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

1.1. Product identifier

Product code : Hygienfresh Deodiffusori Arancia & Cannella
Trades code : A80-095
Product line: Hygienfresh

UFI: 4WM2-T0CA-X00R-Q3HF

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

Fragrance Diffuser sticks-exciting environment of long duration
Sectors of use:
Private households (= general public = consumers)[SU21], Public domain (administration, education, entertainment, services, craftsmen)[SU22]

Uses advised against
Do not use for purposes other than those listed

1.3. Details of the supplier of the safety data sheet

Tintolav s.r.l. - Via M. D' Antona 7 - 10028 Trofarello (TO) Tel. 011/649.68.27 Fax 011/649.67.42

Email: info@tintolav.com - Sito internet: www.tintolav.com

Email tecnico competente: a.conedera@tintolav.com

National contact: Malta: Emergency Ambulance 112
Accident & Emergency Department 2545 4030

1.4. Emergency telephone number

The UK National Poisons Emergency number +44 (0)870 600 6266
London: Emergency 24 hour telephone +44 (0) 207188 0100

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008:

Pictograms:
GHS02, GHS07, GHS09

Hazard Class and Category Code(s):
Flam. Liq. 2, Skin Irrit. 2, Skin Sens. 1A, Eye Irrit. 2, Aquatic Chronic 2

Hazard statement Code(s):
H225 - Highly flammable liquid and vapour.
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.

The product easy inflames if subordinate to an ignition source.
If brought into contact with eyes, the product causes significant irritations which may last for more than 24 hours, if brought into contact with skin, it causes significant inflammation with erythema, scabs, or edema
The product, if brought into contact with skin can cause skin sensitization.

The product is dangerous to the environment as it is toxic to aquatic life with long lasting effects

2.1.2 Additional information:

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:

Pictogram, Signal Word Code(s):
GHS02, GHS07, GHS09 - Danger

Hazard statement Code(s):
H225 - Highly flammable liquid and vapour.
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.

Supplemental Hazard statement Code(s):
not applicable

Precautionary statements:
General
P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.
Prevention
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P273 - Avoid release to the environment.
Response
P302+P352 - IF ON SKIN: Wash with plenty of water and soap
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P370+P378 - In case of fire: Use CO2 or powder to extinguish.
Storage
P403+P235 - Store in a well-ventilated place. Keep cool.
Disposal
P501 - Dispose of contents / container in accordance with local and national regulations.

Contains:
alcohol, PPG-2 methyl ether, parfum, limonene, linalool, eugenol, methylcinnamic aldehyde, cinnamonitrile, benzyl alcohol, cinnamal, geraniol, litsea cubeba fruit oil citral, citronellol, isoeugenol.

Packaging to be fitted with a tactile warning
Content of VOC ready to use condition: 80.82

UFI: 4WM2-T0CA-X00R-Q3HF

2.3. Other hazards

Based on the available data, no PBT or vPvB substances are present in accordance with Regulation (EC) 1907/2006, annex XIII

Based on available data, there are no substances that interfere with the Endocrine System in accordance with Regulation (EU) 2017/2100

No information on other hazards

SECTION 3. Composition/information on ingredients

3.1 Substances

Irrilevant

3.2 Mixtures

Note C - Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACh
ethanol	>= 50,00 < 75%	Flam. Liq. 2, H225; Eye Irrit. 2, H319 Limits: Eye Irrit. 2, H319 %C >=50; ATE oral = 7.060,000 mg/kg ATE dermal = 20.000,000 mg/kg ATE inhal = 116,900 mg/l/4 h	603-002-00-5	64-17-5	200-578-6	01-2119457610-43
dipentene Note: C	>= 5 < 15%	Flam. Liq. 3, H226; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Skin Sens. 1B, H317; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 1 ATE oral = 4.400,000 mg/kg ATE dermal = 5.000,000 mg/kg	601-096-00-2	5989-27-5	227-813-5	01-2119529223-47-0001
Linalool	>= 5 < 15%	Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Irrit. 2, H319 ATE oral = 2.790,000 mg/kg ATE dermal = 5.610,000 mg/kg ATE inhal = 307,000 mg/l/4 h	603-235-00-2	78-70-6	201-134-4	01-2119474016-42-0000
Eugenol	>= 5 < 15%	Skin Sens. 1B, H317; Eye Irrit. 2, H319 ATE oral = 2.000,000 mg/kg	ND	97-53-0	202-589-1	01-2119971802-33-0000
α-methylcinnamaldehyde - FEMA	>= 1 < 5%	Skin Sens. 1, H317	ND	101-39-3	202-938-8	01-211953

