SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

SECTION 1 : IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name : AGRUMENALDEHYDE 710021

Product code : E01150.

UFI : JPF0-Q068-S00U-867K

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

Use of the substance/mixture: Raw material used in perfumery preparations.

1.3. Details of the supplier of the safety data sheet

Registered company name : Symrise AG.

Address : Muehlenfeldstrasse 1.D-37603.Holzminden..

Telephone : +495531900. Fax : +495531901649.

sds@symrise.com

Distributor : BLH s.a.s.

Address : ZAC du Pilon - 06460 SAINT VALLIER DE THIEY

Tèl : 04 92 60 35 60 - Fax : 04 92 60 35 69

Website : www.blhsas.com

1.4. Emergency telephone number : +33 (0)1 45 42 59 59.

Association/Organisation : .

SECTION 2 : HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Skin irritation, Category 2 (Skin Irrit. 2, H315).

Eye irritation, Category 2 (Eye Irrit. 2, H319).

Skin sensitisation, Category 1 (Skin Sens. 1, H317).

Hazardous to the aquatic environment - Chronic hazard, Category 2 (Aquatic Chronic 2, H411).

This mixture does not present a physical hazard. Refer to the recommendations regarding the other products present on the site.

2.2. Label elements

In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms :

GHS09

GHS07

Signal Word :

WARNING

Product identifiers :

EC 204-116-4	ACETATE DE LINALYLE
EC 203-518-7	7-HYDROXYCITRONELLAL
EC 226-394-6	CITRAL
EC 227-813-5	(R)-P-MENTHA-1,8-DIENE
EC 268-264-1	3-CYCLOHEXENE-1-CARBOXALDEHYDE, 2,4-DIMETHYL-
EC 201-134-4	LINALOOL
EC 204-872-5	PIN-2(10)-ENE
EC 242-060-2	L-.BETA.-PINENE
EC 203-377-1	GERANIOL
EC 232-077-3	BICYCLO[3.1.1]HEPT-2-ENE, 2,6,6-TRIMETHYL-, (1S)-
EC 201-746-1	BETA CARYOPHYLLENE
EC 209-235-5	4 TERPINEOL
EC 203-341-5	GERANYL ACETATE

EC 207-856-6	BICYCLO[4.1.0]HEPT-3-ENE, 3,7,7-TRIMETHYL-, (1S,6R)-
EC 201-291-9	PIN-2(3)-ÈNE
EC 202-590-7	ISOEUGENOL
EC 207-491-2	[1S-(1A,3AB,4A,8AB)]-DÉCAHYDRO-4,8,8-TRIMÉTHYL-9-MÉTHYLÈNE-1,4-MÉTHANOAZULÈNE

Hazard statements :

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

Precautionary statements - Prevention :

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash skin thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statements - Response :

P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P391	Collect spillage.

2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) >= 0.1% published by the European CHemicals Agency (ECHA) under article 59 of REACH: http://echa.europa.eu/fr/candidate-list-table

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

The mixture does not contain substances> = 0.1% with endocrine disrupting properties in accordance with the criteria of the Delegated Regulation (EU) 2017/2100 of the Commission or Regulation (EU) 2018/605 of the Commission.

|>SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

|> Composition :

Identification	Classification (EC) 1272/2008	Note	%
CAS: 115-95-7 EC: 204-116-4 ACETATE DE LINALYLE	GHS07 Wng Skin Irrit. 2, H315 Skin Sens. 1B, H317 Eye Irrit. 2, H319		10-20
CAS: 107-75-5 EC: 203-518-7 REACH: 01-2119973482-31 7-HYDROXYCITRONELLAL	GHS07 Wng Skin Sens. 1, H317 Eye Irrit. 2, H319		10-20
CAS: 5392-40-5 EC: 226-394-6 CITRAL	GHS07 Wng Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319	[i]	1-10
CAS: 93-08-3 EC: 202-216-2 2'-ACÉTONAPHTONE	GHS07, GHS09 Wng Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411		2.5-10
CAS: 8050-15-5 EC: 232-476-2 RESIN ACIDS AND ROSIN ACIDS, HYDROGENATED, ME ESTERS	Aquatic Chronic 3, H412		2.5-10

CAS: 5989-27-5 EC: 227-813-5 (R)-P-MENTHA-1,8-DIENE	GHS07, GHS09, GHS08, GHS02 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Chronic 3, H412 Aquatic Acute 1, H400 M Acute = 1	[i]	2.5-10
CAS: 68039-49-6 EC: 268-264-1 3-CYCLOHEXENE-1-CARBOXALDEHYDE, 2,4-DIMETHYL-	GHS07, GHS09 Wng Skin Irrit. 2, H315 Skin Sens. 1B, H317 Eye Irrit. 2, H319 Aquatic Chronic 2, H411		2.5-10
CAS: 78-70-6 EC: 201-134-4 LINALOOL	GHS07 Wng Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319		1-10
CAS: 127-91-3 EC: 204-872-5 PIN-2(10)-ENE	GHS07, GHS09, GHS08, GHS02 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1	[i]	1-2.5
CAS: 18172-67-3 EC: 242-060-2 L-.BETA.-PINENE	GHS07, GHS09, GHS08, GHS02 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		1-2.5
CAS: 120-51-4 EC: 204-402-9 BENZYL BENZOATE	GHS07, GHS09 Wng Acute Tox. 4, H302 Aquatic Chronic 2, H411		0.1-0.25
CAS: 123-35-3 EC: 204-622-5 7-MÉTHYL-3-MÉTHYLENEOCTA-1,6-DIÈNE	GHS07, GHS09, GHS08, GHS02 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Aquatic Chronic 2, H411		0.1-0.25
CAS: 99-85-4 EC: 202-794-6 P-MENTHA-1,4-DIÈNE	GHS09, GHS08, GHS02 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 Repr. 2, H361 Aquatic Chronic 2, H411	[ii]	0.25-1
CAS: 106-24-1 EC: 203-377-1 GERANIOL	GHS07, GHS05 Dgr Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Dam. 1, H318		0.1-1

