

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

### **1.1. Product identifier**

Product code : Hygienfresh Essenza Fresh Lavender  
Trades code : A48-022  
Product line: Hygienfresh

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

Perfumed essence

Sectors of use:

Industrial Manufacturing[SU3], 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](mailto:info@tintolav.com) - Sito internet: [www.tintolav.com](http://www.tintolav.com)

Email tecnico competente: [a.conedera@tintolav.com](mailto: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:

GHS05, GHS07, GHS09

Hazard Class and Category Code(s):

Acute Tox. 4, Skin Irrit. 2, Skin Sens. 1, Eye Dam. 1, Aquatic Chronic 2

Hazard statement Code(s):

H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H411 - Toxic to aquatic life with long lasting effects.

Harmful product: do not ingest

If brought into contact with the skin, the product causes significant inflammation with erythema, scabs, or edema.

The product, if brought into contact with skin can cause skin sensitization.

If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.

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

## 2.2. Label elements

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

Pictogram, Signal Word Code(s):  
GHS05, GHS07, GHS09 - Danger



Hazard statement Code(s):  
H302 - Harmful if swallowed.  
H315 - Causes skin irritation.  
H317 - May cause an allergic skin reaction.  
H318 - Causes serious eye damage.  
H411 - Toxic to aquatic life with long lasting effects.

Supplemental Hazard statement Code(s):  
not applicable

Precautionary statements:

Prevention

- P261 - Avoid breathing vapours.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.

Response

- P301+P312 - IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- 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.
- P310 - Immediately call a POISON CENTER/doctor/physician
- P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

Disposal

- P501 - Dispose of contents / container in accordance with local and national regulations.

Contains:

Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy; Isotridecanol, ethoxylated , Citronellol, 4-tert-Butylcyclohexyl acetate, 3-methyl-4-(2,6,6-trimethylcyclohex-2-enyl)but-3-en-2-one,  $\alpha$ -Hexylcinnamaldehyde, Geraniol, Hexyl salicylate, 1-(2,3,8,8-Tetramethyl-1,2,3,4,5,6,7,8-octahydronaphthalen-2-yl)ethanone, 2,6-dimethyloct-7-en-2-ol, 2-(4-tert-butylbenzyl)propionaldehyde, alpha-Isomethyl ionone, cineole, ETHYL TRIMETHYLCYCLOPENTENE BUTENOL, Linalool, Dodecanal, 4-Methoxytoluene, Isoeugenol, 2-Methylundecanal, benzyl benzoate, 10-Undecenal, 4-methyl-2-(2-methylprop-1-en-1-yl)tetrahydro-2H-pyran, 1-(2,6,6-trimethyl-3-cyclohexen-1-yl)-2-buten-1-one, 2,4-dimethylcyclohex-3-ene-1-carbaldehyde, nerol, 7,11-dimethyldodeca-4,6,10-trien-3-one, Benzyl salicylate

Contains (Reg. EC 648/2004):

> 30% perfumes, 15% < 30% non-ionic surfactants, < 5% Citronellol, ALPHA ISOMETHYLE IONONE,  $\alpha$ -Hexylcinnamaldehyde, Geraniol, BUTYLPHENYL METHYLPROPIONAL, Linalool, Isoeugenol, benzile benzoato, Benzyl salicylate

For professional use only

## 2.3. Other hazards

The substance / mixture NOT contains substances PBT/vPvB according to Regulation (EC) No 1907/2006, Annex XIII