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACh
2697		ATE oral = 2.050,000 mg/kg ATE dermal > 5.000,000 mg/kg				8797-21-xxxx
3-phenylprop-2-enenitrile	>= 1 < 5%	Acute Tox. 3, H301; Acute Tox. 4, H312; Skin Sens. 1, H317 ATE oral = 4.150,000 mg/kg	ND	4360-47-8	224-441-5	ND
benzyl alcohol	>= 0,1 < 1%	Acute Tox. 4, H302; Skin Sens. 1B, H317; Eye Irrit. 2, H319; Acute Tox. 4, H332 ATE oral = 1.200,000 mg/kg	603-057-00-5	100-51-6	202-859-9	ND
cinnamaldehyde	>= 0,1 < 1%	Acute Tox. 4, H312; Skin Irrit. 2, H315; Skin Sens. 1A, H317; Eye Irrit. 2, H319 Limits: Skin Sens. 1A, H317 %C >=0,01; ATE oral = 2.200,000 mg/kg	606-155-00-6	104-55-2	203-213-9	01-2119935242-45
Geraniol - FEMA 2507	>= 0,1 < 1%	Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Dam. 1, H318 ATE oral = 3.500,000 mg/kg ATE dermal = 5.000,000 mg/kg ATE inhal = 0,500 mg/l/4 h	603-241-00-5	106-24-1	203-377-1	01-2119552430-49-0000
Litsea cubeba oil - FEMA 2624	>= 0,1 < 1%	Flam. Liq. 3, H226; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Chronic 1, H410 1 1 ATE oral = 5.000,000 mg/kg ATE dermal = 4.800,000 mg/kg	ND	68855-99-2	290-018-7	ND
citral	>= 0,1 < 1%	Skin Irrit. 2, H315; Skin Sens. 1, H317 ATE oral = 4.960,000 mg/kg ATE dermal = 2.250,000 mg/kg	605-019-00-3	5392-40-5	226-394-6	01-2119462829-23-0001
Citronellol	>= 0,1 < 1%	Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Irrit. 2, H319; STOT SE 3, H335 ATE oral = 3.450,000 mg/kg ATE dermal = 2.650,000 mg/kg ATE inhal = 1,300 mg/l/4 h	ND	106-22-9	203-375-0	01-2119453995-23-0000

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACh
Isoeugenol	>= 0,1 < 1%	Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1A, H317; Eye Irrit. 2, H319 Limits: Skin Sens. 1A, H317 %C >=0,01;	604-094-00-X	97-54-1	202-590-7	ND

Fractionated global values

H226	= 8,60	H315	= 17,30	H400	= 8,00	H410	= 8,60
H304	= 8,60	H317	= 25,20	H225	= 60,90	H319	= 74,30
H312	= 1,80	H301	= 1,00	H332	= 0,90	H302	= 1,20
H318	= 0,70	H335	= 0,40				

SECTION 4. First aid measures

4.1. Description of first aid measures

Inhalation:
Air the area. Move immediately the contaminated patient from the area and keep him at rest in a well ventilated area. If you feel unwell seek medical advice.

Direct contact with skin (of the pure product).:
Take contaminated clothing Immediately off.
Wash immediately with plenty of running water and possibly with soap, the areas of the body that have, or are only suspected to have, come in contact with the product.
In case of contact with skin, wash immediately with soap and water

Direct contact with eyes (of the pure product).:
Wash immediately and thoroughly with running water, keeping eyelids open for at least 10 minutes, then protect your eyes with a dry sterile gauze. Seek medical advice immediately

Ingestion:
Not hazardous. It's possible to give activated charcoal in water or liquid paraffin medicine

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

If skin irritation occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If medical advice is needed, have product container or label at hand.

