

SAFETY DATA SHEET

Prepared in accordance with the provisions of KKDIK Annex-2
Regulation, 23.06.2017, No: 30105

Givaudan

HAKUNA FOREST

Version 2.0

Revision Date 22 APR 2024

Print Date 07 MAY 2024

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

1.1 Product identifier

Sales No. : 30173154
HAKUNA FOREST

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

Intended Use Fragrances : Perfume compound

1.3 Details of the supplier of the safety data sheet

Company : Givaudan Suisse SA
Chemin de la Parfumerie 5
CH-1214 VERNIER

Telephone : +41227809111
Telefax : +41227809150
E-mail address : global.sds_info@givaudan.com
Responsible/issuing person

1.4 Emergency Call

Givaudan 24/7 call : +33172110003

Please refer to section 16 for a full list of emergency phone numbers, from Givaudan's 24/7 provider.

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION about classification, labeling and packaging of substances and mixtures No 28848)

Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2	H319: Causes serious eye irritation.
Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Long-term (chronic) aquatic hazard, Category 2	H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION about classification, labeling and packaging of substances and mixtures No 28848)

Administrative information:

Report Information: SDS_TR/EN/GHS_SDS_TR/25

Sales & Distribution Information: VE01/FR/CH11/01

Shipping Order Information: 30 244 733/25 833 138

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Hazard pictograms :



Signal word :

Warning

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 mist or vapours.

P264

Wash skin thoroughly after handling.

P273

Avoid release to the environment.

P280

Wear protective gloves/ eye protection/ face protection.

Response:

P333 + P313

If skin irritation or rash occurs: Get medical advice/ attention.

P391

Collect spillage.

Hazardous components which must be listed on the label:

- 2-acetyl-1,2,3,4,5,6,7,8-octahydro- 54464-57-2
2,3,8,8-tetra-methylnaphtalene
(main isomer)
- 2,6,6,8-tetramethyl-9-acetyl- 32388-55-9
tricyclo{5.3.1.0(1,5)}undec-8-ene
- 2-hexyl-3-phenyl-2-propenal (trans & 101-86-0
cis)
- linalool 78-70-6
- Oils, Lemon 8008-56-8
- Cedarwood oil 85085-29-6
- 3,7-dimethyl-1,6-octadien-3-yl 115-95-7
acetate (= linalyl acetate)
- 7-hydroxy-3,7-dimethyloctan-1-al 107-75-5
- 3,7-dimethyl-6-octen-1-ol (= 106-22-9
citronellol)
- 2,2-dimethyl-3-(4(2)- 67634-15-5
ethylphenyl)propanal
- 2,2,6-trimethyl-alpha- 70788-30-6
propylcyclohexanepropanol
- Cedryl methyl ether 19870-74-7
- 2-methyl-3-(4- 103-95-7
isopropylphenyl)propanal
- (R)-p-mentha-1,8-diene 5989-27-5

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- methyl 2,4-dihydroxy-3,6-dimethylbenzoate 4707-47-5
- Terpenes and Terpenoids, lemon-oil 68917-33-9
- 6,7-Dihydro-1,1,2,3,3-pentamethyl-4(5H)-indanone 33704-61-9
- Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene- (= Beta-pinene) 127-91-3
- 4,11,11-trimethyl-8-methylenebicyclo[7.2.0]undec-4-ene (= Caryophyllene) 87-44-5

2.3 Other hazards

Hazards not Otherwise Classified : May cause phototoxicity.

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3. Composition/information on ingredients

3.2 Mixtures

Hazardous components

Chemical name	CAS-No. EC-No. Registration number	Classification (Regulation TR 28848)	Concentration [%]
2-acetyl-1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetra-methylnaphtalene (main isomer)	54464-57-2 915-730-3	Skin Irrit. 2; H315 Skin Sens. 1B; H317 Aquatic Chronic 2; H411 Acute toxicity estimate	>= 10 - < 20

