS/ELINCS): 226-394-6 EC index number: 605-019-00-3	< 0.1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Carvone	CAS: 99-49-0 EC No (EC/EINECS/ELINCS): 202-759-5 EC index number: 606-148-00-8	< 0.1	Skin Sens. 1, H317
Geraniol	CAS: 106-24-1 EC No (EC/EINECS/ELINCS): 203-377-1 EC index number: 603-241-00-5	< 0.1	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317

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	: Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	: Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of water/.... Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention. Specific treatment (see supplemental first aid instruction on this label). If skin irritation or rash occurs:
First-aid measures after eye contact	: 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. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects after inhalation	: May cause an allergic skin reaction.
Symptoms/effects after skin contact	: Causes skin irritation.
Symptoms/effects after ingestion	: May be fatal if swallowed and enters airways.

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

No additional information available

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SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Fire extinguishing agents: no data available. Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Flammable liquid and vapour.
- Explosion hazard : May form flammable/explosive vapour-air mixture.

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.

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.

For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Stop release. Ventilate area.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Collect spills and put it into appropriated container. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

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.
- Precautions for safe handling : Obtain special instructions before use. 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. Take precautionary measures against static discharge. Use only non-sparking tools. Avoid breathing dust/fume/gas/mist/vapours/spray.
- Hygiene measures : Wash hands, forearms and face thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment.

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Storage conditions	: Keep only in the original container in a cool, well-ventilated place away from: Keep container tightly closed.
Incompatible products	: Strong bases. Strong acids.
Incompatible materials	: Sources of ignition. Direct sunlight. Heat sources.
Maximum storage period	: 12 months
Storage temperature	: ≤ 12 °C
Storage area	: Store in a well-ventilated place.
Special rules on packaging	: Keep in the dark. Store tightly closed in a dry, cool and well-ventilated place. Product must only be kept in the original packaging.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

beta-Pinene (127-91-3)	
USA - ACGIH® - Threshold Limit Values	
Local name	β-Pinene
ACGIH® TLV® TWA	112 mg/m³
	20 ppm
Remark (ACGIH®)	TLV® Basis: Lung irr. Notations: DSEN; A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2026
citral (5392-40-5)	
USA - ACGIH® - Threshold Limit Values	
Local name	Citral
ACGIH® TLV® TWA	32 mg/m³ (IFV - Inhalable fraction and vapor)
	5 ppm (IFV - Inhalable fraction and vapor)
Remark (ACGIH®)	TLV® Basis: Body weight; URT irr; Eye dam. Notations: Skin; DSEN; A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2026

DNEL and PNEC

BITTER ORANGE E.O. IVORY COAST (5989-27-5)	
DNEL/DMEL (Workers)	
Acute - systemic effects, dermal	9.5 mg/kg bodyweight/day
Acute - systemic effects, inhalation	66.7 mg/m³
DNEL/DMEL (General population)	
Acute - systemic effects, dermal	4.8 mg/kg bodyweight
Acute - systemic effects, inhalation	16.6 mg/kg bodyweight/day
Acute - systemic effects, oral	4.8 mg/kg bodyweight
PNEC (Water)	
PNEC aqua (freshwater)	14 µg/l
PNEC aqua (marine water)	1.4 µg/L

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PNEC (Sediment)

PNEC sediment (freshwater)	3.85 mg/kg dwt
PNEC sediment (marine water)	0.385 mg/kg dwt

PNEC (STP)

PNEC sewage treatment plant	1.8 mg/l
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8.2. Exposure controls

Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Chemical goggles or safety glasses

Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Wear protective gloves.

Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Environmental exposure controls

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	: Pale yellow to dark brown.
Appearance	: Liquid.
Odour	: Characteristic of fresh outer part of fruit.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: 152 °C The boiling point of d-limonene at 101 kPa is between 176 and 178 °C. At a pressure of 1020 hPa, bitter orange oil starts to boil at 152 degrees Celsius
Flammability	: Flammable liquid and vapour.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point (closed cup)	: 47 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available

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Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: The initial vapour pressure of orange oil bitter was found to be 209.1 Pa at 25 degrees Celsius. The vapour pressure of the constituents ranges from 11.1 to 320 Pa. ((Q)SAR calculation) The vapour pressure of d-limonene at 25 °C is 200 Pa.
Vapour pressure at 50°C	: Not available
Density	: Not available
Specific gravity (20°C)	: 0.8400 – 0.8600
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

Limonene (5989-27-5/138-86-3/5989-54-8)

Boiling point	175.5 – 176 °C at 763 mmHg Source: HSDB
Flash point (closed cup)	51 °C
Auto-ignition temperature	245 °C Source: ECHA Registered substances
Vapour pressure	1.98 mm Hg

Myrcene (123-35-3)

Boiling point	167 °C
Flash point (closed cup)	45 °C
Vapour pressure	267.98 Pa Temp.: 25 °C

alpha-Terpineol (98-55-5)

Boiling point	218.9 °C Atm. press.: 1 atm
Flash point (closed cup)	91 °C
Auto-ignition temperature	275 °C Source: ECHA
Vapour pressure	6.48 Pa Temp.: 23 °C

Linalool (78-70-6)

Boiling point	196.3 °C Atm. press.: 99,2 kPa Decomposition: 'no' Decomp. temp.: 196,3 °C
Flash point (closed cup)	77 °C
Auto-ignition temperature	235 °C Source: International Chemical Safety Cards
Vapour pressure	27 Pa Temp.: 298 K

alpha-Pinene (80-56-8)

Boiling point	155.95 °C Atm. press.: 1013,25 mBar
Flash point (closed cup)	31 °C
Auto-ignition temperature	255 °C
Vapour pressure	4.75 mm Hg

1-Octanol (111-87-5)

Boiling point	194 °C Atm. press.: 1 atm Decomposition: 'no'
Flash point (closed cup)	87 °C
Vapour pressure	≈ 0.7645 mbar Temp.: 38 °C

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beta-Pinene (127-91-3)	
Boiling point	158 – 166 °C
Flash point (closed cup)	39 °C
Auto-ignition temperature	255 °C
Vapour pressure	2.93 mm Hg

beta-Phellandrene (555-10-2)	
Boiling point	171 – 174 °C (760 mm Hg; Source:thegoodscentcompany.com)
Flash point (closed cup)	44 °C
Vapour pressure	1.573 mm Hg (760 mm Hg; Source:thegoodscentcompany.com)

Linalyl acetate (115-95-7)	
Boiling point	220 °C Atm. press.: 1013,25 hPa
Flash point (closed cup)	85 °C
Vapour pressure	0.171 hPa Temp.: 20 °C

Neryl acetate (141-12-8)	
Boiling point	236.8 °C Source: National Library of Medicine
Flash point (closed cup)	106 °C
Vapour pressure	6.58 Pa

Octanal (124-13-0)	
Boiling point	175 °C
Flash point (closed cup)	54 °C
Auto-ignition temperature	190 °C
Vapour pressure	1.18 mm Hg

1-Decanol (112-30-1)	
Boiling point	229.1667 °C Atm. press.: 1 atm Decomposition: 'no'
Flash point (closed cup)	107 °C

Decanal (112-31-2)	
Boiling point	215.85 °C Atm. press.: 101,325 kPa Decomposition: 'no'
Flash point (closed cup)	93 °C
Auto-ignition temperature	200 °C
Vapour pressure	8.2 Pa Temp.: 20 °C

beta-Caryophyllene (87-44-5)	
Boiling point	253 – 262 °C Atm. press.: 1013 hPa
Flash point (closed cup)	105.5 °C
Vapour pressure	6 Pa

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Geranyl acetate (105-87-3)

Boiling point	243.97 °C Atm. press.: 1013,25 hPa
Flash point (closed cup)	110 °C
Vapour pressure	0.013 hPa Temp.: 20 °C

trans beta-Ocimene (3779-61-1)

Boiling point	174 – 175 °C
Vapour pressure	1.559 mm Hg

citral (5392-40-5)

Boiling point	≈ 230 °C Atm. press.: 1013 hPa Decomposition: 'yes' Decomp. temp.: 180 °C
Flash point (closed cup)	98 °C
Auto-ignition temperature	225 °C Source: ECHA
Vapour pressure	4.6 Pa at 20°C Source: ECHA

Carvone (99-49-0)

Boiling point	230 °C
Flash point (closed cup)	89 °C
Vapour pressure	0.16 mm Hg Source 25°C : https://www.thegoodscentscompany.com/

Geraniol (106-24-1)

Boiling point	230 °C
Flash point (closed cup)	108 °C

9.2. Other information

Other safety characteristics

Refractive index (20°C) : 1.4720 – 1.4780

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Flammable liquid and vapour. 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.