SECTION 5. Firefighting measures

5.1. Extinguishing media

Advised extinguishing agents:
In the case of fire use: CO2 or powder extinguisher

Extinguishing means to avoid:
Water jets. Use water jets only to cool the surfaces of the containers exposed to fire.

5.2. Special hazards arising from the substance or mixture

No data available.

5.3. Advice for firefighters

Use protection for the breathing apparatus
Safety helmet and full protective suit.
The spray water can be used to protect the people involved in the extinction
You may also use selfrespirator, especially when working in confined and poorly ventilated area and if you use halogenated extinguishers (Halon 1211 fluobrene, Solkan 123, NAF, etc...)
Keep containers cool with water spray

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel:
Leave the area surrounding the spill or release. Do not smoke
Wear gloves and protective clothing

6.1.2 For emergency responders:
Wear gloves and protective clothing
Eliminate all unguarded flames and possible sources of ignition. No smoking.
Provision of sufficient ventilation.
Evacuate the danger area and, in case, consult an expert.

6.2. Environmental precautions

Contain spill with earth or sand.
If the product has entered a watercourse in sewers or has contaminated soil or vegetation, notify it to the authorities.
Discharge the remains in compliance with the regulations

6.3. Methods and material for containment and cleaning up

6.3.1 For containment:
Rapidly recover the product, wear a mask and protective clothing
Recover the product for reuse, if possible, or for removal. Possibly absorb it with inert material.
Prevent it from entering the sewer system.

6.3.2 For cleaning up:
After wiping up, wash with water the area and materials involved

6.3.3 Other information:
None in particular.

6.4. Reference to other sections

Refer to paragraphs 8 and 13 for more information

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid contact and inhalation of vapors
Do not smoke at work

At work do not eat or drink.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
See also paragraph 8 below.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original container closed tightly. Do not store in open or unlabeled containers.
Keep containers upright and safe by avoiding the possibility of falls or collisions.
Store in a cool place, away from sources of heat and `direct exposure of sunlight.
Always store in well ventilated areas.
Never close the container tightly, leave a chance to vent
Keep away from open flames, sparks and heat sources. Avoid direct sunlight exposure.

7.3. Specific end use(s)

Private households (= general public = consumers):
Handle with care.
Store in ventilated place away from heat sources,
Keep the container tightly closed.

Public domain (administration, education, entertainment, services, craftsmen):
Handle with care. Store in a ventilated area and away from heat, keep the container tightly closed.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Related to contained substances:
ethanol:
Component CAS-No. Value Control parameters
Basis
Ethanol-17-64 TWA 5 ppm 1.000
1.920 mg/m3
UK. EH40 WEL-Workplace Exposure Limits
Remarks Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used

dipentene:
TWA: 30 from AIHA
TWA: 165.5 (mg/m3) from AIHA

benzyl alcohol:
TLV - TWA: 5-10 ppm TLV - STEL: 5-10 ppm
MAK: IIb

- Substance: ethanol
DNEL
Systemic effects Long term Workers inhalation = 950 (mg/m3)
Systemic effects Long term Workers dermal = 343 (mg/kg bw/day)
Systemic effects Long term Consumers inhalation = 114 (mg/m3)
Systemic effects Long term Consumers dermal = 206 (mg/kg bw/day)
Systemic effects Long term Consumers oral = 87 (mg/kg bw/day)
PNEC
Sweet water = 0,96 (mg/l)
sediment Sweet water = 3,6 (mg/kg/sediment)
Sea water = 0,79 (mg/l)
sediment Sea water = 2,9 (mg/kg/sediment)
STP = 580 (mg/l)
ground = 0,63 (mg/kg ground)

- Substance: Linalool
DNEL
Systemic effects Long term Workers inhalation = 2,8 (mg/m3)
Systemic effects Long term Workers dermal = 2,5 (mg/kg bw/day)
Systemic effects Long term Consumers inhalation = 0,7 (mg/m3)
Systemic effects Long term Consumers dermal = 1,25 (mg/kg bw/day)
Systemic effects Long term Consumers oral = 0,2 (mg/kg bw/day)

- Substance: Geraniol
DNEL
Systemic effects Long term Workers inhalation = 161,6 (mg/m3)

- Substance: Citronellol
DNEL
Systemic effects Long term Workers inhalation = 161,6 (mg/m3)

8.2. Exposure controls

Appropriate engineering controls:
Private households (= general public = consumers):
No specific checks planned

Public domain (administration, education, entertainment, services, craftsmen):
No specific monitoring foreseen

Individual protection measures:

(a) Eye / face protection
Not needed for normal use.