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		Acute oral toxicity: > 5 000,00 mg/kg Acute dermal toxicity: > 5 000,00 mg/kg	
2,6,6,8-tetramethyl-9-acetyl- tricyclo{5.3.1.0(1,5)}undec-8-ene	32388-55-9 251-020-3 01-0000479672-25	Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1 Acute toxicity estimate Acute oral toxicity: > 5 000,00 mg/kg	>= 1 - < 2,5
2-hexyl-3-phenyl-2-propenal (trans & cis)	101-86-0 165184-98-5 639-566-4 01-0000466934-37	Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411 M-Factor (Acute aquatic toxicity): 1 Acute toxicity estimate Acute oral toxicity: 3 100,00 mg/kg	>= 1 - < 2,5
[3R-(3a,3aβ,6a,7β,8aa)]-octahydro- 3,6,8,8-tetramethyl-1H-3a,7- methanoazulen-6-ol	77-53-2 201-035-6	Aquatic Chronic 2; H411 Acute toxicity estimate Acute oral toxicity: > 5 000,00 mg/kg Acute dermal toxicity: > 5 000,00 mg/kg	>= 1 - < 2,5

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		> 5 000,00 mg/kg	
linalool	78-70-6 201-134-4	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317 Acute toxicity estimate Acute oral toxicity: 2 790,00 mg/kg	>= 1 - < 5
Cedarwood oil	85085-29-6 1159574-01-2 8000-27-9 285-360-9	Skin Corr. 1C; H314 Skin Sens. 1B; H317 Asp. Tox. 1; H304 Aquatic Chronic 2; H411 Acute toxicity estimate Acute oral toxicity: > 5 000,00 mg/kg Acute dermal toxicity: > 5 000,00 mg/kg	>= 1 - < 2,5
Oils, Lemon	8008-56-8 84929-31-7 284-515-8 01-0000490212-27	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Skin Sens. 1; H317 Asp. Tox. 1; H304 Aquatic Chronic 2; H411 Acute toxicity estimate Acute dermal toxicity: > 5 000,00 mg/kg	>= 1 - < 2,5
3,7-dimethyl-1,6-octadien-3-yl acetate (= linalyl acetate)	115-95-7 204-116-4	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317 Acute toxicity estimate Acute oral toxicity: 13 934,00 mg/kg	>= 0,1 - < 1

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		Acute dermal toxicity: > 5 000,00 mg/kg	
7-hydroxy-3,7-dimethyloctan-1-al	107-75-5 203-518-7	Eye Irrit. 2; H319 Skin Sens. 1B; H317 Acute toxicity estimate Acute oral toxicity: > 5 000,00 mg/kg	>= 0,1 - < 1
3,7-dimethyl-6-octen-1-ol (= citronellol)	106-22-9 203-375-0	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317 Acute toxicity estimate Acute oral toxicity: 3 450,00 mg/kg Acute dermal toxicity: 2 650,00 mg/kg	>= 0,1 - < 1
Cedryl methyl ether	19870-74-7 67874-81-1 243-384-7	Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 Acute toxicity estimate Acute oral toxicity: > 5 000,00 mg/kg Acute dermal toxicity: > 5 000,00 mg/kg	>= 0,25 - < 1
2,2-dimethyl-3-(4(2)-ethylphenyl)propanal	67634-15-5 67634-14-4 916-329-6	Skin Irrit. 2; H315 Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 2; H411	>= 0,25 - < 1

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		M-Factor (Acute aquatic toxicity): 1 Acute toxicity estimate Acute oral toxicity: > 5 000,00 mg/kg Acute dermal toxicity: > 5 000,00 mg/kg	
2,2,6-trimethyl-alpha-propylcyclohexanepropanol	70788-30-6 947-716-8	Skin Sens. 1B; H317 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1 Acute toxicity estimate Acute oral toxicity: > 5 000,00 mg/kg	>= 0,25 - < 1
2-methyl-3-(4-isopropylphenyl)propanal	103-95-7 203-161-7 01-0000467974-83	Skin Irrit. 2; H315 Skin Sens. 1B; H317 Aquatic Chronic 3; H412	>= 0,25 - < 1
(R)-p-mentha-1,8-diene	5989-27-5 227-813-5	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Skin Sens. 1B; H317 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 3; H412 Acute toxicity estimate Acute oral toxicity: 5 600,00 mg/kg	>= 0,25 - < 1