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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

BITTER ORANGE E.O. IVORY COAST (5989-27-5)	
LD50 oral rat	> 2000 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg bodyweight
Limonene (5989-27-5/138-86-3/5989-54-8)	
LD50 oral rat	5000 mg/kg Source: National Library of Medicine/Hazardous Substances Data Bank
LD50 dermal rabbit	> 5000 mg/kg Source: National Library of Medicine
ATE CLP (oral)	5000 mg/kg bodyweight
Myrcene (123-35-3)	
LD50 oral rat	> 11390 mg/kg bodyweight Animal: rat
LD50 oral	> 3380 mg/kg bodyweight Animal: mouse
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
alpha-Terpineol (98-55-5)	
LD50 oral rat	4300 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 2900 - 5700
LD50 oral	4300 mg/kg
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
ATE CLP (oral)	4300 mg/kg bodyweight
Linalool (78-70-6)	
LD50 oral rat	2790 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 2440 - 3180
LD50 oral	2790 mg/kg
LD50 dermal rabbit	5610 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), 95% CL: 3578 - 8374
ATE CLP (oral)	2790 mg/kg bodyweight
ATE CLP (dermal)	5610 mg/kg bodyweight
alpha-Pinene (80-56-8)	
LD50 oral rat	2100 mg/kg Source: International Uniform Chemical Information Database
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))
ATE CLP (oral)	500 mg/kg bodyweight
1-Octanol (111-87-5)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	2000 – 4000 mg/kg bodyweight Animal: rabbit
ATE CLP (dermal)	2500 mg/kg bodyweight

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beta-Pinene (127-91-3)	
LD50 oral rat	4700 mg/kg Source: NLM,THOMSON
Linalyl acetate (115-95-7)	
LD50 oral rat	> 9000 mg/kg bodyweight Animal: rat
LD50 dermal rabbit	> 5000 mg/kg Source: HSDB
LC50 Inhalation - Rat (Dust/Mist)	> 2.74 mg/l Source: SIDS
Neryl acetate (141-12-8)	
LD50 oral rat	> 5000 mg/kg Source: National Library of Medicine
LD50 dermal rabbit	> 5000 mg/kg Source: National Library of Medicine
Octanal (124-13-0)	
LD50 oral rat	4617 mg/kg bodyweight Animal: rat, Animal sex: male
LD50 dermal rabbit	5207 mg/kg bodyweight Animal: rabbit, Animal sex: male
LC50 Inhalation - Rat	> 0.83 mg/l air Animal: rat, Animal sex: male
ATE CLP (oral)	4617 mg/kg bodyweight
ATE CLP (dermal)	5207 mg/kg bodyweight
1-Decanol (112-30-1)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: EPA OPPTS 870.1100 (Acute Oral Toxicity)
LD50 dermal rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 2.05 mg/l air Animal: rat, Guideline: EPA OPPTS 870.1300 (Acute inhalation toxicity)
Decanal (112-31-2)	
LD50 oral rat	> 33300 mg/kg Source: THOMSON
LD50 oral	3730 mg/kg
beta-Caryophyllene (87-44-5)	
LD50 oral	> 5000 mg/kg bodyweight Animal: mouse, Animal sex: male
Geranyl acetate (105-87-3)	
LD50 oral rat	6330 mg/kg bodyweight Animal: rat, 95% CL: 5450 - 7340
ATE CLP (oral)	6330 mg/kg bodyweight
trans beta-Ocimene (3779-61-1)	
LD50 oral	5000 mg/kg
citral (5392-40-5)	
LD50 oral rat	≈ 6800 mg/kg bodyweight Animal: rat
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat
LD50 dermal rabbit	2250 mg/kg
ATE CLP (dermal)	2250 mg/kg bodyweight
Carvone (99-49-0)	
LD50 oral rat	1640 mg/kg Source: NLM;ChemIDPlus
LD50 dermal	3800 mg/kg

