

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

### **1.1. Product identifier**

Product code : Hygienfresh DeoEssenze Ambienti Clean Sense  
Trades code : A74-027  
Product line: Hygienfresh

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

Deo essence multi-function environments. Smells, cleans and excited with just one spray

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

Hazard Class and Category Code(s):  
Eye Dam. 1, Aquatic Chronic 3

Hazard statement Code(s):  
H318 - Causes serious eye damage.  
H412 - Harmful to aquatic life with long lasting effects.

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 harmful 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 - Danger

Hazard statement Code(s):

- H318 - Causes serious eye damage.
- H412 - Harmful to aquatic life with long lasting effects.

Supplemental Hazard statement Code(s):

EUH208 - Contains 2-(4-tert-butylbenzyl)propionaldehyde, 2-benzylideneheptanal, 4-tert-Butylcyclohexyl acetate, 2-Methylundecanal, Cinnamyl alcohol, Geraniol, reaction mass of: 5-chloro-2-methyl-4-isothiazolin-3-one [EC no. 247-500-7] and 2-methyl-2H -isothiazol-3-one [EC no. 220-239-6] (3:1). May produce an allergic reaction.

Precautionary statements:

General

- P101 - If medical advice is needed, have product container or label at hand.
- P102 - Keep out of reach of children.

Prevention

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

Response

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

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 , tetrasodium ethylenediaminetetraacetate, Steareth-21, ethanol, 2-(4-tert-butylbenzyl)propionaldehyde, 2-benzylideneheptanal, 4-tert-Butylcyclohexyl acetate, 2-Methylundecanal, Cinnamyl alcohol, Geraniol, 4-methoxybenzyl alcohol

Content of VOC ready to use condition: 6,83 %

### 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	> 5 <= 10%	Acute Tox. 4, H302; Eye Dam. 1, H318		24938-91-8		
Propan-2-ol - FEMA 2929	> 1 <= 5%	Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	603-117-00-0	67-63-0	200-661-7	
2-(4-tert-butylbenzyl)propionalde	>= 0,1 < 1%	Acute Tox. 4, H302;		80-54-6	201-289-8	01-211990

Substance	Concentration	Classification	Index	CAS	EINECS	REACH
hyde		Skin Irrit. 2, H315; Skin Sens. 1, H317; Repr. 2, H361f; Aquatic Chronic 2, H411				7954-30-00 00
2-benzylideneheptanal	> 0,1 < 1%	Skin Sens. 1, H317; Aquatic Chronic 2, H411		122-40-7	204-541-5	
Benzophenone - FEMA 2134	> 0,1 <= 1%	Aquatic Acute 1, H400; Aquatic Chronic 2, H411		119-61-9	204-337-6	
ethanol	> 0,1 <= 1%	Flam. Liq. 2, H225	603-002-00-5	64-17-5	200-578-6	
Cinnamyl alcohol	> 0,1 < 1%	Skin Sens. 1, H317		104-54-1		
Geraniol - FEMA 2507	> 0,1 < 1%	Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Dam. 1, H318		106-24-1	203-377-1	01-2119552 430-49-000 0
diphenyl ether - FEMA 3667	> 0,1 <= 1%	Aquatic Acute 1, H400; Aquatic Chronic 1, H410		101-84-8	202-981-2	
4-tert-Butylcyclohexyl acetate - FEMA 0	> 0,1 < 1%	Skin Sens. 1B, H317; Aquatic Chronic 2, H411		32210-23-4	250-954-9	
musk ketone - FEMA 0	> 0,1 <= 1%	Carc. 2, H351; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 10	609-069-00-7	81-14-1	201-328-9	
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	

**Fractionated global values**

H302 = 6,46	H318 = 6,20	H315 = 1,94	H225 = 2,30
H319 = 3,61	H336 = 1,70	H331 = 0,00	H311 = 0,01
H301 = 0,00	H314 = 0,00	H317 = 1,24	H400 = 0,82
H410 = 0,52	H272 = 0,00	H411 = 1,99	H361f = 0,33
H335 = 0,25	H412 = 1,31	H351 = 0,16	H312 = 0,03
H361 = 0,02			

**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):**

Wash thoroughly with soap and running 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

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

**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 medical advice is needed, have product container or label at hand.  
Immediately call a POISON CENTER/doctor/physician

**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.  
At work do not eat or drink.  
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**

Related to contained substances:

Propan-2-ol:

TLV: TWA 200 ppm 400 ppm as STEL A4 (not classifiable as a human carcinogen); (ACGIH 2004).