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		Acute dermal toxicity: > 5 000,00 mg/kg	
Pentyl 2-hydroxybenzoate	2050-08-0 218-080-2 01-0000468587-13	Acute Tox. 4; H302 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1 Acute toxicity estimate Acute oral toxicity: 2 000 mg/kg	>= 0,25 - < 1
alpha cedrene	469-61-4 207-418-4	Skin Irrit. 2; H315 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 10 M-Factor (Chronic aquatic toxicity): 10 Acute toxicity estimate Acute oral toxicity: > 5 000,00 mg/kg Acute dermal toxicity: > 5 000,00 mg/kg	>= 0,25 - < 1
reaction mass of cis-and trans-cyclohexadec-8-en-1-one	3100-36-5 401-700-2	Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1 M-Factor (Chronic aquatic toxicity): 1	>= 0,1 - < 0,25

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		Acute toxicity estimate Acute oral toxicity: 10 000,00 mg/kg	
6,7-Dihydro-1,1,2,3,3-pentamethyl-4(5H)-indanone	33704-61-9 251-649-3	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1B; H317 Aquatic Chronic 2; H411 Acute toxicity estimate Acute oral toxicity: 2 900,00 mg/kg	>= 0,1 - < 0,25
Terpenes and Terpenoids, lemon-oil	68917-33-9 84929-31-7 284-515-8 01-0000490212-27	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Skin Sens. 1; H317 Asp. Tox. 1; H304 Aquatic Chronic 2; H411	>= 0,1 - < 0,25
methyl 2,4-dihydroxy-3,6-dimethylbenzoate	4707-47-5 225-193-0	Skin Sens. 1B; H317 Acute toxicity estimate Acute oral toxicity: > 8 000,00 mg/kg Acute dermal toxicity: > 5 000,00 mg/kg	>= 0,1 - < 1
Bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene- (= Beta-pinene)	127-91-3 204-872-5	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Skin Sens. 1B; H317 Asp. Tox. 1; H304 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor (Acute aquatic toxicity): 1	>= 0,1 - < 0,25
4,11,11-trimethyl-8-methylenebicyclo[7.2.0]undec-4-ene	87-44-5 201-746-1	Skin Sens. 1B; H317	>= 0,1 - < 1

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(= Caryophyllene)		Asp. Tox. 1; H304 Acute toxicity estimate Acute oral toxicity: > 5 000,00 mg/kg Acute dermal toxicity: > 5 000,00 mg/kg	
1-Isopropyl-4-methylcyclohexa-1,4-diene (= gamma terpinene)	99-85-4 202-794-6	Flam. Liq. 3; H226 Repr. 2; H361 Asp. Tox. 1; H304 Aquatic Chronic 2; H411 Acute toxicity estimate Acute oral toxicity: 3 650,00 mg/kg	>= 0,1 - < 0,25

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4. First aid measures

4.1 Description of first aid measures

General advice	: Move out of dangerous area. Show this safety data sheet to the doctor in attendance. Do not leave the victim unattended.
If inhaled	: If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician.
In case of skin contact	: If skin irritation persists, call a physician. If on skin, rinse well with water. If on clothes, remove clothes.
In case of eye contact	: Remove contact lenses. Immediately flush eyes for at least 15 minutes. Get medical attention.
If swallowed	: Keep respiratory tract clear. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

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4.2 Most important symptoms and effects, both acute and delayed

Symptoms	: no data available
Risks	: Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : no data available

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Dry chemical
Alcohol-resistant foam
Carbon dioxide (CO2)
Water spray

Unsuitable extinguishing media : no data available

5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.