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Carvone (99-49-0)	
ATE CLP (oral)	2500 mg/kg bodyweight
Geraniol (106-24-1)	
LD50 oral rat	3600 mg/kg bodyweight Animal: rat, 95% CL: 2840 - 4570
LD50 oral	3600 mg/kg
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit
ATE CLP (oral)	3600 mg/kg bodyweight
Skin corrosion/irritation	: Causes skin irritation.
citral (5392-40-5)	
pH	< 5 Source: HSDB
Serious eye damage/irritation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
citral (5392-40-5)	
pH	< 5 Source: HSDB
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Limonene (5989-27-5/138-86-3/5989-54-8)	
IARC group	3 - Not classifiable
Myrcene (123-35-3)	
IARC group	2B - Possibly carcinogenic to humans
citral (5392-40-5)	
NOAEL (chronic, oral, animal/male, 2 years)	60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Remarks on results: other:Effect type: toxicity (migrated information)
Geraniol (106-24-1)	
NOAEL (chronic, oral, animal/male, 2 years)	60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Remarks on results: other:Effect type: toxicity (migrated information)
Reproductive toxicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Limonene (5989-27-5/138-86-3/5989-54-8)	
NOAEL (animal/female, F0/P)	600 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other:
1-Octanol (111-87-5)	
NOAEL (animal/male, F0/P)	1127 mg/kg bodyweight Animal: rat, Animal sex: male
NOAEL (animal/female, F0/P)	1243 mg/kg bodyweight Animal: rat, Animal sex: female
Octanal (124-13-0)	
NOAEL (animal/female, F0/P)	300 mg/kg bodyweight Animal: rat, Animal sex: female
NOAEL (animal/female, F1)	300 mg/kg bodyweight Animal: rat, Animal sex: female
1-Decanol (112-30-1)	
NOAEL (animal/male, F0/P)	1127 mg/kg bodyweight Animal: rat, Animal sex: male

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1-Decanol (112-30-1)	
NOAEL (animal/female, F0/P)	1243 mg/kg bodyweight Animal: rat, Animal sex: female
Decanal (112-31-2)	
LOAEL (animal/female, F0/P)	1500 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other:Unclear; makes reference to FDA (1987)
NOAEL (animal/female, F0/P)	300 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: other:Unclear; makes reference to FDA (1987)
STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Myrcene (123-35-3)	
LOAEL (oral, rat, 90 days)	250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEL (subchronic, oral, animal/male, 90 days)	500 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEL (subchronic, oral, animal/female, 90 days)	250 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
alpha-Terpineol (98-55-5)	
NOAEL (oral, rat, 90 days)	≥ 314 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
Linalool (78-70-6)	
NOAEL (dermal, rat/rabbit, 90 days)	250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
Linalyl acetate (115-95-7)	
NOAEL (dermal, rat/rabbit, 90 days)	250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
1-Decanol (112-30-1)	
LOAEL (dermal, rat/rabbit, 90 days)	100 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
NOAEL (dermal, rat/rabbit, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)
Geranyl acetate (105-87-3)	
NOAEL (oral, rat, 90 days)	2000 mg/kg bodyweight Animal: rat, Guideline: other:Specifications for the Conduct of Studies to Evaluate the Toxic and Carcinogenic Potential of Chemical, Biological, and Physical Agents in Laboratory Animals for the National Toxicology Program (NTP)
citral (5392-40-5)	
LOAEC (inhalation, rat, gas, 90 days)	68 ppm Animal: rat, Animal sex: female
NOAEL (oral, rat, 90 days)	100 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)
NOAEC (inhalation, rat, gas, 90 days)	34 ppm Animal: rat, Animal sex: female
NOAEL (subchronic, oral, animal/male, 90 days)	60 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies)

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Geraniol (106-24-1)

NOAEL (dermal, rat/rabbit, 90 days)	300 mg/kg bodyweight Animal: rat, Guideline: other:OECD Guideline 421 (Reproduction/Developmental Toxicity Screening test), Guideline: other:EPA OPPTS 870.3550 (Reproduction/Developmental Toxicity Screening Test)
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Aspiration hazard : May be fatal if swallowed and enters airways.

