

**SECTION 1. Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product code : Hygienfresh Detergente Delicati &amp; Lana

Trades code : A39-510

Product line: Hygienfresh

UFI: 02A0-50N2-K00H-2CSF

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

Detergent for wool and delicates

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 - Sito internet: www.tintolav.com

Email tecnico competente: a.conedera@tintolav.com

National contact: Malta: Emergency Ambulance 112

Accident &amp; 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:

GHS07

Hazard Class and Category Code(s):

Eye Irrit. 2

Hazard statement Code(s):

H319 - Causes serious eye irritation.

If brought into contact with eyes, the product, causes significant irritations which may last for more than 24 hours.

**2.2. Label elements**

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

Pictogram, Signal Word Code(s):

GHS07 - Warning



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**Hazard statement Code(s):**

H319 - Causes serious eye irritation.

**Supplemental Hazard statement Code(s):**

EUH208 - Contains 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**

P264 - Wash your hand thoroughly after handling.

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.

P337+P313 - If eye irritation persists: Get medical advice/attention.

**Contains (Reg.EC 648/2004):**

5% &lt; 15% anionic surfactants, non-ionic surfactants, &lt; 5% Dye, Miscela di: 5-cloro-2-metil-2H-isotiazol-3-one [EC no. 247-500-7]; 2-metil-2H-isotiazol-3-one [EC no. 220-239-6] (3:1), perfumes, amphoteric surfactants, a-Hexylcinnamaldehyde, Linalool, Citronellol, Geraniol, Coumarin, Eugenol

Content of VOC ready to use condition: 0,08 %

UFI: 02A0-50N2-K00H-2CSF

**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**

Irrelevant

**3.2 Mixtures**

Refer to paragraph 16 for full text of hazard statements

Substance	Concentration[ w/w]	Classification	Index	CAS	EINECS	REACH
Alcohols, C13-15, branched and linear, ethoxylated	>= 1 < 5%	Acute Tox. 4, H302; Eye Dam. 1, H318; Aquatic Chronic 3, H412 Limits: Eye Irrit. 2, H319 %C <=10; Eye Dam. 1, H318 %C >10;	ND	157627-86-6	ND	NR

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACH
		1 1 ATE oral = 300,0 mg/kg				
Dodecylbenzenesulphonic acid, compound with 2,2',2''nitrilotriethanol (1:1).	$\geq 1 < 5\%$	Skin Irrit. 2, H315; Eye Irrit. 2, H319 ATE oral = 1.653,0 mg/kg ATE dermal = 4.199,0 mg/kg	ND	27323-41-7	248-406-9	NR
Sodium Lauryl Ether sulfate	$\geq 1 < 5\%$	Skin Irrit. 2, H315; Eye Dam. 1, H318; Aquatic Chronic 3, H412 Limits: Eye Dam. 1, H318 %C $\geq 10$ ; Eye Irrit. 2, H319 5% ATE oral = 2.000,0 mg/kg ATE dermal = 2.000,0 mg/kg ATE inhal = 4.100,0mg/l/4 h	ND	68891-38-3	500-234-8	01-2119488 639-16
Coconut diethanolamide	$\geq 1 < 3\%$	Skin Irrit. 2, H315; Eye Dam. 1, H318 ATE oral = 5.000,0 mg/kg	ND	68603-42-9	271-657-0	NR
4-tert-Butylcyclohexyl acetate - FEMA 0	$< 0,1\%$	Skin Sens. 1B, H317; Aquatic Chronic 2, H411 ATE oral = 5.000,0 mg/kg ATE dermal = 5.000,0 mg/kg	ND	32210-23-4	250-954-9	01-2119976 286-24
$\alpha$ -Hexylcinnamaldehyde	$< 0,1\%$	Skin Sens. 1, H317; Aquatic Chronic 2, H411 ATE oral = 2.450,0 mg/kg	ND	101-86-0	202-983-3	01-2119533 092-50
Linalool	$< 0,1\%$	Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Irrit. 2, H319 ATE oral = 2.790,0 mg/kg ATE dermal = 5.610,0 mg/kg ATE inhal = 307,0mg/l/4 h	603-235-00-2	78-70-6	201-134-4	01-2119474 016-42-000 0
Citronellol	$< 0,1\%$	Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Irrit. 2, H319; STOT SE 3, H335 ATE oral = 3.450,0 mg/kg ATE dermal = 2.650,0 mg/kg ATE inhal = 1,3mg/l/4	ND	106-22-9	203-375-0	01-2119453 995-23-000 0