(b) Skin protection

(i) Hand protection
Handle with gloves. Gloves must be checked before use. Use a technique suitable for removing gloves (without touching the outer surface of the glove) to avoid the skin contact with this product Dispose of contaminated gloves after use in accordance with current legislation and good laboratory practices. Wash and dry your hands.
The selected protective gloves have to satisfy the requirements of EU directive 89/686 / EEC e the resulting EN 374 standards.
Full contact
Material: Nitrile rubber
minimum thickness: 0.11 mm
breakthrough time: 480 min
The choice of an appropriate glove depends not only on the material but also on other quality characteristics which vary from one manufacturer to another.
For the choice of the type of gloves to use consult the supplier / manufacturer of the gloves.
Observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.

(ii) Other
Wear normal work clothing.

(c) Respiratory protection
Not needed for normal use.

(d) Thermal hazards
No hazard to report

Environmental exposure controls:
Related to contained substances:
dipentene:
Do not let this chemical agent contaminate the environment.

benzyl alcohol:
Do not discard into the sewer system.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical and chemical properties	Value	Determination method
Physical state	Liquid	
Colour	Orange	
Odour	Characteristic	
Odour threshold	not determined	
Melting point/freezing point	not determined	
Boiling point or initial boiling point and boiling range	not determined	
Flammability	flammable	
Lower and upper explosion limit	not determined	
Flash point	16 °C	ASTM D92
Auto-ignition temperature	not determined	
Decomposition temperature	not determined	
pH	6	
Kinematic viscosity	not determined	
Solubility	not determined	
Water solubility	not determined	
Partition coefficient n-octanol/water (log value)	not determined	
Vapour pressure	not determined	
Density and/or relative density	not determined	
Relative vapour density	not determined	
Particle characteristics	irrelevant	

9.2. Other information

Content of VOC ready to use condition: 80.82

9.2.1 Information with regard to physical hazard classes

Irrilevant

9.2.2 Other safety characteristics

Irrilevant

SECTION 10. Stability and reactivity

10.1. Reactivity

No reactivity hazards

10.2. Chemical stability

No hazardous reaction when handled and stored according to provisions.

10.3. Possibility of hazardous reactions

There are no hazardous reactions

10.4. Conditions to avoid

Avoid contact with combustible materials. The product could catch fire.
Avoid heat, open flames, sparks or hot surfaces.

10.5. Incompatible materials

It can generate inflammable gases to contact with elementary metals, nitrides, strong reducing agents.
It can ignite in contact with oxidants mineral acids, elementary metals, nitrides, organic peroxides, organic water peroxides, oxidating and reducing agents.

10.6. Hazardous decomposition products

Does not decompose when used for intended uses.

SECTION 11. Toxicological information

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

ATE(mix) oral = 74.074,1 mg/kg
ATE(mix) dermal = 61.111,1 mg/kg
ATE(mix) inhal = 1.222,2 mg/l/4 h

(a) acute toxicity: ethanol: LD50 Oral-rat-7.060 mg/kg
Remarks: Lungs, Thorax, or Respiration: Other changes.
LC50 Inhalation-rat-10:0-20000 ppm
dipentene: LD50 Oral-rat-4.400 mg/kg
Remarks: Behavioral: Change in motor activity (specific assay). Respiratory disorder Skin and Appendages: Other: Hair. Inhalation: Irritating to respiratory system.
LD50 Dermal-rabbit->5.000 mg/kg
Geraniol: LD50 Oral (rat) (mg / kg body weight) = 3500
LD50 Dermal (rabbit) (mg / kg body weight) => 5000
LC50 Inhalation (rat) of vapor / dust / aerosol / smoke (mg / l / 4h): 0.5
Citronellol: orl-rat LD50:3450 mg/kg
skn-rbt LD50:2650 mg/kg