CAS: 7785-26-4 EC: 232-077-3 BICYCLO[3.1.1]HEPT-2-ENE, 2,6,6-TRIMETHYL-, (1S)-	GHS07, GHS09, GHS08, GHS02 Dgr Flam. Liq. 3, H226 Acute Tox. 4, H302 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		0.25-1
CAS: 87-44-5 EC: 201-746-1 BETA CARYOPHYLLENE	GHS07, GHS08 Dgr Asp. Tox. 1, H304 Skin Sens. 1B, H317		0.1-1
CAS: 562-74-3 EC: 209-235-5 4 TERPINEOL	GHS06 Dgr Acute Tox. 4, H302 Skin Irrit. 2, H315 Skin Sens. 1, H317 Eye Irrit. 2, H319 Acute Tox. 3, H331 STOT SE 3, H336		0.1-1
CAS: 105-87-3 EC: 203-341-5 GERANYL ACETATE	GHS07 Wng Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Chronic 3, H412		0.25-1
CAS: 498-15-7 EC: 207-856-6 BICYCLO[4.1.0]HEPT-3-ENE, 3,7,7-TRIMETHYL-, (1S,6R)-	GHS07, GHS09, GHS08, GHS02 Dgr Flam. Liq. 3, H226 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1, H317 Acute Tox. 4, H332 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		0.25-1
CAS: 1222-05-5 EC: 214-946-9 1,3,4,6,7,8-HEXAHYDRO-4,6,6,7,8,8-HEXAMETHYLINDENO[5,6-C]PYRAN	GHS09 Wng Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		0.1-0.25
CAS: 13171-00-1 EC: 236-114-4 REACH: 01-2120762756-42 6-TERT-BUTYL-1,1-DIMÉTHYLINDANE-4-YLMÉTHYLCÉTONE	GHS09 Wng Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		0.1-0.25
CAS: 79-92-5 EC: 201-234-8 BICYCLO[2.2.1]HEPTANE, 2,2-DIMETHYL-3-METHYLENE-	GHS07, GHS09, GHS02 Dgr Flam. Sol. 1, H228 Eye Irrit. 2, H319 Aquatic Acute 1, H400 M Acute = 10 Aquatic Chronic 1, H410 M Chronic = 10		0.1-0.25

CAS: 80-56-8 EC: 201-291-9 PIN-2(3)-ÈNE	GHS07, GHS09, GHS08, GHS02 Dgr Flam. Liq. 3, H226 Acute Tox. 4, H302 Asp. Tox. 1, H304 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1	[i]	0.1-0.25
CAS: 97-54-1 EC: 202-590-7 ISOEUGENOL	GHS07 Wng Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Irrit. 2, H315 Skin Sens. 1A, H317 Eye Irrit. 2, H319 Acute Tox. 4, H332 STOT SE 3, H335		0.01-0.1
CAS: 16356-11-9 EC: 240-416-1 UNDECATRIENE	GHS07, GHS09, GHS08 Dgr Asp. Tox. 1, H304 Skin Irrit. 2, H315 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		0.025-0.1
CAS: 475-20-7 EC: 207-491-2 [1S-(1A,3AB,4A,8AB)]-DÉCAHYDRO-4,8,8-TRIMÉTHYL-9-MÉTHYLÈNE-1,4-MÉTHANOAZULÈNE	GHS09, GHS07, GHS08 Dgr Asp. Tox. 1, H304 Skin Sens. 1B, H317 Aquatic Acute 1, H400 M Acute = 1 Aquatic Chronic 1, H410 M Chronic = 1		0.025-0.1

|> **Specific concentration limits:**

Identification	Specific concentration limits	ATE
CAS: 5392-40-5 EC: 226-394-6 CITRAL		oral: ATE = 6800 mg/kg BW
CAS: 68039-49-6 EC: 268-264-1 3-CYCLOHEXENE-1-CARBOXALDEHYDE, 2,4-DIMETHYL-		oral: ATE = 3900 mg/kg BW
CAS: 78-70-6 EC: 201-134-4 LINALOOL		dermal: ATE = 5610 mg/kg BW oral: ATE = 2790 mg/kg BW
CAS: 120-51-4 EC: 204-402-9 BENZYL BENZOATE		oral: ATE = 1500 mg/kg BW
CAS: 106-24-1 EC: 203-377-1 GERANIOL		oral: ATE = 3600 mg/kg BW
CAS: 562-74-3 EC: 209-235-5 4 TERPINEOL		oral: ATE = 1300 mg/kg BW
CAS: 105-87-3 EC: 203-341-5 GERANYL ACETATE		oral: ATE = 6330 mg/kg BW

CAS: 498-15-7 EC: 207-856-6 BICYCLO[4.1.0]HEPT-3-ENE, 3,7,7-TRIMETHYL-, (1S,6R)-		inhalation: ATE = 1.5 mg/l 4h (dust/mist) oral: ATE = 4800 mg/kg BW
CAS: 80-56-8 EC: 201-291-9 PIN-2(3)-ÈNE		oral: ATE = 500 mg/kg BW
CAS: 97-54-1 EC: 202-590-7 ISOEUGENOL		oral: ATE = 1560 mg/kg BW
CAS: 16356-11-9 EC: 240-416-1 UNDECATRIENE		oral: ATE = 7563 mg/kg BW

Information on ingredients :

(Full text of H-phrases: see section 16)

[i] Substance for which maximum workplace exposure limits are available.

[ii] Carcinogenic, mutagenic or reprotoxic (CMR) substance.

SECTION 4 : FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

4.1. description of first aid measures

In the event of splashes or contact with eyes :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

If there is any redness, pain or visual impairment, consult an ophthalmologist.

In the event of splashes or contact with skin :

Remove contaminated clothing and wash the skin thoroughly with soap and water or a recognised cleaner.

Watch out for any remaining product between skin and clothing, watches, shoes, etc.

In the event of an allergic reaction, seek medical attention.

If the contaminated aera is widespread and/or there is damage to the skin, a doctor must be consulted or the patient transferred to hospital.

In the event of swallowing :

Do not give the patient anything orally.

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Keep the person exposed at rest. Do not force vomiting.

Seek medical attention immediately, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

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

No data available.

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

No data available.

SECTION 5 : FIREFIGHTING MEASURES

Non-flammable.

5.1. Extinguishing media

Suitable methods of extinction

In the event of a fire, use :

- sprayed water or water mist
- foam
- multipurpose ABC powder
- BC powder
- carbon dioxide (CO2)

Unsuitable methods of extinction

In the event of a fire, do not use :

- water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed :

- carbon monoxide (CO)
- carbon dioxide (CO2)

5.3. Advice for firefighters

No data available.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For non first aid worker

Avoid any contact with the skin and eyes.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

Clean preferably with a detergent, do not use solvents.

6.4. Reference to other sections

No data available.

SECTION 7 : HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

Individuals with a history of skin sensitisation should not, under any circumstance, handle this mixture.

7.1. Precautions for safe handling

Always wash hands after handling.

Remove and wash contaminated clothing before re-using.

Ensure that there is adequate ventilation, especially in confined areas.

Fire prevention :

Handle in well-ventilated areas.

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Avoid skin and eye contact with this mixture.