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACH
		h				
Geraniol - FEMA 2507	< 0,1%	Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Dam. 1, H318 ATE oral = 3.500,0 mg/kg ATE dermal = 5.000,0 mg/kg ATE inhal = 0,5mg/l/4 h	603-241-00-5	106-24-1	203-377-1	01-2119552 430-49-000 0
1-(2,3,8,8-Tetramethyl-1,2,3,4,5,6,7,8-octahydronaphthalen-2-yl)ethanone - FEMA 0	< 0,1%	Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Chronic 1, H410 1 1 ATE oral = 5.000,0 mg/kg ATE dermal = 5.000,0 mg/kg	ND	54464-57-2	259-174-3	01-2119489 989-04
Methyl Ionone Gamma	< 0,1%	Skin Sens. 1B, H317; Aquatic Chronic 2, H411 1 1	ND	1322-70-9	ND	NR
Coumarin	< 0,1%	Acute Tox. 4, H302; Skin Sens. 1, H317; STOT RE 2, H373 ATE oral = 293,0 mg/kg ATE dermal = 242,0 mg/kg	ND	91-64-5	202-086-7	01-2119943 756-26-000 0
Eugenol	< 0,1%	Skin Sens. 1B, H317; Eye Irrit. 2, H319 ATE oral = 2.000,0 mg/kg	ND	97-53-0	202-589-1	01-2119971 802-33-000 0
1-(1,2,3,4,6,7,8,8a-Octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one	< 0,1%	Skin Corr. 2, H315; Skin Sens. 1, H317; Aquatic Chronic 2, H411 1 1	ND	68155-67-9	268-979-9	NR

## 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 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:**

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 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:

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**

- Substance: Sodium Lauryl Ether sulfate  
DNEL  
Systemic effects Long term Workers inhalation = 175 (mg/m<sup>3</sup>)  
Systemic effects Long term Workers dermal = 2750 (mg/kg bw/day)  
Systemic effects Long term Consumers inhalation = 52 (mg/m<sup>3</sup>)  
Systemic effects Long term Consumers dermal = 1650 (mg/kg bw/day)  
Systemic effects Long term Consumers oral = 15 (mg/kg bw/day)  
PNEC  
Sweet water = 0,24 (mg/l)  
sediment Sweet water = 5,45 (mg/kg/sediment)

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Sea water = 0,02 (mg/l)  
sediment Sea water = 0,54 (mg/kg/sediment)  
intermittent emissions = 0,07 (mg/l)  
STP = 10000 (mg/l)  
ground = 0,946 (mg/kg ground)

- Substance: Coconut diethanolamide

DNEL

Systemic effects Long term Workers inhalation = 73,4 (mg/m<sup>3</sup>)  
Systemic effects Long term Workers dermal = 4,16 (mg/kg bw/day)  
Systemic effects Long term Consumers inhalation = 21,73 (mg/m<sup>3</sup>)  
Systemic effects Long term Consumers dermal = 2,5 (mg/kg bw/day)  
Systemic effects Long term Consumers oral = 6,25 (mg/kg bw/day)  
Local effects Long term Workers dermal = 0,09 (mg/kg bw/day)  
Local effects Long term Consumers dermal = 0,0562 (mg/kg bw/day)

PNEC

Sweet water = 0,007 (mg/l)  
sediment Sweet water = 0,195 (mg/kg/sediment)  
Sea water = 0,001 (mg/l)  
sediment Sea water = 0,019 (mg/kg/sediment)  
intermittent emissions = 0,024 (mg/l)  
STP = 830 (mg/l)  
ground = 0,035 (mg/kg ground)

- Substance:  $\alpha$ -Hexylcinnamaldehyde

DNEL

Systemic effects Long term Workers inhalation = 0,000078 (mg/m<sup>3</sup>)  
Systemic effects Short term Workers inhalation = 0,00628 (mg/m<sup>3</sup>)

PNEC

Sweet water = 0,03 (mg/l)  
sediment Sweet water = 47,7 (mg/kg/sediment)  
Sea water = 0,003 (mg/l)  
sediment Sea water = 4,77 (mg/kg/sediment)  
ground = 9,51 (mg/kg ground)

- Substance: Linalool

DNEL

Systemic effects Long term Workers inhalation = 2,8 (mg/m<sup>3</sup>)  
Systemic effects Long term Workers dermal = 2,5 (mg/kg bw/day)  
Systemic effects Long term Consumers inhalation = 0,7 (mg/m<sup>3</sup>)  
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: Citronellol

DNEL

Systemic effects Long term Workers inhalation = 161,6 (mg/m<sup>3</sup>)

- Substance: Geraniol

DNEL

Systemic effects Long term Workers inhalation = 161,6 (mg/m<sup>3</sup>)

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

DNEL

Systemic effects Long term Workers inhalation = 1,76 (mg/m<sup>3</sup>)  
Systemic effects Long term Workers dermal = 1,73 (mg/kg bw/day)  
Systemic effects Short term Workers inhalation = 1,76 (mg/m<sup>3</sup>)