ihl-rat LCLo:1.3 mg/m3/4H
(b) skincorrosion/irritation: If brought into contact with the skin, the product causes significant inflammation with erythema, scabs, or edema.
ethanol: Skin-rabbit
Result: Irritating to skin. -12:0 am
Geraniol: skn-rbt 100 mg/24H SEV
skn-gpg 100 mg/24H SEV
skn-man 16 mg/24H SEV
Citronellol: skn-rbt 100 mg/24H SEV
Skin - Human - Skin irritation - 48 h
(c) serious eye damage/irritation: If brought into contact with eyes, the product, causes significant irritations which may last for more than 24 hours.
ethanol: Eyes-rabbit
Result: Mild eye irritation-12:0 am
(Draize Test)
Geraniol: Eyes-rabbit
Result: Risk of serious damage to eyes. -12:00 am
(Directive 67/548/EEC, Annex V, b. 5.)
(d) respiratoryorskinsensitisation: The product, if brought into contact with skin can cause skin sensitization.
Geraniol: Guinea pig
May cause sensitisation by skin contact.
Citronellol: mouse - May cause sensitization by skin contact.
(e) germ cell mutagenicity: based on available data, the classification criteria are not met.
(f) carcinogenicity: dipentene: Carcinogenicity-rat-Oral
Tumorigenic: Carcinogenic by RTECS criteria. Kidney, Ureter, Bladder: Kidney tumors. Tumorigenic Effects: Testicular tumors.
Carcinogenicity-mouse-Oral
Equivocal tumorigenic agent by RTECS criteria: Tumorigenic. Gastrointestinal: Tumors.
This product is or contains a component that is not classifiable as to its carcinogenicity IARC, ACGIH, NTP, based on its or EPA classification.
IARC: Group 3-3: Not classifiable as to its carcinogenicity to humans (D-Limonene)
Geraniol: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
(g) eproductivetoxicity: ethanol: Reproductive toxicity-Human-female-Oral
Effects on Newborn: Apgar score (human only). Effects on Newborn: Other measures or neonatal effects.
Effects on Newborn: Drug dependence.
(h) specific target organ toxicity (STOT) single exposure: based on available data, the classification criteria are not met.
(i) specific target organ toxicity (STOT) repeated exposurebased on available data, the classification criteria are not met.
(j) aspiration hazard: based on available data, the classification criteria are not met.

Related to contained substances:
ethanol:
ROUTES of EXPOSURE: the substance can be absorbed into the body by inhalation of its fumes and ingestion.
INHALATION RISK: A harmful contamination of the air will be reached quite slowly due to evaporation of the substance at 20 C.
Effects of short-term exposure: the substance is irritating to the eyes. Inhalation of high vapour can concetrazioni cause irritation of the eyes and respiratory tract. The substance may cause effects on the central nervous system effects of REPEATED EXPOSURE or long term: the liquid degreasing the skin features. The substance may have an effect on the high central nervous system respiratory tract, causing irritation, headaches, fatigue and lack of concentration. See Notes.

ACUTE HAZARDS/Symptoms INHALATION Cough. Headaches. Fatigue. Drowsiness.
CUTE CUTE.
EYE Redness. Pain. Burning.
SWALLOWED burning sensation. Headaches. Confusion. Vertigo. State of unconsciousness.

N O T and consumption of ethanol during pregnancy can have adverse effects on the unborn child. Chronic ethanol

ingestion can cause cirrhosis of the liver.
LD50 (rat) Oral (mg/kg body weight) = 7060
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 20000
CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 116,9