No information on other hazards

## SECTION 3. Composition/information on ingredients

**3.1 Substances**

Irrilevant

**3.2 Mixtures**

Refer to paragraph 16 for full text of hazard statements

Substance	Concentration	Classification	Index	CAS	EINECS	REACH
Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy; Isotridecanol, ethoxylated - FEMA 0	> 20 <= 30%	Acute Tox. 4, H302; Eye Dam. 1, H318		24938-91-8		
Hexyl salicylate - FEMA 0	> 5 <= 10%	Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Irrit. 2, H319; Aquatic Acute 1, H400; Aquatic Chronic 1, H410		6259-76-3	228-408-6	01-2119638 275-36-000 2
Citronellol	> 1 <= 5%	Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335		106-22-9	203-375-0	01-2119453 995-23-000 0
benzyl acetate - FEMA 2135	> 1 <= 5%	Aquatic Chronic 3, H412		140-11-4	205-399-7	
3-methyl-4-(2,6,6-trimethylcyclohex-2-enyl)but-3-en-2-one - FEMA 2714	> 1 <= 5%	Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Irrit. 2, H319; Aquatic Chronic 2, H411		127-51-5	204-846-3	
α-Hexylcinnamaldehyde	> 1 <= 5%	Skin Sens. 1, H317; Aquatic Chronic 2, H411		101-86-0	202-983-3	
Geraniol - FEMA 2507	> 1 <= 5%	Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Dam. 1, H318		106-24-1	203-377-1	01-2119552 430-49-000 0
2-phenylethanol - FEMA 2858	> 1 <= 5%	Eye Irrit. 2, H319		60-12-8	200-456-2	
2-(4-tert-butylbenzyl)propionaldehyde	> 1 < 3%	Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317; Repr. 2, H361f; Aquatic Chronic 2, H411		80-54-6	201-289-8	01-2119907 954-30-000 0
4-tert-Butylcyclohexyl acetate - FEMA 0	> 1 <= 5%	Skin Sens. 1B, H317; Aquatic Chronic 2, H411		32210-23-4	250-954-9	
Cyclohexyl salicylate - FEMA 0	> 1 <= 5%	Aquatic Acute 1, H400; Aquatic Chronic 1, H410		25485-88-5	400-410-3	
1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran	> 1 <= 5%	Aquatic Acute 1, H400; Aquatic Chronic 1, H410	603-212-00-7	1222-05-5	214-946-9	01-2119488 227-29-000 0
3a,4,5,6,7,7a-hexahydro-1H-4,7-methanoinden-1-yl propionate - FEMA 0	> 1 <= 5%	Aquatic Chronic 2, H411		68912-13-0	272-805-7	
1-(2,3,8,8-Tetramethyl-1,2,3,4,5,6,7,8-octahydronaphthalen-2-yl)ethanone - FEMA 0	> 0,1 <= 1%	Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Chronic 2, H411		54464-57-2	259-174-3	

Substance	Concentration	Classification	Index	CAS	EINECS	REACH
cineole - FEMA 2465	> 0,1 <= 1%	Flam. Liq. 3, H226; Skin Sens. 1B, H317		470-82-6	207-431-5	
Isoeugenol	> 0,1 <= 1%	Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Irrit. 2, H319		97-54-1	202-590-7	
ETHYL TRIMETHYLCYCLOPENTENE BUTENOL - FEMA 0	> 0,1 <= 1%	Skin Irrit. 2, H315; Aquatic Acute 1, H400; Aquatic Chronic 1, H410		28219-61-6	248-908-8	
4-Methoxytoluene - FEMA 2681	>= 0,1 <= 1%	Flam. Liq. 3, H226; Acute Tox. 4, H302; Skin Irrit. 2, H315; Repr. 2, H361; Aquatic Chronic 3, H412		104-93-8	203-253-7	
2-Methylundecanal - FEMA 2749	> 0,1 <= 1%	Skin Irrit. 2, H315; Skin Sens. 1B, H317; Aquatic Acute 1, H400; Aquatic Chronic 1, H410		110-41-8	203-765-0	
Benzyl salicylate	<= 0,1%	Eye Irrit. 2, H319; Aquatic Chronic 2, H411		118-58-1	204-262-9	

## 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 room.  
CALL A PHYSICIAN.

If breathing has stopped, give artificial respiration.

#### 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 water and soap.

#### 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

Do not use eye drops or ointments of any kind before the examination or advice from an oculist.

#### Ingestion:

The product is harmful and can cause irreversible damages even following a single exposure if swallowed.  
Absolutely do not induce vomiting or emesis. Seek medical advice immediately.

### 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 SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

If skin irritation occurs: Get medical advice/attention.

## **SECTION 5. Firefighting measures**

### **5.1. Extinguishing media**

Advised extinguishing agents:

Water spray, CO<sub>2</sub>, foam, dry chemical, depending on the materials involved in the fire.

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 mask, gloves and protective clothing.

6.1.2 For emergency responders:

Wear mask, 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  
Wear protective gloves/protective clothing/eye protection/face protection.  
In residential areas do not use on large surfaces.  
At work do not eat or drink.  
Do not eat, drink or smoke when using this product.  
Contaminated work clothing should not be allowed out of the workplace.  
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.

#### **7.3. Specific end use(s)**

Industrial Manufacturing:  
Handle with extreme caution.  
Store in a well ventilated place away from heat sources.

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**

No data available.

#### **8.2. Exposure controls**



Appropriate engineering controls:  
Industrial Manufacturing:  
No specific monitoring foreseen

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

When handling the pure product use safety glasses (spectacles cage) (EN 166).