5.3 Advice for firefighters

Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : no data available

6.2 Environmental precautions

Environmental precautions : Prevent product from entering drains.
If the product contaminates rivers and lakes or drains inform respective authorities.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel,

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acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

Not applicable

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Do not breathe vapours/dust.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.
Temperature class : no data available
Fire-fighting class : no data available
Dust explosion class : no data available

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage conditions : Ambient / 10-30°C (50-85°F)
Dry, well ventilated, preferably full, hermetically sealed
Advice on common storage : Protect against light.
Storage class (TRGS 510) : 10 Combustible liquids
Other data : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : no data available

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

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Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Exposure assessment: Exposures are dependent on the product being handled, the potential for chemical release, and any resulting airborne concentrations or dermal contact. Since product handling and release scenarios vary, and no two workplaces are exactly alike, it is recommended that the potential for exposure be assessed prior to the product's use or introduction. Exposure assessments should be performed by an occupational hygienist, industrial hygienist, or other qualified occupational or environmental health professional. An exposure assessment should be conducted to determine the efficacy of any ventilation and the need for additional PPE. The PPE indicated below are recommendations for worst-case scenario exposures. An exposure assessment will identify more applicable measures to be implemented. EN and ANSI standards are mentioned in the following recommendations, consult equivalent local standards when required.

PPE is always the last resort to avoid exposure. In any case technical and organisational measures have to be explored and used prior to the selection of PPE. The PPE selection is for operators trained to work with chemicals according to good industrial hygiene and safety practice. Operators have to be trained on the use of PPE.

8.2.1 Engineering measures

Use engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use the product only with adequate ventilation.

8.2.2 Personal protective equipment

- | | |
|-----------------------|---|
| Eye/face protection | : Use safety goggles and faceshield tested according to EN 166/ ANSI Z87.1 or equivalent local standard. |
| Hand protection | : Use gloves when handling substance in open systems. Inspect gloves prior to use. Train operators for proper use. If only incidental exposure is expected: (work without direct contact to substance) use gloves tested according EN 16523-1/ASTM F739 or equivalent local standard breakthrough times at least 10 minutes, tested for chemicals indicated in chapter 3 of this SDS. Change gloves frequently.
If direct skin contact is expected: use gloves tested according to EN 16523-1/ASTM F739 or equivalent local standard, tested for chemicals indicated in chapter 3 of this SDS. Permeation time must exceed contact time. |
| Other skin protection | : Wear working clothes covering arms and legs. The type of protective equipment must be selected according to the concentration and amount of the hazardous substance at the specific workplace. Use apron and sleeve covers or complete chemical suit if exposure is expected. |

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Respiratory protection : Respiratory protection should be worn when workplace exposures exceed exposure limit requirements or guidelines. If there are no applicable exposure limits or guidelines, use an approved respirator where there is a potential for adverse effects, including but not limited to respiratory irritation or odor, or where indicated by the exposure assessment. Selection of air-purifying or positive-pressure supplied-air will depend on the results of the exposure assessment which includes an evaluation of the specific operations and the potential airborne concentrations. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

In case a risk analysis proved the cartridge respirator as acceptable, use type:
ABEK-P3 (EN 14387) OR Combination Multi-gas/P100 (42CFR84.193; ANSI Z88.7 or equivalent local standard) as a backup to engineering controls.

In absence of engineering controls, use self-contained breathing apparatus or full face supplied air respirators. Use respirators and components tested and approved under appropriate government standards such as CEN (EU) or NIOSH 42 CFR 84(US).

Thermal hazards : Wear appropriate thermal protective clothing, when necessary.

Hygiene measures : Remove contaminated clothing and protective equipment before entering eating areas.
Do not eat, drink or smoke during work.
Wash hands any time after handling the product.

8.2.3 Environmental exposure controls

General advice : Prevent product from entering drains.
If the product contaminates rivers and lakes or drains inform respective authorities.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: liquid
Form	: Clear liquid
Colour	: Pale yellow to yellow
Taste	: not determined
Odour	: woody, Spicy, Ambery
Odour Threshold	: Not applicable
Flash point	: 95 °C Method: Grabner miniflash closed cup

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Lower explosion limit	: not determined
Upper explosion limit	: not determined
Flammability	: Not applicable
Particle size	: no data available
Oxidizing properties	: no data available
Auto-ignition temperature	: not determined
Decomposition temperature	: no data available
pH	: not determined
Boiling point	: not determined
Vapour pressure	: 0,0627 hPa at 20 °C Calculated (99,9 %)
Density	: 994,20 kg/m3 at 20 °C
Bulk density	: Not applicable
Water solubility	: not determined
Solubility/qualitative	: not determined
Partition coefficient: n-octanol/water	: Not applicable
Viscosity, kinematic	: no data available
Relative vapour density	: no data available
Evaporation rate	: no data available
Explosive properties	: no data available

9.2 Other information

Not applicable

SECTION 10. Stability and reactivity

10.1 Reactivity

none

10.2 Chemical stability

The product is chemically stable.