dipentene:
Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.
Toxicity to Animals:
Acute oral toxicity (LD50): 4400 mg/kg [Rat].
Acute dermal toxicity (LD50): >5000 mg/kg [Rabbit].
Chronic Effects on Humans: CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
Other Toxic Effects on Humans:
Hazardous in case of skin contact (irritant, sensitizer), of inhalation (lung irritant).
Slightly hazardous in case of skin contact (permeator), of ingestion.
Special Remarks on Toxicity to Animals: Not available.
Special Remarks on Chronic Effects on Humans: May cause adverse reproductive effects and birth defects (teratogenic)
Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin: Causes skin irritation. It can be absorbed through intact skin. However, it is generally regarded to have low toxicity by dermal route.
Eyes: Causes eye irritation.
Inhalation: Aspiration of large doses may produce pulmonary edema and chemical pneumonitis. May cause dizziness and suffocation. No nasal or pharyngeal irritation has been reported.
Ingestion: It is generally regarded to have low toxicity by oral route. It may produce burning pain in the mouth and throat, abdominal pain, nausea, vomiting, and diarrhea. There may an odor of terpenes in the vomitus or breath.
It may affect behavior/central nervous and peripheral nervous system. Central nervous system effects may include excitememt, somnolence, delirium, ataxia, convulsions, and stupor while peripheral system effects may include spastic paralysis. It may affect respiration (respiratory depression, choking, coughing, dyspnea, cyanosis). Other symptoms may include cyanosis, fever, and tachycardia. Systemic absorption of large doses may produce pulmonary edema and chemical pneumonitis. The urine may smell like violets.
Chronic Potential Health Effects:
Ingestion: Prolonged or repeated ingestion may produce nausea, lowered blood sugar and cholesterol, and kidney damage (hematuria, albuminuria, tubular necrosis), and may also affect the liver.
Skin: It may be a weak sensitizer and responsible for some rare allergic responses (dermatitis)
LD50 (rat) Oral (mg/kg body weight) = 4400
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 5000

Linalool:
LD50 (rat) Oral (mg/kg body weight) = 2790
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 5610
CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 307

Eugenol:
LD50 (rat) Oral (mg/kg body weight) = 2000

α-methylcinnamaldehyde:
LD50 (rat) Oral (mg/kg body weight) = 2050
LD50 Dermal (rat or rabbit) (mg/kg body weight) > 5000

3-phenylprop-2-enenitrile:
LD50 (rat) Oral (mg/kg body weight) = 4150

benzyl alcohol:
Routes of exposure: the substance can be absorbed into the body by inhalation of its vapour and by ingestion.
INHALATION RISK: can not be given any indication about the speed with which it reaches a harmful contamination in the air due to evaporation of the substance at 20 C.
Effects of short-term EXPOSURE: the aerosol is irritating to eyes and skin. The substance can determine effects on the nervous system EFFECTS of repeated exposure or repeated or prolonged Contact in the long term: may cause skin

sensitization.

Acute hazards/symptoms INHALATION cough. Vertigo. Headache.
SKIN Redness.
EYE Redness.
SWALLOWED, abdominal pain. Diarrhea. Drowsiness. Nausea. Vomiting.
Oral LD50-rat-1,230 mg/kg
Observations: behavior: somnolence (General depressed activity) behavior: excitement
Behavior: coma
Oral LD50-rat-male-1,620 mg/kg
LD50 (rat) Oral (mg/kg body weight) = 1200

cinnamaldehyde:
Oral LD50-rat-2,220 mg/kg
Observations: behavior: somnolence (General depressed activity) Diarrhea
LD50 (rat) Oral (mg/kg body weight) = 2200

Geraniol:
LD50 (rat) Oral (mg/kg body weight) = 3500
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 5000
CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 0,5

Litsea cubeba oil:
LD50 Oral-rat-> 5,000 mg/kg
LD50 Dermal-rabbit-4,800 mg/kg
LD50 (rat) Oral (mg/kg body weight) = 5000
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 4800

citral:
LD50 (rat) Oral (mg/kg body weight) = 4960
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 2250

Citronellol:
LD50 (rat) Oral (mg/kg body weight) = 3450
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 2650
CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 1,3

11.2. Information on other hazards

No data available.