## (b) Skin protection

## (i) Hand protection

Manipulate with gloves. The gloves should be checked before being used. Use a technique suitable for the removal of gloves (without touching the outside of the glove) to avoid skin contact with this product dispose of contaminated gloves after use in accordance with the legislation and good laboratory practices. Wash and dry your hands. Selected protective gloves shall comply with the requirements of EU Directive 89/686/EEC and EN 374 standards arising therefrom.

Full contact

Material: nitrile rubber

minimum thickness: 0.11 mm

permeation time: 480 min

## (ii) Other

When handling the pure product wear full protective skin clothing.

## (c) Respiratory protection

Not needed for normal use.

## (d) Thermal hazards

No hazard to report

Environmental exposure controls:

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

## SECTION 9. Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical and chemical properties	Value	Determination method
Appearance	ochre liquid	
Odour	characteristic	
Odour threshold	not determined	
pH	not determined	
Melting point/freezing point	not determined	
Initial boiling point and boiling range	> 100 °C	
Flash point	> 60 °C	ASTM D92
Evaporation rate	irrelevant	
Flammability (solid, gas)	nonflammable	
Upper/lower flammability or explosive limits	not determined	
Vapour pressure	not determined	
Vapour density	not determined	
Relative density	0,980 - 1,020 g/cm <sup>3</sup>	
Solubility	not determined	
Water solubility	soluble in water	
Partition coefficient: n-octanol/water	not determined	
Auto-ignition temperature	not determined	

Physical and chemical properties	Value	Determination method
Decomposition temperature	not determined	
Viscosity	not determined	
Explosive properties	not explosive	
Oxidising properties	non-oxidizing	

## 9.2. Other information

Content of VOC ready to use condition: 21,54 %

## 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

Nothing to report

### 10.5. Incompatible materials

It can ignite in contact with oxidants mineral acids.

### 10.6. Hazardous decomposition products

Does not decompose when used for intended uses.

## SECTION 11. Toxicological information

### 11.1. Information on toxicological effects

ATE(mix) oral = 1.774,4 mg/kg

ATE(mix) dermal = 431.372,6 mg/kg

ATE(mix) inhal = ∞

(a) acute toxicity: Harmful product: do not ingest

Citronellol: orl-rat LD50:3450 mg/kg

skn-rbt LD50:2650 mg/kg

ihl-rat LCLo:1.3 mg/m<sup>3</sup>/4H

α-Hexylcinnamaldehyde: Oral (rat) LD50: 2450 mg/kg

Geraniol: Oral, rat: LD50 = 3500 mg/kg

Skin, rabbit: LD50 = >5000 mg/kg

IHL-rat TCLo: 0.5 mg/m<sup>3</sup>/4:00

2-(4-tert-butylbenzyl)propionaldehyde: Oral Rat LD50 mg/kg 3.700

Skin Rabbit > 2.000 mg/kg LD50

4-tert-Butylcyclohexyl acetate: Rats (10 per dose, sex and strain not reported) were administered 4-tert-butylcyclohexyl acetate by gavage at 5000 mg/kg-bw. No information on mortality was reported. Rabbits (4, sex and strain not reported) were administered 4-tert-butylcyclohexyl acetate dermally at 5000 mg/kg-bw. One rabbit died.

Cyclohexyl salicylate: Oral, rat, LD50 : > 2000 mg/kg

1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran: Acute Oral Toxicity

(1) Wistar rats (10/sex) were administered commercial grade HHCB (65% HHCB in either diethyl phthalate or isopropyl myristate) via gavage at 5000 mg/kg-bw and observed for 14 days. The corrected dose of HHCB was 3250 mg/kg-bw. One death occurred at this dose.

LD50 > 3250 mg/kg-bw

(2) Rats (10 females/dose; strain not specified) were administered commercial sample (65% HHCB in either diethyl phthalate or isopropyl myristate) via gavage at 3000 mg/kg-bw and observed for 14 days. It is not clear whether the reported dose reflected dose of the mixture or of HHCB. Therefore, a conservative estimate of the LD50 is considered to be 65% of the test concentration. No mortality was observed during the study.

LD50 > 1950 mg/kg-bw

1-(2,3,8,8-Tetramethyl-1,2,3,4,5,6,7,8-octahydronaphthalen-2-yl)ethanone: TOXIC DOSE 1-LD > 50 5000 mg/kg (oral rat)

TOXIC DOSE 2-LD > 50 5000 mg/kg (skn-rbt)

Benzyl salicylate: Oral Rat LD50 = 2227 mg/kg bw

(b) skin corrosion/irritation: If brought into contact with the skin, the product causes significant inflammation with erythema, scabs, or edema.