10.3 Possibility of hazardous reactions

Hazardous reactions : No decomposition if stored and applied as directed.

10.4 Conditions to avoid

Conditions to avoid : no data available

10.5 Incompatible materials

Materials to avoid : no data available

10.6 Hazardous decomposition products

Hazardous decomposition products : no data available

Thermal decomposition : no data available

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SECTION 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity : No data is available on the product itself.

Acute oral toxicity

2-acetyl-1,2,3,4,5,6,7,8-octahydro-2,3,8,8-tetramethylnaphthalene (main isomer) : LD50: > 5 000 mg/kg Species: Rat

2,6,6,8-tetramethyl-9-acetyl-tricyclo[5.3.1.0(1,5)]undec-8-ene : LD50: > 5 000 mg/kg Species: Rat

2-hexyl-3-phenyl-2-propenal (trans & cis) : LD50: 3 100 mg/kg Species: Rat

[3R-(3a,3aβ,6a,7β,8aa)]-octahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-6-ol : LD50: > 5 000 mg/kg Species: Rat

linalool : LD50: 2 790 mg/kg Species: Rat

Cedarwood oil : LD50: > 5 000 mg/kg Species: Rat

3,7-dimethyl-1,6-octadien-3-yl acetate (= linalyl acetate) : LD50: 13 934 mg/kg Species: Rat

7-hydroxy-3,7-dimethyloctan-1-al : LD50: > 5 000 mg/kg Species: Rat

3,7-dimethyl-6-octen-1-ol (= citronellol) : LD50: 3 450 mg/kg Species: Rat

Cedryl methyl ether : LD50: > 5 000 mg/kg Species: Rat

2,2-dimethyl-3-(4(2)-ethylphenyl)propanal : LD50: > 5 000 mg/kg Species: Rat

2,2,6-trimethyl-α-propylcyclohexanepropanol : LD50: > 5 000 mg/kg Species: Rat

(R)-p-mentha-1,8-diene : LD50: 5 600 mg/kg Species: Mouse

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Pentyl 2-hydroxybenzoate	: LD50: 2 000 mg/kg	Species: Rat
alpha cedrene	: LD50: > 5 000 mg/kg	Species: Rat
reaction mass of cis-and trans-cyclohexadec-8-en-1- one	: LD50: 10 000 mg/kg	Species: Rat
6,7-Dihydro-1,1,2,3,3- pentamethyl-4(5H)-indanone	: LD50: 2 900 mg/kg	Species: Rat
methyl 2,4-dihydroxy-3,6- dimethylbenzoate	: LD50: > 8 000 mg/kg	Species: Rat
4,11,11-trimethyl-8- methylenebicyclo[7.2.0]unde c-4-ene (= Caryophyllene)	: LD50: > 5 000 mg/kg	Species: Rat
1-Isopropyl-4- methylcyclohexa-1,4-diene (= gamma terpinene)	: LD50: 3 650 mg/kg	Species: Rat
Acute inhalation toxicity	: No data is available on the product itself.	
Acute dermal toxicity	: No data is available on the product itself.	
Acute dermal toxicity 2-acetyl-1,2,3,4,5,6,7,8- octahydro-2,3,8,8-tetra- methylnaphthalene (main isomer)	: LD50: > 5 000 mg/kg	Species: Rabbit
[3R-(3a,3aβ,6a,7β,8aa)]- octahydro-3,6,8,8- tetramethyl-1H-3a,7- methanoazulen-6-ol	: LD50: > 5 000 mg/kg	Species: Rabbit
	LD50: > 5 000 mg/kg	Species: Rat
Cedarwood oil	: LD50: > 5 000 mg/kg	Species: Rabbit
Oils, Lemon	: LD50: > 5 000 mg/kg	Species: Rabbit
3,7-dimethyl-1,6-octadien-3- yl acetate (= linalyl acetate)	: LD50: > 5 000 mg/kg	Species: Rabbit