11.2.1. Endocrine disrupting properties

Based on available data, there are no substances that interfere with the Endocrine System in accordance with Regulation (EU) 2017/2100

SECTION 12. Ecological information

12.1. Toxicity

Related to contained substances:
ethanol:
C(E)L50 (mg/l) = 11200

dipentene:
Ecotoxicity: Not available.
BOD5 and COD: Not available.
Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.
Special Remarks on the Products of Biodegradation: Not available.
C(E)L50 (mg/l) = 0,702 1

Linalool:
Fish: 96h LC50:39 mg/L (Oryzias latipes)
Crustacea: 48h EC50:52 mg/L (Daphnia magna)
Algae: 72h EC50:28 mg/L (Selenastrum capricornutum)
C(E)L50 (mg/l) = 27,799999 1
1

Eugenol:
Toxicity to fish Lc50-Danio rerio (zebrafish)-13 mg/l-96 h (OECD TEST GUIDELINE 203) Toxicity to daphnia and other aquatic invertebrates – Daphnia Ec50-1.13 mg/l-48 h
C(E)L50 (mg/l) = 1,13 1
1

benzyl alcohol:
Toxic to aquatic organisms.
Toxicity to fish Lc50-Lepomis macrochirus-10 mg/l-96 h
LC50-Pimephales promelas (Fathead)-460 mg/l-96 h
Toxicity to daphnia
and for other invertebrates
Aquatics
-EC50 Daphnia magna (water flea)-55 mg/l-12:00 am
-Daphnia magna (water flea)-230 mg/l-48 h
C(E)L50 (mg/l) = 10 1
1

Geraniol:
static test LC50-zebrafish (zebra fish)-ca. 22 mg/l-96 h (OECD Test Guideline 203)
Broadcast application EC50-Daphnia magna (Water flea)-10.8 mg/l-48 h (OECD Test Guideline 202)
Growth inhibition EC50-Desmodesmus subspicatus (green algae)-13.1 mg/l-72 h
C(E)L50 (mg/l) = 10,8 1
1

citral:
Oryzias latipes OECD TG 203 LC50 (96 h): 4.1 mg/L
Other Daphnia magna EC50 (72 hours) = 7 mg/L
Selenastrum capricornutum Other EC50 (72hr) = 5 mg/L
C(E)L50 (mg/l) = 4,1 1
1

Citronellol:
LC50 (96 h) 14,66 mg/l, Leuciscus idus
EC50 (48 h) 17 mg/l, Daphnia magna
EC50 (72 h) 2,4 mg/l, Scenedesmus subspicatus
C(E)L50 (mg/l) = 2,4 1
1

The product is dangerous for the environment as it is toxic to aquatic organisms following acute exposure.

Use according to good working practices to avoid pollution into the environment.

12.2. Persistence and degradability

Related to contained substances:
Linalool:
90 % (by BOD), 99 % (by TOC), 100 % (by GC)

benzyl alcohol:
Biotic Biodegradabilit/aerobic-exposure time 28 d
Score: 92-96%-readily biodegradable.
aerobic biochemical oxygen demand-time exposure 7 d
Score: 92-96%-readily biodegradable.
(OECD TG 301 C)

Geraniol:
Aerobic chemical oxygen demand:
Exposure time 3 days
Result: 80 - 100% - Easily biodegradable.
(OECD Test Guideline 301A)

citral:
OECD TG 301 c Readily biodegradable
1/2 T Photodegradation = 1.14 years (direct) T 1/2 = 2.83 hour s (indirect)

12.3. Bioaccumulative potential

Related to contained substances:
Linalool:
106

citral:
None

12.4. Mobility in soil

Related to contained substances:
Linalool:
log Pow: 2.55
Soil adsorption (Koc): 75
Henry's Law constant(PaM3/mol): 2

Geraniol:
log Pow: 3.47

12.5. Results of PBT and vPvB assessment

Based on the available data, no PBT or vPvB substances are present in accordance with Regulation (EC) 1907/2006, annex XIII

12.6. Endocrine disrupting properties

Based on available data, there are no substances that interfere with the Endocrine System in accordance with Regulation (EU) 2017/2100

12.7. Other adverse effects

No adverse effects

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Do not reuse empty containers. Dispose of them in accordance with the regulations in force. Any remaining product should be disposed of according to applicable regulations by addressing to authorized companies.