Packages which have been opened must be reclosed carefully and stored in an upright position.

Prohibited equipment and procedures :

No smoking, eating or drinking in areas where the mixture is used.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep the container tightly closed in a dry, well-ventilated place.

The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

No data available.

SECTION 8 : EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

- Germany - AGW (BAuA - TRGS 900, 02/2022) :

CAS	VME :	VME :	Excess	Notes
5989-27-5		5 ppm 28 mg/m3		4(II)

- Spain (Instituto Nacional de Seguridad e Higiene en el Trabajo (INSHT), 2019) :

CAS	TWA :	STEL :	Ceiling :	Definition :	Criteria :
5392-40-5	5 ppm			via dermica. Sen.FIV	
5989-27-5	30 ppm 168 mg/m3			Sen. via dermica	
127-91-3	20 ppm 113 mg/m3				
80-56-8	20 ppm 113 mg/m3				

Derived no effect level (DNEL) or derived minimum effect level (DMEL):

GERANYL ACETATE (CAS: 105-87-3)

Final use: **Workers.**
Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 35.5 mg/kg body weight/day

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 62.59 mg of substance/m3

Final use: **Consumers.**
Exposure method: Ingestion.
Potential health effects: Long term systemic effects.
DNEL : 8.9 mg/kg body weight/day

Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 17.75 mg/kg body weight/day

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 15.4 mg of substance/m3

3-CYCLOHEXENE-1-CARBOXALDEHYDE, 2,4-DIMETHYL- (CAS: 68039-49-6)

Final use: **Workers.**
Exposure method: Dermal contact.
Potential health effects: Long term systemic effects.
DNEL : 25 mg/kg body weight/day

Exposure method: Inhalation.
Potential health effects: Long term systemic effects.
DNEL : 59 mg of substance/m3

Exposure method: Inhalation.
Potential health effects: Long term local effects.
DNEL : 7 mg of substance/m3

Predicted no effect concentration (PNEC):

GERANYL ACETATE (CAS: 105-87-3)
Environmental compartment: Soil.

PNEC : 0.086 mg/kg

Environmental compartment: Fresh water.
PNEC : 3.72 µg/l

Environmental compartment: Sea water.
PNEC : 0.372 µg/l

Environmental compartment: Fresh water sediment.
PNEC : 0.442 mg/kg

Environmental compartment: Marine sediment.
PNEC : 0.044 mg/kg

Environmental compartment: Waste water treatment plant.
PNEC : 8 mg/l

3-CYCLOHEXENE-1-CARBOXALDEHYDE, 2,4-DIMETHYL- (CAS: 68039-49-6)
Environmental compartment: Soil.
PNEC : 0.018 mg/kg

Environmental compartment: Fresh water.
PNEC : 0 mg/l

Environmental compartment: Sea water.
PNEC : 0 mg/l

Environmental compartment: Fresh water sediment.
PNEC : 0.093 mg/kg

Environmental compartment: Marine sediment.
PNEC : 0.009 mg/kg

Environmental compartment: Waste water treatment plant.
PNEC : 10 mg/l

RESIN ACIDS AND ROSIN ACIDS, HYDROGENATED, ME ESTERS (CAS: 8050-15-5)
Environmental compartment: Soil.
PNEC : 15.35 mg/kg

Environmental compartment: Fresh water.
PNEC : 0.027 mg/l

Environmental compartment: Sea water.
PNEC : 0.003 mg/l

Environmental compartment: Intermittent waste water.
PNEC : 0.27 mg/l

Environmental compartment: Fresh water sediment.
PNEC : 77.05 mg/kg

Environmental compartment: Marine sediment.
PNEC : 7.7 mg/kg

Environmental compartment: Waste water treatment plant.
PNEC : 1.26 mg/l

8.2. Exposure controls

Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE) :

Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles with protective sides accordance with standard EN166.

In the event of high danger, protect the face with a face shield.

Prescription glasses are not considered as protection.

Individuals wearing contact lenses should wear prescription glasses during work where they may be exposed to irritant vapours.

Provide eyewash stations in facilities where the product is handled constantly.

- Hand protection

Use suitable protective gloves that are resistant to chemical agents in accordance with standard EN ISO 374-1.

Gloves must be selected according to the application and duration of use at the workstation.

Protective gloves need to be selected according to their suitability for the workstation in question : other chemical products that may be handled, necessary physical protections (cutting, pricking, heat protection), level of dexterity required.

Type of gloves recommended :

- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- PVA (Polyvinyl alcohol)

- Body protection

Avoid skin contact.

Wear suitable protective clothing.

Suitable type of protective clothing :

In the event of substantial spatter, wear liquid-tight protective clothing against chemical risks (type 3) in accordance with EN14605/A1 to prevent skin contact.

In the event of a risk of splashing, wear protective clothing against chemical risks (type 6) in accordance with EN13034/A1 to prevent skin contact.

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state

Physical state :	Fluid liquid.

Colour

Unspecified

Odour

Odour threshold :	Not stated.

Melting point

Melting point/melting range :	Not specified.

Freezing point

Freezing point / Freezing range :	Not stated.

Boiling point or initial boiling point and boiling range

Boiling point/boiling range :	Not specified.

Flammability

Flammability (solid, gas) :	Not stated.

Lower and upper explosion limit

Explosive properties, lower explosivity limit (%) :	Not stated.
Explosive properties, upper explosivity limit (%) :	Not stated.

Flash point

Flash Point :	71.00 °C.

Auto-ignition temperature

Self-ignition temperature :	Not specified.

Decomposition temperature

Decomposition point/decomposition range :	Not specified.

pH

pH :	Not stated. Neutral.
pH (aqueous solution) :	Not stated.

Kinematic viscosity

Viscosity :	Not stated.

Solubility

Water solubility :	Insoluble.
Fat solubility :	Not stated.

Partition coefficient n-octanol/water (log value)

Partition coefficient: n-octanol/water :	Not stated.

Vapour pressure

Vapour pressure (50°C) :	Not relevant.

Density and/or relative density

Density :	CoA

Relative vapour density

Vapour density :	Not stated.

Particle characteristics

The mixture does not contain nanoforms.

9.2. Other information

No data available.

9.2.1. Information with regard to physical hazard classes

No data available.

9.2.2. Other safety characteristics

No data available.

SECTION 10 : STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

10.4. Conditions to avoid

No data available.

10.5. Incompatible materials

No data available.

10.6. Hazardous decomposition products

The thermal decomposition may release/form :

- carbon monoxide (CO)
- carbon dioxide (CO2)

|>SECTION 11 : TOXICOLOGICAL INFORMATION

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

Exposure to vapours from solvents in the mixture in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system.