Citronellol: skn-rbt 100 mg/24H SEV

Skin - Human - Skin irritation - 48 h

benzyl acetate: Skin-rabbit-skin irritant-24 h

Geraniol: SKN-rbt 100 mg/12:00 am SEV

SKN-gpg 100 mg/12:00 am SEV

SKN-man 12:00 am 16 mg/SEV

4-tert-Butylcyclohexyl acetate: Rabbits (species, sex and number not specified) were administered 4-tert-butylcyclohexyl acetate dermally to the ears and backs. Observations of the backs included slight erythema after 1 and 5 min, severe erythema and slight edema at 15 min, and severe erythema and edema at 20 hours. On day 8, slight redness and severe scaling were observed. Observations of the ears included severe erythema and edema with blistering after 20 hours. Severe necrosis was recorded on day 8. (Bhatia, S.P., et al., Food and Chemical Toxicology 46 (2008) S36-S41) 4-tert-Butylcyclohexyl acetate was irritating to rabbit skin

Cyclohexyl salicylate: Non-irritant for skin. (OECD 404)

3a,4,5,6,7,7a-hexahydro-1H-4,7-methanoinden-1-yl propionate: Skin irritation (Component) : human Result: No skin irritation Method: closed patch test

Exposure time: 48 h rabbit Result: Skin irritation

Exposure time: 24 h

4-Methoxytoluene: Skin - On rabbit

Result: Irritating to the skin.

(OECD Test Guideline 404)

Benzyl salicylate: Skin - rabbit

Result: No skin irritation

(OECD Test Guideline 404)

(c) serious eye damage/irritation: If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.

Geraniol: Eyes-rabbit

Result: Risk of serious damage to eyes. -12:00 am

(Directive 67/548/EEC, Annex V, b. 5.)

4-tert-Butylcyclohexyl acetate: Albino rabbits (3/sex dose not specified) were instilled 0.1 mL aliquot of 0.625% solution (vehicle not reported) into the right eye of each rabbit with no further treatment while the left eye served as control. Scores were recorded according to the Draize scale. Slight to moderate irritation with conjunctival chemosis and discharge were observed in all three rabbits (mean score for redness and 1.9 for 1 chemosis). All eyes cleared by day 4. (Bhatia, S.P., et al., Food and Chemical Toxicology 46 (2008) S36-S41) 4-tert-Butylcyclohexyl acetate was irritating to rabbit eyes.

Cyclohexyl salicylate: Non-irritating to the eye. (OECD 405)

4-Methoxytoluene: Eyes - Rabbit

Result: No eye irritation  
(OECD Test Guideline 405)

Benzyl salicylate: Eyes - In vitro study  
Result: Moderate eye irritation  
(OECD Test Guideline 437)

Eyes - rabbit

Result: Irritating to eyes.  
(Draize Test)

(d) respiratory or skin sensitization: The product, if brought into contact with skin can cause skin sensitization.

Citronellol: mouse - May cause sensitization by skin contact.

Geraniol: Guinea pig

May cause sensitisation by skin contact.

3a,4,5,6,7,7a-hexahydro-1H-4,7-methanoinden-1-yl propionate: Sensitisation (Component) : Component: 68912-13-0

Test substance: 0.0%

maximisation study human

Result: Did not cause sensitization on laboratory animals.

Test substance: 20% in petrolatum

(e) germ cell mutagenicity: benzyl acetate: Laboratory tests revealed mutagenic effects.

Genotoxicity in vitro lymphocyte-topo-  
mutation in mammalian somatic cells

In vitro genotoxicity-Hamster-Lungs

Cytogenetic analysis

4-tert-Butylcyclohexyl acetate: Salmonella typhimurium strains TA98, TA100, TA1535, TA1537 and Ta 1538 were exposed to 4-tert-butylcyclohexyl acetate at 8 to 5000 g/plate in a bacterial reverse mutation assay in the presence and absence of metabolic activation. Positive and negative controls were used but their response was not provided.

Cytotoxicity was observed at and above 200 g/plate.

4-tert-Butylcyclohexyl acetate was not mutagenic in this assay.

Cyclohexyl salicylate: Non-mutagenic (OECD 471)

4-Methoxytoluene: in vitro test

S. typhimurium

Result: negative

Mutagenicity (micronucleus test)

Mouse - male

Result: negative

(f) carcinogenicity: benzyl acetate: Cancerogenicit-rat-Oral

Oncogenia: second neoplastic RTECS gastrointestinal tumors

Cancerogenicit-rat-Oral

Oncogenia: Liver cancer second neoplastic RTECS:

This product or contains a component that cannot be classified according to its effect  
carcinogen IARC classification, ACGIH, NTP or EPA.