Recover if possible. Send to authorized discharge plants or for incineration under controlled conditions. Operate according to local and National rules in force

SECTION 14. Transport information

14.1. UN number or ID number

ADR/RID/IMDG/ICAO-IATA: 1993

ADR exemption because compliance with the following characteristics:
Combination packagings: per inner packaging 1 L per package 30 kg
Inner packagings placed in skrink-wrapped or stretch-wrapped trays: per inner packaging 1 L per package 20 kg

14.2. UN proper shipping name

ADR/RID/IMDG: LIQUIDO INFIAMMABILE, N.A.S. (pressione di vapore a 50°C inferiore o uguale a 110 kPa) (etanolo, dipentene)
ADR/RID/IMDG: FLAMMABLE LIQUID, N.O.S. (vapor pressure at 50 ° C is not more than 110 kPa) (ethanol, dipentene)
ICAO-IATA: FLAMMABLE LIQUID, N.O.S. (vapor pressure at 50 ° C is not more than 110 kPa) (ethanol, dipentene)

14.3. Transport hazard class(es)

ADR/RID/IMDG/ICAO-IATA: Class : 3
ADR/RID/IMDG/ICAO-IATA: Label : Limited quantities
ADR: Tunnel restriction code : D/E
ADR/RID/IMDG/ICAO-IATA: Limited quantities : 1 L
IMDG - EmS : F-E, S-E

14.4. Packing group

ADR/RID/IMDG/ICAO-IATA: II

14.5. Environmental hazards

ADR/RID/ICAO-IATA: Product is environmentally hazardous
IMDG: Marine polluting agent : Yes

14.6. Special precautions for user

No data available.

14.7. Maritime transport in bulk according to IMO instruments

It is not intended to carry bulk

SECTION 15. Regulatory information

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

Seveso category:
P5c - FLAMMABLE LIQUIDS
E2 - ENVIRONMENTAL HAZARDS

REGULATION (EU) No 1357/2014 - waste:
HP3 - Flammable
HP4 - Irritant — skin irritation and eye damage
HP14 - Ecotoxic

Substances in the Candidate List (REACH Article 59)
Based on available data, no SVHC substances are present

15.2. Chemical safety assessment

The supplier has made an assessment of chemical safety

SECTION 16. Other information

16.1. Other information

Points modified compared to previous release: 2.1. Classification of the substance or mixture, 2.2. Label elements, 2.3. Other hazards, 3.2 Mixtures, 4.1. Description of first aid measures, 5.1. Extinguishing media, 7.2. Conditions for safe storage, including any incompatibilities, 8.1. Control parameters, 8.2. Exposure controls, 9.2. Other information, 10.4. Conditions to avoid, 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008, 11.2. Information on other hazards, 12.1. Toxicity, 12.2. Persistence and degradability, 12.3. Bioaccumulative potential, 12.4. Mobility in soil, 12.5. Results of PBT and vPvB assessment, 12.6. Endocrine disrupting properties, 14.1. UN number or ID number, 14.2. UN proper shipping name, 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Description of the hazard statements exposed to point 3
H225 = Highly flammable liquid and vapour.
H319 = Causes serious eye irritation.
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.
H400 = Very toxic to aquatic life.
H410 = Very toxic to aquatic life with long lasting effects.
H301 = Toxic if swallowed.
H312 = Harmful in contact with skin.
H302 = Harmful if swallowed.
H332 = Harmful if inhaled.
H318 = Causes serious eye damage.
H335 = May cause respiratory irritation.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008

H225 - Highly flammable liquid and vapour. Classification procedure: On basis of test data
H315 - Causes skin irritation. Classification procedure: Calculation method
H317 - May cause an allergic skin reaction. Classification procedure: Calculation method
H319 - Causes serious eye irritation. Classification procedure: Calculation method
H411 - Toxic to aquatic life with long lasting effects. Classification procedure: Calculation method

Main normative references:
Directive 1999/45/EC
Directive 2001/60/EC
Regulation 1272/2008/EC
Regulation 2010/453/EC

** The information contained herein is based on our knowledge at the date above.
Related solely to the product and do not constitute a guarantee of a particular quality.
It is the duty of the user to ensure that these are appropriate and complete information regarding the specific use intended.
This data sheet cancels and replaces any previous edition.