Linalool (78-70-6)

Viscosity, kinematic	5.192 mm²/s
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1-Octanol (111-87-5)

Viscosity, kinematic	5.584 mm²/s Temp.: '40°C' Parameter: 'kinematic viscosity (in mm²/s)'
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11.2. Information on other hazards

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

Limonene (5989-27-5/138-86-3/5989-54-8)

LC50 - Fish [1]	0.7 mg/l Source: The ECOTOXicology database
LC50 - Fish [2]	702 µg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	0.307 mg/l Source: ECHA Registered substances
EC50 - Crustacea [2]	0.51 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	0.32 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0.214 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

Myrcene (123-35-3)

LC50 - Fish [1]	0.92 mg/l Source: NITE
EC50 - Crustacea [1]	1.47 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	0.342 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	0.31 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

alpha-Terpineol (98-55-5)

LC50 - Fish [1]	70 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	73 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	≈ 68 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	≈ 17 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

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Linalool (78-70-6)	
LC50 - Fish [1]	27.8 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	59 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	88.3 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [2]	156.7 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
alpha-Pinene (80-56-8)	
LC50 - Fish [1]	0.28 mg/l Source: International Uniform Chemical Information Database
EC50 - Crustacea [1]	0.475 mg/l Test organisms (species): Daphnia magna
1-Octanol (111-87-5)	
LC50 - Fish [1]	13.3 mg/l Test organisms (species): Pimephales promelas
LC50 - Fish [2]	13.5 mg/l Test organisms (species): Pimephales promelas
NOEC (chronic)	1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
beta-Pinene (127-91-3)	
LC50 - Fish [1]	0.624 mg/l Source: ECOSAR
Linalyl acetate (115-95-7)	
LC50 - Fish [1]	11 mg/l Test organisms (species): Cyprinus carpio
EC50 - Crustacea [1]	15 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	62 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [1]	0.437 mg/l Source: EPISUITE
Neryl acetate (141-12-8)	
LC50 - Fish [1]	0.552 mg/l Source: Ecological Structure Activity Relationships
EC50 - Crustacea [1]	9.97 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	9.06 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	0.405 mg/l Source: Ecological Structure Activity Relationships
Octanal (124-13-0)	
LC50 - Fish [1]	6.114 mg/l Source: ECOSAR
EC50 - Crustacea [1]	1.54 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	12.991 mg/l Source: ECOSAR
1-Decanol (112-30-1)	
EC50 72h - Algae [1]	1.5 mg/l Test organisms (species): other:Green algae
NOEC chronic fish	0.26 mg/l Test organisms (species): Pimephales promelas Duration: '33 d'
Decanal (112-31-2)	
LC50 - Fish [1]	2.1 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
LC50 - Fish [2]	1.45 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	1.94 mg/l Test organisms (species): Daphnia magna

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Decanal (112-31-2)	
EC50 - Crustacea [2]	1.17 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	2.149 mg/l Source: ECOSAR
beta-Caryophyllene (87-44-5)	
EC50 - Crustacea [1]	> 0.17 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 0.033 mg/l Test organisms (species): Raphidocelis subcapitata (previous names: Pseudokirchneriella subcapitata, Selenastrum capricornutum)
Geranyl acetate (105-87-3)	
LC50 - Fish [1]	68.12 mg/l Test organisms (species): Leuciscus idus
EC50 - Crustacea [1]	14.1 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	3.72 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
citral (5392-40-5)	
LC50 - Fish [1]	6.78 mg/l Test organisms (species): Leuciscus idus
EC50 - Crustacea [1]	6.8 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	103.8 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
Carvone (99-49-0)	
LC50 - Fish [1]	14.388 mg/l Source: EPISUITE
EC50 96h - Algae [1]	6.319 mg/l Source: EPISUITE
Geraniol (106-24-1)	
LC50 - Fish [1]	≈ 22 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	10.8 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	13.1 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
12.2. Persistence and degradability	
BITTER ORANGE E.O. IVORY COAST (5989-27-5)	
Persistence and degradability	May cause long-term adverse effects in the environment.
Biodegradation	71.4 % OECD TG 310 (CO2 production in a sealed vessel, formerly under OECD 301B). After 28 days, the biodegradation was 71.4% (95% confidence interval 68.3 - 74.5%). Thus the test substance is readily biodegradable.
Limonene (5989-27-5/138-86-3/5989-54-8)	
Persistence and degradability	Rapidly degradable
Myrcene (123-35-3)	
Persistence and degradability	Rapidly degradable
alpha-Terpineol (98-55-5)	
Persistence and degradability	Rapidly degradable
Linalool (78-70-6)	
Persistence and degradability	Rapidly degradable