IARC: Group 3-3: Not classifiable as to its carcinogenicity to humans (Benzyl acetate)

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) reproductive toxicity: 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran: Mated female Crl:CD(SD)Br  
rats (animals/sex/dose not specified) were administered HHCB via gavage at 0, 2, 6 or

20 mg/kg-bw/day beginning on gestation day 14. The F1 offspring were exposed in utero and throughout lactation.

At the end of the pre-weaning period, 24 male and 24 female pups per dose were retained for further study. On day  
22 post-partum, excess pups and parents were sacrificed and examined for abnormalities. When offspring were 84  
days of age, males and females were mated and produced litters. After day 21 post-partum, all F2 pups and F1 dams  
were sacrificed and examined internally and externally for abnormalities. No adverse effects on behavior or  
reproduction were observed at any dose in parental animals or in F1 or F2 pups.

NOAEL (systemic and reproductive toxicity) = 20 mg/kg-bw/day (based on no effects at the highest dose tested)

(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 exposure 4-tert-Butylcyclohexyl acetate: In a modified developmental  
toxicity screening test (OCED TG 421), Crl: CD pregnant (SD) rats were administered 4-tert-butylcyclohexyl acetate (a  
mixture of 71% 28% trans and cis) in corn oil by gavage at 0, 40, 160 or 640 mg/kg-bw per day during gestation days 7

20. Rats were Caesarean-sectioned on day 21 of gestation and examined for number and distribution of corpora lutea, implantation sites and placenta. Live and dead fetuses and early and late resorptions were recorded. Fetuses were examined for sex ratio, gross external alterations and skeletal and soft tissue alterations. There were no effects on maternal body weights, weight gain, food consumption or organ weights. Pup viability, body weights, external observations and microscopic examination showed no significant alterations that could be related to the administration of the test substance.

NOAEL (maternal or developmental toxicity) = 640 mg/kg-bw/day (based on no effects at the highest dose tested)

1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran: Sprague-Dawley rats (15/sex/dose) were administered HHCB via the diet at 0, 5, 15, 50 or 150 mg/kg-bw/day for 13 weeks. Test concentrations were determined from a range finding study in which a LOAEL of 300 mg/kg-bw/day (based on hepatic effects) was determined. Mean estimated test substance intakes were 5.4, 15.7, 51.8 or 155.8 mg/kg-bw/day for males and 5.1, 15.6, 51.9 or 154.6 mg/kg-bw/day for females. There were no mortalities, adverse clinical signs or treatment-related effects on body weight, hematology or ophthalmologic evaluation. Slightly lower mean plasma triglyceride levels were observed at week 13 in males at 50 and 150 mg/kg-bw/day. Slightly lower plasma glucose concentrations were noted at week 7 in males and females given 15, 50 and 150 mg/kg-bw/day and at week 13 in males given 50 and 150 mg/kg-bw/day; these effects were not seen at the end of the 4-week recovery period. There were no treatment-related differences in absolute organ weights or organ weight

(j) aspiration hazard: Benzyl salicylate: in vivo assay - mouse  
May cause allergic skin reaction.  
(OECD Test Guideline 429)

Related to contained substances:

Hexyl salicylate:

LD50 (rat) Oral (mg/kg body weight) = 5000

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 5000

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

benzyl acetate:

Oral LD50-rat-2,490 mg/kg

Observations: behavior: somnolence (General depressed activity)

LD50 Dermal-rabbit-> 5,000 mg/kg

Acute toxicity of the vapor (LC50): 245 8 hours

LD50 (rat) Oral (mg/kg body weight) = 2490

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 5000

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 245

3-methyl-4-(2,6,6-trimethylcyclohex-2-enyl)but-3-en-2-one:

LD50 (rat) Oral (mg/kg body weight) = 5000

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 5000

$\alpha$ -Hexylcinnamaldehyde:

LD50 (rat) Oral (mg/kg body weight) = 2450

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

2-phenylethanol:

LD50 (rat) Oral (mg/kg body weight) = 1790

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 806

2-(4-tert-butylbenzyl)propionaldehyde:

LD50 (rat) Oral (mg/kg body weight) = 3700

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 2000

**4-tert-Butylcyclohexyl acetate:**

LD50 (rat) Oral (mg/kg body weight) = 5000

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 5000

**Cyclohexyl salicylate:**

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

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 2000

**1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran:**

LD50 (rat) Oral (mg/kg body weight) = 3250

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 3250

**3a,4,5,6,7,7a-hexahydro-1H-4,7-methanoinden-1-yl propionate:**

Acute oral toxicity (Component) LD50 rat Dose: > 5,000 mg/kg Remarks: RIFM

Acute dermal toxicity : LD50 rabbit Dose: > 5,000 mg/kg

Sensitisation (Component) : Component: 68912-13-0

Test substance: 0.0%

maximisation study human

Result: Did not cause sensitization on laboratory animals.