MAK: 200 ppm 500 mg/m peak limitation Category: II (2); Risk group for pregnancy: C; (DFG 2004).

ethanol:

Component CAS-No. Value Control parameters

Basis

Ethanol-17-64 TWA 5 ppm 1.000

1.920 mg/m<sup>3</sup>

**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

- Substance: Propan-2-ol

**DNEL**

Systemic effects Long term Workers inhalation = 500 (mg/m<sup>3</sup>)

Systemic effects Long term Workers dermal = 880 (mg/kg bw/day)

Systemic effects Long term Consumers inhalation = 319 (mg/m<sup>3</sup>)

Systemic effects Long term Consumers dermal = 26 (mg/kg bw/day)

**PNEC**

Sweet water = 140,9 (mg/l)

sediment Sweet water = 552 (mg/kg/sediment)

Sea water = 140,9 (mg/l)

sediment Sea water = 552 (mg/kg/sediment)

ground = 28 (mg/kg ground)

- Substance: ethanol

**DNEL**

Systemic effects Long term Workers inhalation = 950 (mg/m<sup>3</sup>)

**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	Milky liquid	
Odour	characteristic	
Odour threshold	not determined	
pH	7	
Melting point/freezing point	not determined	
Initial boiling point and boiling range	not determined	
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	1	
Solubility	soluble in water	
Water solubility	completely soluble in water	
Partition coefficient: n-octanol/water	not determined	
Auto-ignition temperature	not determined	
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: 6,83 %

## 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 generate inflammable gases to contact with elementary metals, nitrides, inorganic sulfide, strong reducing agents.

It can generate toxic gases to contact with inorganic sulfide, strong reducing agents.

### **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 = 8.333,3 mg/kg

ATE(mix) dermal = ∞

ATE(mix) inhal = ∞

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

Skin Rabbit > 2.000 mg/kg LD50

2-benzylideneheptanal: ori-rat LD50: 3730 mg / kg

The dermal LD50 value for alpha-amylcinnamaldehyde was calculated to be greater than 2000 mg/kg.

Benzophenone: LD50 Oral - rat - > 10,000 mg/kg

LD50 Dermal - rabbit - 3,535 mg/kg

ethanol: LD50 Oral-rat-7.060 mg/kg

Remarks: Lungs, Thorax, or Respiration: Other changes.

LC50 Inhalation-rat-10:0-20000 ppm

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

diphenyl ether: LD50 = 2450 mg/kg bw rat

LD50 > 7940 mg/kg bw rabbit

LC50 = 2.66 mg/L

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.

(b) skin corrosion/irritation Propan-2-ol: Skin-rabbit

Result: Mild skin irritation

ethanol: Skin-rabbit

Result: Irritating to skin. -12:0 am

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

diphenyl ether: Severely irritating (24-h exposure) Slightly irritating (4-h exposure)

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

(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.

ethanol: Eyes-rabbit

Result: Mild eye irritation-12:00 am

(Draize Test)

Geraniol: Eyes-rabbit

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

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

Propan-2-ol: Eyes-rabbit

Result: Eye irritation- 24 h

diphenyl ether: Slightly irritating

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.

(d) respiratory or skin sensitization: Geraniol: Guinea pig  
May cause sensitisation by skin contact.

(e) germ cell mutagenicity: 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.

(f) carcinogenicity: 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: 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.

diphenyl ether: In the repeated-dose dietary toxicity study described previously, reproductive organs of both genders were weighed and examined macroscopically and histopathologically. No adverse effects related to treatment were observed.

Pregnant female Sprague-Dawley rats (24/dose) were administered a mixture of diphenyl oxide (73.5 percent) and biphenyl (26.5 percent) by gavage at 0, 50, 200 or 500 mg/kg-day in corn oil on gestational days 6 through 15. Dams were observed for mortality, weight gain, food consumption and clinical signs of toxicity. Fetal resorptions, viability post implantation loss, total implantations and mean litter weight were determined. One-half of fetuses were processed for soft-tissue evaluations and the other half for skeletal evaluations. Two dams at 500 mg/kg/day died. Reduced maternal body weight gain and food consumption were seen at 200 and 500 mg/kg-day. No treatment-related effects on developmental outcomes was observed.

LOAEL (maternal toxicity) = 200 mg/kg-from

(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 exposediphenyl ether: NOAEL (male) = 301 mg/kg-bw/day (the highest dose tested)

NOAEL (female) = 334.8 mg/kg-bw/day (the highest dose tested)

4-tert-Butylcyclohexyl acetate: In a modified developmental toxicity screening test (OCED TG 421), CrI: 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)

(j) aspiration hazard: based on available data, the classification criteria are not met.

Related to contained substances:

Propan-2-ol:

ROUTES of EXPOSURE: the substance can be absorbed into the body by inhalation of its fumes.

INHALATION RISK: A harmful contamination of the air will be reached quite slowly due to evaporation of the substance at 20 C; However, for spraying or scattering, much more quickly.

Effects of short-term exposure: the substance is irritating to the eyes and the respiratory tract the substance may cause effects on the central nervous system, causing depression. Much greater exposure to the OEL may lead to unconsciousness.

Effects of REPEATED EXPOSURE or long term: the liquid degreasing the skin features.

ACUTE HAZARDS/Symptoms INHALATION Cough. Vertigo. Drowsiness. Headaches. Sore throat. See If Swallowed.

CUTE CUTE.

EYE Redness.

INGESTION abdominal pain. Difficulty in breathing. Nausea. State of unconsciousness. Vomiting. (Further see inhalation).

N O T and use of alcoholic beverages enhances the harmful effect.