Symptoms produced will include headaches, numbness, dizziness, fatigue, muscular asthenia and, in extreme cases, loss of consciousness.

May cause irreversible damage to the skin; namely inflammation of the skin or the formation of erythema and eschar or oedema following exposure up to four hours.

Repeated or prolonged contact with the mixture may cause removal of natural oil from the skin resulting in non-allergic contact dermatitis and absorption through the skin.

May have reversible effects on the eyes, such as eye irritation which is totally reversible by the end of observation at 21 days.

Splashes in the eyes may cause irritation and reversible damage

May cause an allergic reaction by skin contact.

11.1.1. Substances

|> Acute toxicity :

[1S-(1A,3AB,4A,8AB)]-DÉCAHYDRO-4,8,8-TRIMÉTHYL-9-MÉTHYLÈNE-1,4-MÉTHANOAZULÈNE (CAS: 475-20-7)

Oral route :	LD50 > 5000 mg/kg bodyweight/day Species : Rat
Dermal route :	LD50 > 5000 mg/kg bodyweight/day Species : Rabbit

UNDECATRIENE (CAS: 16356-11-9)

Oral route :	LD50 = 7563 mg/kg bodyweight/day Species : Rat
Dermal route :	LD50 > 3000 mg/kg bodyweight/day Species : Rabbit

ISOEUGENOL (CAS: 97-54-1)

Oral route :	LD50 = 1560 mg/kg bodyweight/day

PIN-2(3)-ÈNE (CAS: 80-56-8)

Oral route :	LD50 = 500 mg/kg bodyweight/day
Dermal route :	LD50 > 5000 mg/kg bodyweight/day Species : Rabbit

BICYCLO[2.2.1]HEPTANE, 2,2-DIMETHYL-3-METHYLENE- (CAS: 79-92-5)

Oral route :	LD50 > 5000 mg/kg bodyweight/day Species : Rat
Dermal route :	LD50 > 2500 mg/kg bodyweight/day Species : Rabbit

6-TERT-BUTYL-1,1-DIMÉTHYLINDANE-4-YLMÉTHYLCÉTONE (CAS: 13171-00-1)

Oral route :	LD50 > 5.000 mg/kg bodyweight/day Species : Rat
Dermal route :	LD50 > 5.000 mg/kg bodyweight/day Species : Rabbit

1,3,4,6,7,8-HEXAHYDRO-4,6,6,7,8,8-HEXAMETHYLINDENO[5,6-C]PYRAN (CAS: 1222-05-5)

Oral route :	LD50 > 3000 mg/kg bodyweight/day Species : Rat OECD Guideline 401 (Acute Oral Toxicity)
Dermal route :	LD50 > 6500 mg/kg bodyweight/day Species : Rat

OECD Guideline 402 (Acute Dermal Toxicity)

BICYCLO[4.1.0]HEPT-3-ENE, 3,7,7-TRIMETHYL-, (1S,6R)- (CAS: 498-15-7)

Oral route : LD50 = 4800 mg/kg bodyweight/day
Species : Rat

Inhalation route (Dusts/mist) : LC50 = 1.5 mg/l
Duration of exposure : 4 h

GERANYL ACETATE (CAS: 105-87-3)

Oral route : LD50 = 6330 mg/kg bodyweight/day
Species : Rat

Dermal route : LD50 > 5460 mg/kg bodyweight/day
Species : Rabbit

4 TERPINEOL (CAS: 562-74-3)

Oral route : LD50 = 1300 mg/kg bodyweight/day
Species : Rat
OECD Guideline 401 (Acute Oral Toxicity)

BETA CARYOPHYLLENE (CAS: 87-44-5)

Oral route : LD50 > 5000 mg/kg bodyweight/day
Species : Mouse

Dermal route : LD50 > 5000 mg/kg bodyweight/day
Species : Rabbit

BICYCLO[3.1.1]HEPT-2-ENE, 2,6,6-TRIMETHYL-, (1S)- (CAS: 7785-26-4)

Oral route : LD50 > 500 mg/kg bodyweight/day
Species : Rat
OECD Guideline 423 (Acute Oral toxicityAcute Toxic Class Method)

Dermal route : LD50 > 2000 mg/kg bodyweight/day
Species : Rat
OECD Guideline 402 (Acute Dermal Toxicity)

GERANIOL (CAS: 106-24-1)

Oral route : LD50 = 3600 mg/kg bodyweight/day
Species : Rat

Dermal route : LD50 > 5000 mg/kg bodyweight/day
Species : Rabbit

P-MENTHA-1,4-DIÈNE (CAS: 99-85-4)

Oral route : LD50 > 2000 mg/kg bodyweight/day
Species : Rat
OECD Guideline 423 (Acute Oral toxicityAcute Toxic Class Method)

Dermal route : LD50 > 2000 mg/kg bodyweight/day
Species : Rat
OECD Guideline 402 (Acute Dermal Toxicity)

7-MÉTHYL-3-MÉTHYLENEOCTA-1,6-DIÈNE (CAS: 123-35-3)

Oral route : LD50 > 3380 mg/kg bodyweight/day
Species : Mouse

Dermal route : LD50 > 5000 mg/kg bodyweight/day
Species : Rabbit

OECD Guideline 402 (Acute Dermal Toxicity)

BENZYL BENZOATE (CAS: 120-51-4)

Oral route : LD50 = 1500 mg/kg bodyweight/day
Species : Rat

L-.BETA.-PINENE (CAS: 18172-67-3)

Oral route : LD50 > 5000 mg/kg bodyweight/day
Species : Rat

Dermal route : LD50 > 5000 mg/kg bodyweight/day
Species : Rabbit

PIN-2(10)-ENE (CAS: 127-91-3)

Oral route : LD50 > 5000 mg/kg bodyweight/day
Species : Rat

Dermal route : LD50 > 5000 mg/kg bodyweight/day
Species : Rabbit

LINALOOL (CAS: 78-70-6)

Oral route : LD50 = 2790 mg/kg bodyweight/day
Species : Rat
OECD Guideline 401 (Acute Oral Toxicity)

Dermal route : LD50 = 5610 mg/kg bodyweight/day
Species : Rabbit
OECD Guideline 402 (Acute Dermal Toxicity)

3-CYCLOHEXENE-1-CARBOXALDEHYDE, 2,4-DIMETHYL- (CAS: 68039-49-6)

Oral route : LD50 = 3900 mg/kg bodyweight/day
Species : Rat

Dermal route : LD50 > 5000 mg/kg bodyweight/day
Species : Rabbit

(R)-P-MENTHA-1,8-DIENE (CAS: 5989-27-5)