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alpha-Pinene (80-56-8)	
Persistence and degradability	Rapidly degradable
1-Octanol (111-87-5)	
Persistence and degradability	Rapidly degradable
beta-Pinene (127-91-3)	
Persistence and degradability	Rapidly degradable
beta-Phellandrene (555-10-2)	
Persistence and degradability	Rapidly degradable
Linalyl acetate (115-95-7)	
Persistence and degradability	Rapidly degradable
Neryl acetate (141-12-8)	
Persistence and degradability	Rapidly degradable
Octanal (124-13-0)	
Persistence and degradability	Rapidly degradable
1-Decanol (112-30-1)	
Persistence and degradability	Rapidly degradable
Decanal (112-31-2)	
Persistence and degradability	Rapidly degradable
beta-Caryophyllene (87-44-5)	
Persistence and degradability	Rapidly degradable
Geranyl acetate (105-87-3)	
Persistence and degradability	Rapidly degradable
trans beta-Ocimene (3779-61-1)	
Persistence and degradability	Rapidly degradable
citral (5392-40-5)	
Persistence and degradability	Rapidly degradable
Carvone (99-49-0)	
Persistence and degradability	Rapidly degradable
Geraniol (106-24-1)	
Persistence and degradability	Rapidly degradable
12.3. Bioaccumulative potential	
BITTER ORANGE E.O. IVORY COAST (5989-27-5)	
Bioaccumulative potential	Not established.
Limonene (5989-27-5/138-86-3/5989-54-8)	
Partition coefficient n-octanol/water (Log Pow)	4.57

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Myrcene (123-35-3)	
Partition coefficient n-octanol/water (Log Pow)	4.17
alpha-Terpineol (98-55-5)	
Partition coefficient n-octanol/water (Log Pow)	2.98 Source: HSDB
Linalool (78-70-6)	
Partition coefficient n-octanol/water (Log Pow)	2.97 Source: International Chemical Safety Cards
alpha-Pinene (80-56-8)	
Partition coefficient n-octanol/water (Log Pow)	4.834 Source: International Uniform Chemical Information Database
beta-Pinene (127-91-3)	
Partition coefficient n-octanol/water (Log Pow)	4.16
Linalyl acetate (115-95-7)	
Partition coefficient n-octanol/water (Log Pow)	3.93 Source: NLM;ChemIDPlus
Neryl acetate (141-12-8)	
Partition coefficient n-octanol/water (Log Pow)	3.98 Source: National Library of Medicine
Octanal (124-13-0)	
Partition coefficient n-octanol/water (Log Pow)	2.78
Decanal (112-31-2)	
Partition coefficient n-octanol/water (Log Pow)	3.76
citral (5392-40-5)	
Partition coefficient n-octanol/water (Log Pow)	2.76 Source: ECHA
Carvone (99-49-0)	
Partition coefficient n-octanol/water (Log Pow)	3.07 Source: NLM;ChemIDPlus
Geraniol (106-24-1)	
Partition coefficient n-octanol/water (Log Pow)	3.56
12.4. Mobility in soil	
alpha-Terpineol (98-55-5)	
Mobility in soil	1000 Source: HSDB
Linalool (78-70-6)	
Mobility in soil	76 Source: HSDB
alpha-Pinene (80-56-8)	
Mobility in soil	2600 Source: HSDB
Linalyl acetate (115-95-7)	
Mobility in soil	432.4 Source: EPISUITE
Neryl acetate (141-12-8)	
Mobility in soil	3.061 Source: Quantitative Structure Activity Relation

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Carvone (99-49-0)

Mobility in soil 136.2 Source: EPISUITE

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

BITTER ORANGE E.O. IVORY COAST (5989-27-5)

Other information Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Additional information : Handle empty containers with care because residual vapours are flammable.
Ecological waste information : Avoid release to the environment. Hazardous waste due to toxicity.