Administrative information:

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3,7-dimethyl-6-octen-1-ol (= citronellol) : LD50: 2 650 mg/kg Species: Rabbit

Cedryl methyl ether : LD50: > 5 000 mg/kg Species: Rabbit

2,2-dimethyl-3-(4(2)-ethylphenyl)propanal : LD50: > 5 000 mg/kg Species: Rabbit

(R)-p-mentha-1,8-diene : LD50: > 5 000 mg/kg Species: Rabbit

alpha cedrene : LD50: > 5 000 mg/kg Species: Rabbit

methyl 2,4-dihydroxy-3,6-dimethylbenzoate : LD50: > 5 000 mg/kg Species: Rabbit

4,11,11-trimethyl-8-methylenebicyclo[7.2.0]undec-4-ene (= Caryophyllene) : LD50: > 5 000 mg/kg Species: Rabbit

Acute toxicity (other routes of administration) : No data is available on the product itself.

Skin corrosion/irritation

Skin irritation : May cause skin irritation and/or dermatitis.

Serious eye damage/eye irritation

Eye irritation : Vapours may cause irritation to the eyes, respiratory system and the skin.

Respiratory or skin sensitisation

Sensitisation : No data is available on the product itself.

Germ cell mutagenicity

Germ cell mutagenicity : No data is available on the product itself.

Carcinogenicity

Carcinogenicity : No data is available on the product itself.

Reproductive toxicity

Not classified based on available information.

Administrative information:

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Target Organ Systemic Toxicant - Single exposure

Target Organ Systemic Toxicant - Single exposure : No data is available on the product itself.

Target Organ Systemic Toxicant - Repeated exposure

Target Organ Systemic Toxicant - Repeated exposure : No data is available on the product itself.

Target Organ Systemic Toxicant - Repeated exposure Aspiration hazard

Aspiration toxicity : No data is available on the product itself.

Phototoxicity

Phototoxicity : No data is available on the product itself.

Further information : no data available

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks : no data available

SECTION 12. Ecological information

12.1 Toxicity

Components:

[3R-(3.alpha.,3a,7,8a.alpha.)]-1-(2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulen-5-yl)ethan-1-one:

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M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

alpha-hexylcinnamaldehyde:

M-Factor (Acute aquatic toxicity) : 1

[3R-(3alpha,3abeta,6beta,7beta,8aalpha)]-octahydro-6-methoxy-3,6,8,8-tetramethyl-1H-3a,7-methanoazulene:

M-Factor (Acute aquatic toxicity) : 1

3-(p-ethylphenyl)-2,2-dimethylpropionaldehyde:

M-Factor (Acute aquatic toxicity) : 1

2,2,6-trimethyl-alpha-propylcyclohexanepropanol:

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

pentyl salicylate:

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

[3R-(3alpha,3abeta,7beta,8aalpha)]-2,3,4,7,8,8a-hexahydro-3,6,8,8-tetramethyl-1H-3a,7-methanoazulene:

M-Factor (Acute aquatic toxicity) : 10

M-Factor (Chronic aquatic toxicity) : 10

A mixture of cis- and trans-cyclohexadec-8-en-1-one:

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

pin-2(10)-ene:

Administrative information:

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M-Factor (Acute aquatic toxicity) : 1

12.2 Persistence and degradability

no data available

12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : Toxic to aquatic life with long lasting effects.
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13. Disposal considerations

13.1 Waste treatment methods

Product : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

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Dispose of in accordance with local regulations.