Oral route : LD50 > 2000 mg/kg bodyweight/day
Species : Rat
OECD Guideline 423 (Acute Oral toxicityAcute Toxic Class Method)

Dermal route : LD50 > 5000 mg/kg bodyweight/day
Species : Rabbit

RESIN ACIDS AND ROSIN ACIDS, HYDROGENATED, ME ESTERS (CAS: 8050-15-5)

Oral route : LD50 > 2000 mg/kg bodyweight/day
Species : Rat
OECD Guideline 401 (Acute Oral Toxicity)

Dermal route : LD50 > 2000 mg/kg bodyweight/day
Species : Rat
OECD Guideline 402 (Acute Dermal Toxicity)

2'-ACÉTONAPHTONE (CAS: 93-08-3)

Oral route : LD50 > 2300 mg/kg bodyweight/day
Species : Rat
OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)

Dermal route : LD50 > 2000 mg/kg bodyweight/day
Species : Rat

OECD Guideline 402 (Acute Dermal Toxicity)

CITRAL (CAS: 5392-40-5)
Oral route : LD50 = 6800 mg/kg bodyweight/day
Species : Rat

Dermal route : LD50 > 2000 mg/kg bodyweight/day
Species : Rat

7-HYDROXYCITRONELLAL (CAS: 107-75-5)
Oral route : LD50 > 5000 mg/kg bodyweight/day
Species : Rat

Dermal route : LD50 > 2000 mg/kg bodyweight/day
Species : Rabbit

ACETATE DE LINALYLE (CAS: 115-95-7)
Oral route : LD50 > 9000 mg/kg bodyweight/day
Species : Rat

Dermal route : LD50 > 5000 mg/kg bodyweight/day
Species : Rabbit

|> Skin corrosion/skin irritation :

BENZYL BENZOATE (CAS: 120-51-4)
Effect observed : Overall irritation score
Species : Rabbit
OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

3-CYCLOHEXENE-1-CARBOXALDEHYDE, 2,4-DIMETHYL- (CAS: 68039-49-6)
Effect observed : Overall irritation score
Species : Rabbit

|> Germ cell mutagenicity :

PIN-2(3)-ÈNE (CAS: 80-56-8)
Ames test (in vitro) : Negative.

6-TERT-BUTYL-1,1-DIMÉTHYLINDANE-4-YLMÉTHYLCÉTONE (CAS: 13171-00-1)
Ames test (in vitro) : Negative.

GERANYL ACETATE (CAS: 105-87-3)
Ames test (in vitro) : Negative.

4 TERPINEOL (CAS: 562-74-3)
Ames test (in vitro) : Negative.

GERANIOL (CAS: 106-24-1)
Ames test (in vitro) : Negative.

P-MENTHA-1,4-DIÈNE (CAS: 99-85-4)
Ames test (in vitro) : Negative.

7-MÉTHYL-3-MÉTHYLENEOCTA-1,6-DIÈNE (CAS: 123-35-3)
Ames test (in vitro) : Negative.

LINALOOL (CAS: 78-70-6)
Ames test (in vitro) : Negative.

3-CYCLOHEXENE-1-CARBOXALDEHYDE, 2,4-DIMETHYL- (CAS: 68039-49-6)

Ames test (in vitro) : Negative.

RESIN ACIDS AND ROSIN ACIDS, HYDROGENATED, ME ESTERS (CAS: 8050-15-5)
Ames test (in vitro) : Negative.

BICYCLO[4.1.0]HEPT-3-ENE, 3,7,7-TRIMETHYL-, (1S,6R)- (CAS: 498-15-7)
OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Ames test (in vitro) : Negative.
With or without metabolic activation.

CITRAL (CAS: 5392-40-5)
OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Ames test (in vitro) : Negative.
With or without metabolic activation.

ACETATE DE LINALYLE (CAS: 115-95-7)
OECD Guideline 471 (Bacterial Reverse Mutation Assay)

Ames test (in vitro) : Negative.
With or without metabolic activation.

1,3,4,6,7,8-HEXAHYDRO-4,6,6,7,8,8-HEXAMETHYLINDENO[5,6-C]PYRAN (CAS: 1222-05-5)
Species : Mouse

Ames test (in vitro) : Negative.

7-HYDROXYCITRONELLAL (CAS: 107-75-5)
Mutagenesis (in vivo) : Negative.
Species : Mouse

Ames test (in vitro) : Negative.

11.1.2. Mixture

No toxicological data available for the mixture.

11.2. Information on other hazards

Endocrine disrupting properties

The mixture does not contain any substance evaluated as an endocrine disruptor with effects on human health.

Monograph(s) from the IARC (International Agency for Research on Cancer) :

CAS 123-35-3 : IARC Group 2B : The agent is possibly carcinogenic to humans.

CAS 5989-27-5 : IARC Group 3 : The agent is not classifiable as to its carcinogenicity to humans.

|>SECTION 12 : ECOLOGICAL INFORMATION

Toxic to aquatic life with long lasting effects.

The product must not be allowed to run into drains or waterways.

12.1. Toxicity

|> 12.1.1. Substances

[1S-(1A,3AB,4A,8AB)]-DÉCAHYDRO-4,8,8-TRIMÉTHYL-9-MÉTHYLÈNE-1,4-MÉTHANOAZULÈNE (CAS: 475-20-7)
Crustacean toxicity : EC50 = 0.08 mg/l
Species : Daphnia magna
Duration of exposure : 48 h

UNDECATRIENE (CAS: 16356-11-9)
Crustacean toxicity : EC50 = 0.048 mg/l
Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

ISOEUGENOL (CAS: 97-54-1)

Crustacean toxicity :	EC50 = 7.5 mg/l Species : Daphnia magna Duration of exposure : 48 h OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

6-TERT-BUTYL-1,1-DIMÉTHYLINDANE-4-YLMÉTHYLCÉTONE (CAS: 13171-00-1)

Crustacean toxicity :	EC50 = 0.43 mg/l Factor M = 1 Species : Daphnia magna Duration of exposure : 48 h OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Algae toxicity :	ECr50 = 0.49 mg/l Factor M = 1 Species : Pseudokirchnerella subcapitata Duration of exposure : 72 h OECD Guideline 201 (Alga, Growth Inhibition Test)

BICYCLO[4.1.0]HEPT-3-ENE, 3,7,7-TRIMETHYL-, (1S,6R)- (CAS: 498-15-7)

Crustacean toxicity :	EC50 = 0.8 mg/l Species : Daphnia magna Duration of exposure : 48 h OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

GERANYL ACETATE (CAS: 105-87-3)