Test substance: 20% in petrolatum

LD50 (rat) Oral (mg/kg body weight) = 5000

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 5000

**1-(2,3,8,8-Tetramethyl-1,2,3,4,5,6,7,8-octahydronaphthalen-2-yl)ethanone:**

LD50 (rat) Oral (mg/kg body weight) = 5000

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 5000

**cineole:**

LD50 Oral - Rat - 2.480 mg / kg

LD50 (rat) Oral (mg/kg body weight) = 2480

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 5000

**Isoeugenol:**

LD50 (rat) Oral (mg/kg body weight) = 1560

**ETHYL TRIMETHYLCYCLOPENTENE BUTENOL:**

LD50 (rat) Oral (mg/kg body weight) = 5000

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 2000

**4-Methoxytoluene:**

Oral LD50 - Rat - 1,920 mg / kg

(401 OECD Test Guidelines)

LC50 Inhalation - Rat - male and female - 4 h -> 6.1 mg / l

(OECD Test Guideline 403)

LD50 Dermal - On rabbit - male and female -> 4,850 mg / kg

(OECD Test Guideline 402)

LD50 (rat) Oral (mg/kg body weight) = 1920

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 4850

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 6,1

**2-Methylundecanal:**

LD50 Oral - rat -> 5.000 mg / kg

DL50 Dermal - rabbit -> 10,000 mg / kg

LD50 (rat) Oral (mg/kg body weight) = 5000

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 10000

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Benzyl salicylate:  
LD50 (rat) Oral (mg/kg body weight) = 2227

## SECTION 12. Ecological information

### 12.1. Toxicity

Related to contained substances:

Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy; Isotridecanol, ethoxylated:

Acute toxicity to fish

LC50 - 96 h : 7.5 mg/l - *Lepomis macrochirus* (Bluegill sunfish)

Harmful to fish.

LC50 - 96 h : 12 mg/l - *Danio rerio* (zebra fish)

Method: OECD Test Guideline 203

Harmful to fish.

Acute toxicity to daphnia and other aquatic invertebrates.

Tridecyl alcohol ethoxylated : LC50 - 48 h : 4.7 mg/l - *Daphnia magna* (Water flea)

Method: OECD Test Guideline 202

Toxic to aquatic invertebrates.

Toxicity to aquatic plants

Tridecyl alcohol ethoxylated : ErC50 - 72 h : 17 mg/l - *Scenedesmus subspicatus*

Harmful to algae.

C(E)L50 (mg/l) = 4,7

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

benzyl acetate:

Toxicity to fish Lc50-*Oryzias latipes*-4 mg/l-96 h

C(E)L50 (mg/l) = 4

3-methyl-4-(2,6,6-trimethylcyclohex-2-enyl)but-3-en-2-one:

Rainbow Trout (average length, 5.8 cm), acclimatized for 12 days, were exposed to a series of 5 test concentrations of 0, 7.8, 10.9, 15.3, 21.4, or 30 mg/L dispersed in Polysorbate 80 (10 mg/L) for 96 hours at 17.1 °C. Control fish were exposed to Polysorbate 80 (10 mg/L). Fish were observed twice daily for mortality and symptoms. pH values and water temperature were monitored after substance addition at 24 hour intervals. Dissolved oxygen was measured at the beginning of the experiment and at 96 hours.

LC50 = 10.9 mg/L

*Daphnia magna* 48h - LC50 = 0.597 mg/L

72 hr EC50=7.47 mg/L based on average specific growth rate;

C(E)L50 (mg/l) = 0,597

$\alpha$ -Hexylcinnamaldehyde:

Freshwater Fish Toxicity: acute LC50 >1-10 mg/L

Freshwater Invertebrates Toxicity: acute EC <1 mg/L

Algal Toxicity: acute EC <1 mg/L.

C(E)L50 (mg/l) = 0,99

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

2-(4-tert-butylbenzyl)propionaldehyde:

Daphnia magna 48 hrs-LC50 = 0.40 mg/l  
Green algae 96 hrs-EC50 = 0.827 mg/l  
C(E)L50 (mg/l) = 0,4

4-tert-Butylcyclohexyl acetate:

Golden ide (*Leuciscus idus*) were exposed to 4-tert-butylcyclohexyl acetate at nominal concentrations of 0, 10, 13, 16 and 20 mg/L under static conditions for 48 hours. EF Marlowet was used as a solubilizer. Mortality was 0, 10, 100 and 80% at 10, 13, 16 and 20 mg/L.