SECTION 14. Transport information

14.1 UN number

ADR : UN 3082
IMDG : UN 3082
IATA : UN 3082

14.2 UN proper shipping name

ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(alpha-Cedrene, Tetramethyl-acetyl-tricycloundecene)
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(alpha-Cedrene, Tetramethyl-acetyl-tricycloundecene)
IATA : Environmentally hazardous substance, liquid, n.o.s.
(alpha-Cedrene, Tetramethyl-acetyl-tricycloundecene)

14.3 Transport hazard class(es)

ADR : 9
IMDG : 9
IATA : 9

14.4 Packing group

ADR : III
IMDG : III
IATA : III

14.5 Environmental hazards

ADR
Environmentally hazardous : yes
IMDG
Marine pollutant : yes
IATA (Passenger)
Environmentally hazardous : yes
IATA (Cargo)
Environmentally hazardous : yes

14.6 Special precautions for user

Administrative information:
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ADR

Tunnel restriction code : (-)

IMDG

IMDG Code Segregation : None
Group

14.7 Maritime transport in bulk according to IMO instruments

Not applicable for product as supplied.

SECTION 15. Regulatory information

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

Major Accident Hazard : ENVIRONMENTAL HAZARDS
Legislation E2
Quantity 1: 200 t
Quantity 2: 500 t

Water hazard class : WGK 3 highly hazardous to water
(Germany) Classification according to AwSV, Annex 1 (5.2)

15.2 Chemical safety assessment

A Chemical Safety Assessment is not required for this substance.

SECTION 16. Other information

Full text of H-Statements

H226 : Flammable liquid and vapour.
H302 : Harmful if swallowed.
H304 : May be fatal if swallowed and enters airways.
H314 : Causes severe skin burns and eye damage.
H315 : Causes skin irritation.
H317 : May cause an allergic skin reaction.
H319 : Causes serious eye irritation.
H361 : Suspected of damaging fertility or the unborn child.
H400 : Very toxic to aquatic life.
H410 : Very toxic to aquatic life with long lasting effects.
H411 : Toxic to aquatic life with long lasting effects.
H412 : Harmful to aquatic life with long lasting effects.

Full list of Emergency response numbers worldwide.

	Country	Phone nr		Country	Phone nr
Europe	All Europe	+44 1235 239670	APAC	All East/South East Asia	+65 3158 1074

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	Germany	+49 89 220 61012		Taiwan	+886 2 8793 3212
	Spain	+34 91 114 2520		Japan	0120 015 230
	Italy	800 699 792		Indonesia	007 803 011 0293
	Netherlands	+31 10 713 8195		Malaysia	+60 3 6207 4347
	Turkey	0800 621 2139 +44 1235 239670		Thailand	001 800 120 666 751
	Norway	+47 2103 4452		India	+65 3158 1198 000 800 100 7479
	Greece	+30 21 1198 3182		Pakistan	+65 3158 1329
	Portugal	+351 30880 4750		Bangladesh	+65 3158 1200
	Denmark	+45 8988 2286		Philippines	+63 2 8231 2149
	Sweden	+46 8 566 42573		Vietnam	+84 28 4458 2388
	Poland	+48 22 307 3690		Korea	+65 3158 1285
	Czech republic	+420 228 882 830		South Korea	+82 2 3479 8401
	Finland	+358 9 7479 0199		Australia	+61 2 8014 4558
Middle East/Africa	All Middle East/Africa	+44 1235 239671	LATAM	New Zealand	+64 9 929 1483
	Bahrain and Middle East	+44 1235 239671		China	+86 532 8388 9090
	Africa/South Africa	+27 21 300 2732		Mexico	+52 55 5004 8763
NOAM	USA and Canada	+1 866 928 0789		Brazil	+55 11 3197 5891
	USA and Canada	+1 215 207 0061		Chile	+56 2 2582 9336
	USA and Canada	+1 202 464 2554		Colombia	+57 1 508 7337
Global	Global	+44 1865 407333		Argentina	+54 11 5984 3690

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Information displayed in section 3 (Composition/information on ingredients) is additional information to understand the hazards of the product and ensure safe handling, storage and transportation. This information, including CAS numbers, is not meant to be used for registration, notification or any other purposes. Any additional information and documentation needed may be provided by Givaudan.

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Certification Number: KDU-A-0-0250

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