Crustacean toxicity :	EC50 = 14.1 mg/l Species : Daphnia magna Duration of exposure : 48 h
Algae toxicity :	ECr50 = 3.72 mg/l Species : Desmodesmus subspicatus Duration of exposure : 72 h OECD Guideline 201 (Alga, Growth Inhibition Test)

4 TERPINEOL (CAS: 562-74-3)

Crustacean toxicity :	EC50 = 6.3 mg/l Species : Daphnia magna Duration of exposure : 48 h OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Algae toxicity :	ECr50 = 20.6 mg/l Species : Pseudokirchnerella subcapitata Duration of exposure : 72 h OECD Guideline 201 (Alga, Growth Inhibition Test)

BETA CARYOPHYLLENE (CAS: 87-44-5)

Crustacean toxicity :	EC50 > 0.17 mg/l Species : Daphnia magna Duration of exposure : 48 h OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Algae toxicity :	ECr50 = 0.033 mg/l Species : Pseudokirchnerella subcapitata Duration of exposure : 72 h OECD Guideline 201 (Alga, Growth Inhibition Test)

7-MÉTHYL-3-MÉTHYLENEOCTA-1,6-DIÈNE (CAS: 123-35-3)

Crustacean toxicity :	EC50 = 1.47 mg/l

Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity : ECr50 = 0.342 mg/l
Species : Pseudokirchnerella subcapitata
Duration of exposure : 72 h
OECD Guideline 201 (Alga, Growth Inhibition Test)

3-CYCLOHEXENE-1-CARBOXALDEHYDE, 2,4-DIMETHYL- (CAS: 68039-49-6)

Crustacean toxicity : EC50 = 22.4 mg/l
Species : Daphnia magna
Duration of exposure : 48 h

Algae toxicity : ECr50 = 31 mg/l
Species : Scenedesmus subspicatus
Duration of exposure : 72 h

BICYCLO[2.2.1]HEPTANE, 2,2-DIMETHYL-3-METHYLENE- (CAS: 79-92-5)

Fish toxicity : LC50 = 0.72 mg/l
Factor M = 1
Species : Brachydanio rerio
Duration of exposure : 96 h
OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity : EC50 = 0.72 mg/l
Factor M = 1
Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity : ECr50 = 0.07 mg/l
Factor M = 10
Species : Pseudokirchnerella subcapitata
Duration of exposure : 72 h
OECD Guideline 201 (Alga, Growth Inhibition Test)

1,3,4,6,7,8-HEXAHYDRO-4,6,6,7,8,8-HEXAMETHYLINDENO[5,6-C]PYRAN (CAS: 1222-05-5)

Fish toxicity : LC50 = 1.36 mg/l
Species : Lepomis macrochirus
Duration of exposure : 96 h
OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)

NOEC = 0.0925 mg/l
Factor M = 1
Species : Lepomis macrochirus
Duration of exposure : 21 days
OECD Guideline 204 (Fish, Prolonged Toxicity Test: 14-day Study)

Crustacean toxicity : EC50 = 0.9 mg/l
Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity : ECr50 = 0.854 mg/l
Species : Pseudokirchnerella subcapitata
Duration of exposure : 72 h
OECD Guideline 201 (Alga, Growth Inhibition Test)

NOEC = 0.201 mg/l
Species : Pseudokirchnerella subcapitata
Duration of exposure : 72 h
OECD Guideline 201 (Alga, Growth Inhibition Test)

BICYCLO[3.1.1]HEPT-2-ENE, 2,6,6-TRIMETHYL-, (1S)- (CAS: 7785-26-4)

Fish toxicity : LC50 = 0.303 mg/l
Factor M = 1
Species : Danio rerio
Duration of exposure : 96 h
OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity : EC50 = 0.475 mg/l
Factor M = 1
Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

GERANIOL (CAS: 106-24-1)

Fish toxicity : LC50 = 22 mg/l
Species : Danio rerio
Duration of exposure : 96 h
OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity : EC50 = 10.8 mg/l
Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity : ECr50 = 13.1 mg/l
Species : Desmodesmus subspicatus
Duration of exposure : 72 h
OECD Guideline 201 (Alga, Growth Inhibition Test)

P-MENTHA-1,4-DIÈNE (CAS: 99-85-4)

Fish toxicity : LC50 = 2.792 mg/l
Species : Danio rerio
Duration of exposure : 96 h
OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity : EC50 = 10.189 mg/l
Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity : ECr50 = 10.82 mg/l
Species : Scenedesmus capricornutum
Duration of exposure : 72 h
OECD Guideline 201 (Alga, Growth Inhibition Test)

LINALOOL (CAS: 78-70-6)

Fish toxicity : LC50 = 27.8 mg/l
Species : Oncorhynchus mykiss
Duration of exposure : 96 h
OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity : EC50 = 59 mg/l
Species : Daphnia magna
Duration of exposure : 48 h

OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity : ECr50 = 156.7 mg/l
Species : Desmodesmus subspicatus
Duration of exposure : 96 h

RESIN ACIDS AND ROSIN ACIDS, HYDROGENATED, ME ESTERS (CAS: 8050-15-5)

Fish toxicity : LC50 > 1000 mg/l
Species : Pimephales promelas
Duration of exposure : 96 h
OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity : EC50 = 27 mg/l
Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity : ECr50 > 1000 mg/l
Species : Pseudokirchnerella subcapitata
Duration of exposure : 72 h
OECD Guideline 201 (Alga, Growth Inhibition Test)

2'-ACÉTONAPHTONE (CAS: 93-08-3)

Fish toxicity : LC50 = 5 mg/l
Species : Danio rerio
Duration of exposure : 96 h
OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity : EC50 = 48.1 mg/l
Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity : ECr50 = 8.9 mg/l
Species : Desmodesmus subspicatus
Duration of exposure : 72 h
OECD Guideline 201 (Alga, Growth Inhibition Test)

CITRAL (CAS: 5392-40-5)

Fish toxicity : LC50 = 6.78 mg/l
Species : Leuciscus idus
Duration of exposure : 96 h

Crustacean toxicity : EC50 = 6.8 mg/l
Species : Daphnia magna
Duration of exposure : 48 h

Algae toxicity : ECr50 = 103.8 mg/l
Species : Desmodesmus subspicatus
Duration of exposure : 72 h

EC10 mg/l
Species : Desmodesmus subspicatus
Duration of exposure : 72 h

7-HYDROXYCITRONELLAL (CAS: 107-75-5)