Systemic effects Short term Workers dermal = 1,73 (mg/kg bw/day)

PNEC

Sweet water = 0,0028 (mg/l)

sediment Sweet water = 3,73 (mg/kg/sediment)

Sea water = 0,00028 (mg/l)

sediment Sea water = 0,75 (mg/kg/sediment)

ground = 0,705 (mg/kg ground)

- Substance: 1-(1,2,3,4,6,7,8,8a-Octahydro-2,3,8,8-tetramethyl-2-naphtyl)ethan-1-one

DNEL

Systemic effects Short term Workers dermal = 1,73 (mg/kg bw/day)

Systemic effects Short term Consumers oral = 1,76 (mg/kg bw/day)

Local effects Short term Workers dermal = 0,1011 (mg/kg bw/day)

PNEC

Sweet water = 0,0028 (mg/l)

sediment Sweet water = 3,73 (mg/kg/sediment)

Sea water = 0,00028 (mg/l)

sediment Sea water = 0,75 (mg/kg/sediment)

ground = 0,705 (mg/kg ground)

## 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	Liquid	
Colour	Pink	
Odour	characteristic	
Odour threshold	not determined	
pH	6 - 7	
Melting point/freezing point	irrelevant	
Initial boiling point and boiling range	irrelevant	
Flash point	> 65 °C	ASTM D92
Evaporation rate	irrelevant	
Flammability (solid, gas)	irrelevant	
Upper/lower flammability or explosive limits	irrelevant	
Vapour pressure	not determined	
Vapour density	not determined	
Relative density	1,00 - 1,07 g/cm3	
Solubility	Completely soluble in water	
Water solubility	Completely soluble in water	
Partition coefficient: n-octanol/water	not determined	
Auto-ignition temperature	irrelevant	
Decomposition temperature	irrelevant	
Viscosity	not determined	
Explosive properties	not explosive	
Oxidising properties	non-oxidizing	

### 9.2. Other information

Content of VOC ready to use condition: 0,08 %

## 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 hazard classes as defined in Regulation (EC) No 1272/2008**

ATE(mix) oral = 6.009,3 mg/kg

ATE(mix) dermal = ∞

ATE(mix) inhal = ∞

(a) acute toxicity: 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.

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

Citronellol: orl-rat LD50:3450 mg/kg

skn-rbt LD50:2650 mg/kg

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

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

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)

(b) skin corrosion/irritation: Dodecylbenzenesulphonic acid, compound with 2,2',2''nitrilotriethanol (1:1): Irritating

Sodium Lauryl Ether sulfate: Acute effects: contact with eyes will cause irritation; symptoms may include: redness, edema, pain and tears.

Through contact with the skin has irritation with erythema, edema, dryness and cracking.

Coconut diethanolamide: Irritating

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

Citronellol: skn-rbt 100 mg/24H SEV

Skin - Human - Skin irritation - 48 h

Geraniol: skn-rbt 100 mg/24H SEV

skn-gpg 100 mg/24H SEV

skn-man 16 mg/24H SEV

(c) serious eye damage/irritation: If brought into contact with eyes, the product, causes significant irritations which may last for more than 24 hours.

Geraniol: Eyes-rabbit

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

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

Dodecylbenzenesulphonic acid, compound with 2,2',2''nitrilotriethanol (1:1): Irritating

Coconut diethanolamide: Acute Irritazione/Corrosione eyes

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/skinsensitisation: Coconut diethanolamide: Non-sensitizing

Citronellol: mouse - May cause sensitization by skin contact.

Geraniol: Guinea pig

May cause sensitisation by skin contact.

Coumarin: Test: Inhalation Sensitization Route: Inhalation Species: Rat = 293 mg/kg

Test: Inhalation Sensitization Route: Inhalation Species: Mouse = 196 mg/kg

(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: Coconut diethanolamide: IARC Group 2B carcinogen-possible carcinogenic to humans

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: based on available data, the classification criteria are not met.

(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 Dodecylbenzenesulphonic acid, compound with 2,2',2''nitrilotriethanol (1:1): Rabbit 90-day dermal NOAEL > 5 mg/kg bw (only dose tested)

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)

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

Related to contained substances:

Alcohols, C13-15, branched and linear, ethoxylated:

LD50 (rat) Oral (mg/kg body weight) > 300

Dodecylbenzenesulphonic acid, compound with 2,2',2''nitrilotriethanol (1:1):

LD50 (rat) Oral (mg/kg body weight) = 1653

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 4199

Sodium Lauryl Ether sulfate:

LD50 (alcohols, C12-14, ethoxylated, sulfated, sodium salts; CAS No.: 68891-38-3)

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**Via Inhalation Administration:**

Test species: rat

Value: 4100 mg/kg

Specification: LD50 (alcohols, C12-14, ethoxylated, sulfated, sodium salts; CAS No.: 68891-38-3)

**Via Dermal intake:**

Test species: rat

Value: &gt; 2000 mg/kg

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

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

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 4100

**Coconut diethanolamide:**

Ingestion: oral rat LD50: &gt; 2,000 mg/kg

Eye contact: irritating to the eye (rabbit). Can cause irreversible damage to the eye.