48-h LC50 = 14 mg/L

Water fleas (*Daphnia magna*) were exposed to 4-tert-butylcyclohexyl acetate at nominal concentrations of 2.8 to 28.4 mg/L (measured concentrations, 2.4 to 28.4 mg/L) under static conditions for 48 hours.

48-h EC50 = 23.4 mg/L

C(E)L50 (mg/l) = 14

Cyclohexyl salicylate:

Brachydanio rerio (zebra fish), 96h, LC50 : 1 to 10 mg/L

Algae, 48h, IC50 : < 1 mg/L

Daphnia magna, 48h, EC50 : 1 to 10 mg/L

C(E)L50 (mg/l) = 1,1

1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran:

21 days Daphnia magna NOEC 111 g/L NOEC 21 days Bluegill sunfish (*Lepomis macrochirus*) 68 g/L NOEC 35-day early life stage test Fathead minnows (*Pimephales promelas*) 68 g/L NOEC 72 h Algae (*Pseudokirchneriella subcapitata*) 201 g/L 8 weeks NOEC Earthworm (*Eisenia fetida*) 45 g/kg Soil DM 4 weeks Springtails NOEC (*Folsomia candida*) 45 g/kg Soil DM

C(E)L50 (mg/l) = 0,282

3a,4,5,6,7,7a-hexahydro-1H-4,7-methanoinden-1-yl propionate:

C(E)L50 (mg/l) = 4,6

1-(2,3,8,8-Tetramethyl-1,2,3,4,5,6,7,8-octahydronaphthalen-2-yl)ethanone:

Endpoint: LC50 species: *lepomis macrochirus* (fish-salt Bluegrill) = 1.30 mg/l-h Duration: 96-Note:: method: OECD 203 TG

Endpoint: EC50-species: *Daphnia magna* (Water flea) = 1.38 mg/l-h Duration: 48-comments:: semi-static test method: OECD TG 202

Endpoint: EC50 *Desmodesmus subspicatus*-species (green algae) = 2.60 mg/l-h Duration: 72-

Note:: static test method: OECD TG201

C(E)L50 (mg/l) = 1,3

cineole:

Toxicity to fish CL50 - *Pimephales promelas* (American chub) - 102 mg / l - 96 h

C(E)L50 (mg/l) = 106

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**4-Methoxytoluene:**

Toxicity to fish Static test LC50 - *Leuciscus idus* (Golden leuciscus) - 68.2 mg / l - 96 h

Toxicity to daphnia and other aquatic invertebrates

EC50 semi-static test - *Daphnia magna* (Large water flea) - 27 mg / l -

48 h (OECD TG 202)

Toxicity to algae CE50 static test - *Desmodesmus subspicatus* -> 500 mg / l - 72 h

C(E)L50 (mg/l) = 27

**Benzyl salicylate:**

Zebra fish (*Brachydanio rerio*) 96 hour LC50 = 1.03 mg/L

48 hour LC50 = 1.4mg/l

C(E)L50 (mg/l) = 1,03

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:

Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy; Isotridecanol, ethoxylated:

The substance fulfills the criteria for ultimate aerobic biodegradability and ready biodegradability

Geraniol:

36 - 70 % (by BOD), 72 - 88 % (by TOC)

2-(4-tert-butylbenzyl)propionaldehyde:

92% "biodegradation after 28 days. 96% after day 31.

Cyclohexyl salicylate:

Readily biodegradable (OECD 301)

4-Methoxytoluene:

aerobic - Exposure time 28 d

Result: 30 - 40% - Not immediately

### **12.3. Bioaccumulative potential**

No data available.