Fish toxicity : Duration of exposure : 96 h

Crustacean toxicity : EC50 = 410 mg/l
Species : Daphnia magna

Duration of exposure : 48 h

Species : Pagurus logicarpus

Algae toxicity : ECr50 = 68 mg/l
Species : Desmodesmus subspicatus
Duration of exposure : 72 h

ACETATE DE LINALYLE (CAS: 115-95-7)

Fish toxicity : LC50 = 11 mg/l
Species : Cyprinus carpio
Duration of exposure : 96 h
OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity : EC50 = 59 mg/l
Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity : ECr50 = 156.7 mg/l
Species : Desmodesmus subspicatus
Duration of exposure : 96 h
Other guideline

BENZYL BENZOATE (CAS: 120-51-4)

Fish toxicity : LC50 = 2.32 mg/l
Species : Danio rerio
Duration of exposure : 96 h
Other guideline

Crustacean toxicity : EC50 = 3.09 mg/l
Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity : ECr50 = 0.475 mg/l
Species : Pseudokirchnerella subcapitata
Duration of exposure : 72 h
OECD Guideline 201 (Alga, Growth Inhibition Test)

(R)-P-MENTHA-1,8-DIENE (CAS: 5989-27-5)

Fish toxicity : LC50 = 0.720 mg/l
Species : Pimephales promelas
Duration of exposure : 96 h
OECD Guideline 203 (Fish, Acute Toxicity Test)

Crustacean toxicity : EC50 = 0.307 mg/l
Species : Daphnia magna
Duration of exposure : 48 h
OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)

Algae toxicity : ECr50 = 0.32 mg/l
Species : Raphidocelis subcapitata
Duration of exposure : 72 h
OECD Guideline 201 (Alga, Growth Inhibition Test)

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

|> 12.2.1. Substances

[1S-(1A,3AB,4A,8AB)]-DÉCAHYDRO-4,8,8-TRIMÉTHYL-9-MÉTHYLÈNE-1,4-MÉTHANOAZULÈNE (CAS: 475-20-7)
Biodegradability : Rapidly degradable.

UNDECATRIENE (CAS: 16356-11-9)
Biodegradability : no degradability data is available, the substance is considered as not degrading quickly.

ISOEUGENOL (CAS: 97-54-1)
Biodegradability : Rapidly degradable.

PIN-2(3)-ÈNE (CAS: 80-56-8)
Biodegradability : Rapidly degradable.

BICYCLO[2.2.1]HEPTANE, 2,2-DIMETHYL-3-METHYLENE- (CAS: 79-92-5)
Biodegradability : Non-rapidly degradable.

6-TERT-BUTYL-1,1-DIMÉTHYLINDANE-4-YLMÉTHYLCÉTONE (CAS: 13171-00-1)
Biodegradability : Non-rapidly degradable.

1,3,4,6,7,8-HEXAHYDRO-4,6,6,7,8,8-HEXAMETHYLINDENO[5,6-C]PYRAN (CAS: 1222-05-5)
Biodegradability : Non-rapidly degradable.

BICYCLO[4.1.0]HEPT-3-ENE, 3,7,7-TRIMETHYL-, (1S,6R)- (CAS: 498-15-7)
Biodegradability : Rapidly degradable.

GERANYL ACETATE (CAS: 105-87-3)
Biodegradability : Rapidly degradable.

4 TERPINEOL (CAS: 562-74-3)
Biodegradability : Rapidly degradable.

BETA CARYOPHYLLENE (CAS: 87-44-5)
Biodegradability : Rapidly degradable.

BICYCLO[3.1.1]HEPT-2-ENE, 2,6,6-TRIMETHYL-, (1S)- (CAS: 7785-26-4)
Biodegradability : Rapidly degradable.

GERANIOL (CAS: 106-24-1)
Biodegradability : Rapidly degradable.

P-MENTHA-1,4-DIÈNE (CAS: 99-85-4)
Biodegradability : Rapidly degradable.

7-MÉTHYL-3-MÉTHYLENEOCTA-1,6-DIÈNE (CAS: 123-35-3)
Biodegradability : Rapidly degradable.

BENZYL BENZOATE (CAS: 120-51-4)
Biodegradability : Rapidly degradable.

L-.BETA.-PINENE (CAS: 18172-67-3)
Biodegradability : Rapidly degradable.

PIN-2(10)-ENE (CAS: 127-91-3)
Biodegradability : Rapidly degradable.

LINALOOL (CAS: 78-70-6)
Biodegradability : Rapidly degradable.

3-CYCLOHEXENE-1-CARBOXALDEHYDE, 2,4-DIMETHYL- (CAS: 68039-49-6)

Biodegradability : Non-rapidly degradable.

(R)-P-MENTHA-1,8-DIENE (CAS: 5989-27-5)
Biodegradability : Rapidly degradable.

RESIN ACIDS AND ROSIN ACIDS, HYDROGENATED, ME ESTERS (CAS: 8050-15-5)
Biodegradability : Non-rapidly degradable.

2'-ACÉTONAPHTONE (CAS: 93-08-3)
Biodegradability : Rapidly degradable.

CITRAL (CAS: 5392-40-5)
Biodegradability : Rapidly degradable.

7-HYDROXYCITRONELLAL (CAS: 107-75-5)
Biodegradability : Rapidly degradable.

ACETATE DE LINALYLE (CAS: 115-95-7)
Biodegradability : Rapidly degradable.

12.3. Bioaccumulative potential

|> **12.3.1. Substances**

[1S-(1A,3AB,4A,8AB)]-DÉCAHYDRO-4,8,8-TRIMÉTHYL-9-MÉTHYLÈNE-1,4-MÉTHANOAZULÈNE (CAS: 475-20-7)
Octanol/water partition coefficient : log Koe = 6.16

UNDECATRIENE (CAS: 16356-11-9)
Octanol/water partition coefficient : log Koe = 5.18

ISOEUGENOL (CAS: 97-54-1)
Octanol/water partition coefficient : log Koe = 2.55

PIN-2(3)-ÈNE (CAS: 80-56-8)
Octanol/water partition coefficient : log Koe = 5.7

BICYCLO[2.2.1]HEPTANE, 2,2-DIMETHYL-3-METHYLENE- (CAS: 79-92-5)
Octanol/water partition coefficient : log Koe = 4.22

6-TERT-BUTYL-1,1-DIMÉTHYLINDANE-4-YLMÉTHYLCÉTONE (CAS: 13171-00-1)
Octanol/water partition coefficient : log Koe = 5.4

1,3,4,6,7,8-HEXAHYDRO-4,6,6,7,8,8-HEXAMETHYLINDENO[5,6-C]PYRAN (CAS: 1222-05-5)
Octanol/water partition coefficient : log Koe = 5.3