LD50 (rat) Oral (mg/kg body weight) = 2100

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 2100

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 29

2-(4-tert-butylbenzyl)propionaldehyde:

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

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

2-benzylideneheptanal:

LD50 (rat) Oral (mg/kg body weight) = 3730

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

Benzophenone:

LD50 (rat) Oral (mg/kg body weight) = 10000

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 3535

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) = 20000

**Cinnamyl alcohol:**

LD50 (rat) Oral (mg/kg body weight) = 2000  
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 5000

**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

**diphenyl ether:**

LD50 (rat) Oral (mg/kg body weight) = 2450  
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 7940  
CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 2,66

**4-tert-Butylcyclohexyl acetate:**

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

**musk ketone:**

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

**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

## **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

Propan-2-ol:

Toxicity to fish LC50-Pimephales promelas (fathead minnow)-9, 640.00 mg/l-96 h

Toxicity to daphnia and other aquatic invertebrates

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-EC50 Daphnia magna (Water flea)-5, 102.00 mg/l- 24 h  
EC50 Immobilization-Daphnia magna (Water flea)-6.851 mg/l- 24h  
C(E)L50 (mg/l) = 5102

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

2-benzylideneheptanal:  
Fish: 96h LC50: 0.91 mg / L (Oryzias latipes)  
Crustacea: 48h EC50: 0.28 mg / L (Daphnia magna)  
Algae: 72h EC50: 2.3 mg / L (Selenastrum capricornutum)  
C(E)L50 (mg/l) = 0,28

Benzophenone:  
Toxicity to fish mortality NOEC - Pimephales promelas (fathead minnow) - 5.86 mg/l - 7.0 d  
mortality LOEC - Pimephales promelas (fathead minnow) - 9.24 mg/l - 7.0 d  
LC50 - Pimephales promelas (fathead minnow) - 14.2 mg/l - 96.0 h  
Toxicity to daphnia and other aquatic invertebrates  
EC50 - Daphnia magna (Water flea) - 0.28 mg/l - 24 h  
C(E)L50 (mg/l) = 14,2

ethanol:  
C(E)L50 (mg/l) = 11200

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

diphenyl ether:  
Fish 96-h LC50 (mg/L) 4.2  
Aquatic Invertebrates 48-h EC50 (mg/L) 1.7  
Aquatic Plants 72-h EC50 (mg/L) 2.5  
C(E)L50 (mg/l) = 1,7

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

musk ketone:  
Toxicity to daphnia and other aquatic invertebrates  
Static test - Daphnia magna (Large water flea) -> 0.46 mg / l - 48 h  
Method: OECD TG 202

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Toxicity to algae Growth inhibitor CE50 - Pseudokirchneriella subcapitata (algae cloroficee) -  
0.24 mg / l - 72 h  
Method: OECD TG 201  
C(E)L50 (mg/l) = 0,088 10

The product is dangerous for the environment as it is toxic for 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

2-(4-tert-butylbenzyl)propionaldehyde:  
92% "biodegradation after 28 days. 96% after day 31.

2-benzylideneheptanal:  
51% (by BOD), 81% (by TOC)

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

diphenyl ether:  
51–94% after 7 days (inherently biodegradable);  
76% after 20 days (readily biodegradable)  
6.3% after 28 days OECD TG 301C (not readily biodegradable)  
20% after 75 days (resistant to biological action)

musk ketone:  
aerobic Biochemical oxygen demand - Exposure time 28 d  
Result: <80% - Not immediately biodegradable.  
Method: OECD TG 302

### 12.3. Bioaccumulative potential

Related to contained substances:  
diphenyl ether:  
BCF = 196 (measured in trout);  
BCF = 112–583 (measured in carp);  
BCF = 49–594 (measured in carp)

musk ketone:  
Bioaccumulation Oncorhynchus mykiss (rainbow trout) - 21 d -47 µgr / l  
Bioconcentration factor (BCF): 1.380

### 12.4. Mobility in soil

Related to contained substances:  
Geraniol:  
log Pow: 3.47

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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**

Not included in the scope of application regulations concerning the transport of dangerous goods: by road (ADR); by rail (RID); by air (ICAO / IATA); by sea (IMDG).

**14.2. UN proper shipping name**

None

**14.3. Transport hazard class(es)**

None

**14.4. Packing group**

None

**14.5. Environmental hazards**

None

**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**

REGULATION (EU) No 1357/2014 - waste:

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HP14 - Ecotoxic

### **15.2. Chemical safety assessment**

The supplier has made an assessment of chemical safety

## **SECTION 16. Other information**

### **16.1. Other information**

Description of the hazard statements exposed to point 3

- H302 = Harmful if swallowed.
- H318 = Causes serious eye damage.
- H225 = Highly flammable liquid and vapour.
- H319 = Causes serious eye irritation.
- H336 = May cause drowsiness or dizziness.
- H315 = Causes skin irritation.
- H317 = May cause an allergic skin reaction.
- H361f = Suspected of damaging fertility.
- H411 = Toxic to aquatic life with long lasting effects.
- H400 = Very toxic to aquatic life.
- H410 = Very toxic to aquatic life with long lasting effects.
- H351 = Suspected of causing cancer .

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.