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 1197	UN 1197	UN 1197	UN 1197	UN 1197
14.2. UN proper shipping name				
EXTRACTS, LIQUID	EXTRACTS, LIQUID	Extracts, liquid	EXTRACTS, LIQUID	EXTRACTS, LIQUID
Transport document description				
UN 1197 EXTRACTS, LIQUID, 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 1197 EXTRACTS, LIQUID, 3, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1197 Extracts, liquid, 3, III, ENVIRONMENTALLY HAZARDOUS	UN 1197 EXTRACTS, LIQUID, 3, III, ENVIRONMENTALLY HAZARDOUS	UN 1197 EXTRACTS, LIQUID, 3, III, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
3	3	3	3	3
14.4. Packing group				
III	III	III	III	III

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ADR	IMDG	IATA	ADN	RID
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes EmS-No. (Fire): F-E EmS-No. (Spillage): S-D	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: F1
Special provisions (ADR)	: 601
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T2
Portable tank and bulk container special provisions (ADR)	: TP1
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Operation (ADR)	: S2
Hazard identification number (Kemler No.)	: 30
Orange plates	: 30 1197
Tunnel restriction code (ADR)	: D/E
EAC code	: 3Y

Transport by sea

Special provisions (IMDG)	: 223, 955
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T2
Tank special provisions (IMDG)	: TP1
Stowage category (IMDG)	: A
Properties and observations (IMDG)	: Usually consist of alcoholic solutions. Miscibility with water depends upon the composition.
MFAG-No	: 127;128

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y344
PCA limited quantity max net quantity (IATA)	: 10L
PCA packing instructions (IATA)	: 355
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 366
CAO max net quantity (IATA)	: 220L
Special provisions (IATA)	: A3
ERG code (IATA)	: 3L

Inland waterway transport

Classification code (ADN)	: F1
Special provisions (ADN)	: 601

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Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: F1
Special provisions (RID)	: 601
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T2
Portable tank and bulk container special provisions (RID)	: TP1
Tank codes for RID tanks (RID)	: LGBF
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Colis express (express parcels) (RID)	: CE4
Hazard identification number (RID)	: 30

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

EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not 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 (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (EU 2019/1148)

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

Drug Precursors Regulation (EC 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)

National regulations

Denmark

Class for fire hazard	: Class II-1
Store unit	: 5 liter

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Classification remarks : R10 <H226;H304;H315;H317;H410>; 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

Germany

Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV; ID No. 87).

Netherlands

SZW List of Carcinogenic Substances : The substance is not listed

SZW List of Mutagenic Substances : The substance is not listed

SZW List of Reprotoxic Substances – Breastfeeding : The substance is not listed

SZW List of Reprotoxic Substances – Fertility : The substance is not listed

SZW List of Reprotoxic Substances – Development : The substance is not listed

Poland

Polish National Regulations : Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).

Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797).

The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended).

Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).

Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154).

Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).

The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488)

Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended).

Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141).

ADR Agreement: Government Statement of 13 March 2023 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. L. 2023, item 891)

Regulation of the Minister of Health of 25 August 2015 on the method of marking places, pipelines, and containers and tanks used for storing or containing hazardous substances or hazardous mixtures (J.o.L. 2015, item 1368 as amended)

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes		
Section	Changed item	Comments
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified
3	Composition/information on ingredients	Modified
9	Refractive index (20°C)	Modified
12.1	Ecology - water	Modified

BITTER ORANGE E.O. IVORY COAST

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Data sources

: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

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
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
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B
H226	Flammable liquid and vapour.
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.
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.

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.