### **12.4. Mobility in soil**

Related to contained substances:

Geraniol:

log Pow: 3.47

4-Methoxytoluene:

Log Pow --> 2.569

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### 12.5. Results of PBT and vPvB assessment

The substance / mixture NOT contains substances PBT/vPvB according to Regulation (EC) No 1907/2006, Annex XIII

### 12.6. 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

ADR/RID/IMDG/ICAO-IATA: 3082

ADR exemption because compliance with the following characteristics:

Combination packagings: per inner packaging 5 L per package 30 Kg

Inner packagings placed in skrink-wrapped or stretch-wrapped trays: per inner packaging 5 L per package 20 Kg



### 14.2. UN proper shipping name

ADR/RID/IMDG: MATERIA PERICOLOSA PER L'AMBIENTE, LIQUIDA, N.A.S. (acetato di benzile, acetato di 4-terz-butilicicloesile, Cyclohexyl salicylate, 3-metil-4-(2,6,6-trimetilcicloes-2-enil)but-3-en-2-one,  $\alpha$ -Hexylcinnamaldehyde, 1,3,4,6,7,8-esaidro-4,6,6,7,8,8-esametillinden[5,6-c]pirano, 1',2',3',4',5',6',7',8'-ottaidro-2',3',8',8'-tetrametil-2'-acetonaftone, 2-(4-terz-butilbenzil)propionaldeide, alpha-ISOMETHYL IONONE, Cineolo, ETHYL TRIMETHYLCYCLOPENTENE BUTENOL, Dodecanal, 4-Methoxytoluene, benzile benzoato, 10-Undecenal, delta-1-(2,6,6-Trimethyl-3-cyclohexen-1-)

ADR/RID/IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (benzyl acetate, 4-tert-Butylcyclohexyl acetate, Cyclohexyl salicylate, 3-methyl-4-(2,6,6-trimethylcyclohex-2-enyl)but-3-en-2-one,  $\alpha$ -Hexylcinnamaldehyde, 1,3,4,6,7,8-hexahidro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran, 1-(2,3,8,8-Tetramethyl-1,2,3,4,5,6,7,8-octahidronaphthalen-2-yl)ethanone, 2-(4-tert-butylbenzil)propionaldehyde, alpha-Isomethyl ionone, cineole, ETHYL TRIMETHYLCYCLOPENTENE BUTENOL, Dodecanal, 4-Methoxytoluene, benzyl benzoate, 10-Undecenal, 1-(2,6,6-trimethyl-3-cyclohexen-1-yl)-2-)

ICAO-IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (benzyl acetate, 4-tert-Butylcyclohexyl acetate, Cyclohexyl salicylate, 3-methyl-4-(2,6,6-trimethylcyclohex-2-enyl)but-3-en-2-one,  $\alpha$ -Hexylcinnamaldehyde, 1,3,4,6,7,8-hexahidro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran, 1-(2,3,8,8-Tetramethyl-1,2,3,4,5,6,7,8-octahidronaphthalen-2-yl)ethanone, 2-(4-tert-butylbenzil)propionaldehyde, alpha-Isomethyl ionone, cineole, ETHYL TRIMETHYLCYCLOPENTENE BUTENOL, Dodecanal, 4-Methoxytoluene, benzyl benzoate, 10-Undecenal, 1-(2,6,6-trimethyl-3-cyclohexen-1-yl)-2-)

### 14.3. Transport hazard class(es)

ADR/RID/IMDG/ICAO-IATA: Class : 9

ADR/RID/IMDG/ICAO-IATA: Label : Limited quantities

ADR: Tunnel restriction code : --

ADR/RID/IMDG/ICAO-IATA: Limited quantities : 5 L

IMDG - EmS : F-A, S-F

#### **14.4. Packing group**

ADR/RID/IMDG/ICAO-IATA: III

#### **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. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

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:

E2 - ENVIRONMENTAL HAZARDS

REGULATION (EU) No 1357/2014 - waste:

HP4 - Irritant — skin irritation and eye damage

HP14 - Ecotoxic

#### **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: 1.2. Relevant identified uses of the substance or mixture and uses advised against, 2.2. Label elements, 2.3. Other hazards, 4.1. Description of first aid measures, 7.1. Precautions for safe handling, 8.2. Exposure controls, 9.2. Other information, 11.1. Information on toxicological effects, 12.1. Toxicity, 12.2. Persistence and degradability, 12.4. Mobility in soil, 14.2. UN proper shipping name, 14.3. Transport hazard class(es), 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Description of the hazard statements exposed to point 3

H302 = Harmful if swallowed.

H318 = Causes serious eye damage.

H315 = Causes skin irritation.

H317 = May cause an allergic skin reaction.

H319 = Causes serious eye irritation.

H400 = Very toxic to aquatic life.

H410 = Very toxic to aquatic life with long lasting effects.

H335 = May cause respiratory irritation.

H412 = Harmful to aquatic life with long lasting effects.

H411 = Toxic to aquatic life with long lasting effects.

H361f = Suspected of damaging fertility.

H226 = Flammable liquid and vapour.

H312 = Harmful in contact with skin.

H361 = Suspected of damaging fertility or the unborn child .

Classification based on data of all mixture components

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.

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