Bioaccumulation : BCF = 1.584
Species : Others
OECD Guideline 305 (Bioconcentration: Flow-through Fish Test)

BICYCLO[4.1.0]HEPT-3-ENE, 3,7,7-TRIMETHYL-, (1S,6R)- (CAS: 498-15-7)
Octanol/water partition coefficient : log Koe = 4.38
OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

GERANYL ACETATE (CAS: 105-87-3)
Octanol/water partition coefficient : log Koe = 4.04
OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

4 TERPINEOL (CAS: 562-74-3)
Octanol/water partition coefficient : log Koe = 2.97

BETA CARYOPHYLLENE (CAS: 87-44-5)
Octanol/water partition coefficient : log Koe = 6.23

BICYCLO[3.1.1]HEPT-2-ENE, 2,6,6-TRIMETHYL-, (1S)- (CAS: 7785-26-4)
Octanol/water partition coefficient : log Koe = 4.48

GERANIOL (CAS: 106-24-1)
Octanol/water partition coefficient : log Koe = 2.6

P-MENTHA-1,4-DIÈNE (CAS: 99-85-4)
Octanol/water partition coefficient : log Koe = 5.4

7-MÉTHYL-3-MÉTHYLENEOCTA-1,6-DIÈNE (CAS: 123-35-3)
Octanol/water partition coefficient : log Koe = 4.82

BENZYL BENZOATE (CAS: 120-51-4)
Octanol/water partition coefficient : log Koe = 4

L-.BETA.-PINENE (CAS: 18172-67-3)
Octanol/water partition coefficient : log Koe = 4.35

PIN-2(10)-ENE (CAS: 127-91-3)
Octanol/water partition coefficient : log Koe = 5.4

LINALOOL (CAS: 78-70-6)
Octanol/water partition coefficient : log Koe = 2.84
OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

3-CYCLOHEXENE-1-CARBOXALDEHYDE, 2,4-DIMETHYL- (CAS: 68039-49-6)
Octanol/water partition coefficient : log Koe = 3.2
OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

(R)-P-MENTHA-1,8-DIENE (CAS: 5989-27-5)
Octanol/water partition coefficient : log Koe = 4.38
OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

RESIN ACIDS AND ROSIN ACIDS, HYDROGENATED, ME ESTERS (CAS: 8050-15-5)
Octanol/water partition coefficient : log Koe > 6.5
OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

2'-ACÉTONAPHTONE (CAS: 93-08-3)
Octanol/water partition coefficient : log Koe = 2.678
OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

CITRAL (CAS: 5392-40-5)
Octanol/water partition coefficient : log Koe = 2.76
OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

7-HYDROXYCITRONELLAL (CAS: 107-75-5)
Octanol/water partition coefficient : log Koe = 1.5
OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

ACETATE DE LINALYLE (CAS: 115-95-7)
Octanol/water partition coefficient : log Koe = 3.9
OECD Guideline 107 (Partition Coefficient (n-octanol / water), Shake Flask Method)

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Endocrine disrupting properties

The mixture does not contain any substance evaluated as an endocrine disruptor with environmental effects.

12.7. Other adverse effects

No data available.

SECTION 13 : DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste :

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14 : TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2023 - IMDG 2022 [41-22] - ICAO/IATA 2024 [65]).

14.1. UN number or ID number

3082

14.2. UN proper shipping name

UN3082=ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

((r)-p-mentha-1,8-diene)

14.3. Transport hazard class(es)

- Classification :

9

14.4. Packing group

III

14.5. Environmental hazards

- Environmentally hazardous material :

14.6. Special precautions for user

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunnel
	9	M6	III	9	90	5 L	274 335 375 601	E1	3	-

Not subject to this regulation if Q <= 5 l / 5 kg (ADR 3.3.1 - DS 375)

IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ	Stowage Handling	Segregation
	9	-	III	5 L	F-A. S-F	274 335 969	E1	Category A	-

Not subject to this regulation if Q <= 5 l / 5 kg (IMDG 3.3.1 - 2.10.2.7)

IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ
	9	-	III	964	450 L	964	450 L	A97 A158 A197 A215	E1
	9	-	III	Y964	30 kg G	-	-	A97 A158 A197 A215	E1

Not subject to this regulation if Q <= 5 l / 5 kg (IATA 4.4.4 - DS A197)

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

Marine pollutant (IMDG 3.1.2.9):((r)-p-mentha-1,8-diene)

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15 : REGULATORY INFORMATION

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

Classification and labelling information included in section 2:

The following regulations have been used:

Container information:

No data available.

Restrictions applied under Title VIII of Regulation (EC) No. 1907/2006 (REACH):

The mixture does not contain any substance restricted under Annex XVII of Regulation (EC) No. 1907/2006 (REACH): https://echa.europa.eu/substances-restricted-under-reach.

Explosives precursors :

The mixture does not contain any substance subject to Regulation (EU) 2019/1148 on the marketing and use of explosives precursors.

Particular provisions :

No data available.

15.2. Chemical safety assessment

No data available.

SECTION 16 : OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Wording of the phrases mentioned in section 3 :

H226	Flammable liquid and vapour.
H228	Flammable solid.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361	Suspected of damaging fertility or the unborn child .
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms :

LD50 : The dose of a test substance resulting in 50% lethality in a given time period.

LC50 : The concentration of a test substance resulting in 50% lethality in a given period.

EC50 : The effective concentration of substance that causes 50% of the maximum response.

ECr50 : The effective concentration of substance that causes 50% reduction in growth rate.

NOEC : The concentration with no observed effect.

REACH : Registration, Evaluation, Authorization and Restriction of Chemical Substances.

ATE : Acute Toxicity Estimate

BW : Body Weight

DNEL : Derived No-Effect Level
PNEC : Predicted No-Effect Concentration
CMR: Carcinogenic, mutagenic or reprotoxic.
UFI : Unique formulation identifier.
STEL : Short-term exposure limit
TWA : Time Weighted Averages
TLV : Threshold Limit Value (exposure)
AEV : Average Exposure Value.
ADR : European agreement concerning the international carriage of dangerous goods by Road.
IMDG : International Maritime Dangerous Goods.
IATA : International Air Transport Association.
ICAO : International Civil Aviation Organisation
RID : Regulations concerning the International carriage of Dangerous goods by rail.
WGK : Wassergefahrdungsklasse (Water Hazard Class).
GHS07 : Exclamation mark
GHS09 : Environment
PBT: Persistent, bioaccumulable and toxic.
vPvB : Very persistent, very bioaccumulable.
SVHC : Substances of very high concern.
|> Modification compared to the previous version