Skin contact: moderately irritating for a single application (4 h-rabbit)

Readily biodegradable in accordance with the criteria of Directive 67/548 and subsequent modifications.

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

**4-tert-Butylcyclohexyl acetate:**

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

**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

**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

**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

**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

**Coumarin:**

Acute oral LD50 for rats: 293mg/kg

Acute oral LD50 for mice: 196mg/kg

Irritant data: Not determined

Inhalation data: Not determined

Mutagenicity data: Not determined

LD50 (rat) Oral (mg/kg body weight) = 293

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 242

**Eugenol:**

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

**11.2. Information on other hazards**

No data available.

**SECTION 12. Ecological information****12.1. Toxicity**

Related to contained substances:

Alcohols, C13-15, branched and linear, ethoxylated:

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

Dodecylbenzenesulphonic acid, compound with 2,2',2''nitrilotriethanol (1:1):

C(E)L50 (mg/l) = 2,6

Sodium Lauryl Ether sulfate:

LC50 (alcohols, C12-14, ethoxylated, sulfated, sodium salts; CAS No.: 68891-38-3)

Parametro: Fish

Danio Rerio

Value = 7.1 mg/l

For. test: 96 h

Specification: EC50 (alcohols, C12-14, ethoxylated, sulfated, sodium salts; CAS No.: 68891-38-3)

Parametro: Daphnia

Daphnia magna

Value = 7.2 mg/l

For. test: 48 h

Specification: EC50 (alcohols, C12-14, ethoxylated, sulfated, sodium salts; CAS No.: 68891-38-3)

Parametro: Algae

Scenedesmus subspicatus

Value = 27 mg/l

C(E)L50 (mg/l) = 7,1

Coconut diethanolamide:

Acute/prolonged toxicity to fish: (83d) 2.52 mg/l (brachydanio rerio)

Acute toxicity to Aquatic Invertebrates: EC50 (12:0 am) 2.8 mg/l (daphnia Magna)

Primary: Biodegradabilit > 90% (OECD)

Easy Biodegradabilit: 60% > (manometric Tests, O2 consumption)

Theoretical O2 demand (thod) 2.52 mg O2/mg.

Chemical O2 demand (COD): 2.51 mg O2/mg.

C(E)L50 (mg/l) = 2,39

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

$\alpha$ -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

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In conformity to Regulation (EU) 2020/878

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**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

**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

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

Endpoint: LC50 species: *leptomismacrochirus* (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

**Coumarin:**

Toxicity to fish LC50 - *Poecilia reticulata* (guppy) - 56 mg/l - 96 h  
Toxicity to daphnia and other aquatic invertebrates LC50 - *Daphnia magna* (Water flea) - 3.5 mg/l - 48 h  
C(E)L50 (mg/l) = 13,5

**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

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

**12.2. Persistence and degradability**

Related to contained substances:

Sodium Lauryl Ether sulfate:  
Easily biodegradable

**Linalool:**

90 % (by BOD), 99 % (by TOC), 100 % (by GC)

**Geraniol:**

Aerobic chemical oxygen demand:

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

### 12.3. Bioaccumulative potential

Related to contained substances:

Linalool:  
106

Coumarin:

Bioaccumulation *Leuciscus idus melanotus* - 3 d -46 µg/l

Bioconcentration factor (BCF): < 10

### 12.4. Mobility in soil

Related to contained substances:

Linalool:

log Pow: 2.55

Soil adsorption (K<sub>oc</sub>): 75

Henry's Law constant(PaM<sup>3</sup>/mol): 2

Geraniol:

log Pow: 3.47

### 12.5. Results of PBT and vPvB assessment

No PBT/vPvB ingredient is present

### 12.6. Endocrine disrupting properties

No data available.

### 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. Operate according to local or national regulations

## SECTION 14. Transport information

### 14.1. UN number or ID 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. 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**

No data available.

**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: 1.1. Product identifier, 2.2. Label elements, 2.3. Other hazards, 4.1. Description of first aid measures, 8.1. Control parameters, 9.2. Other information, 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008, 12.1. Toxicity, 12.2. Persistence and degradability, 12.3. Bioaccumulative potential, 12.4. Mobility in soil, 12.6. Endocrine disrupting properties

Description of the hazard statements exposed to point 3

H302 = Harmful if swallowed.

H318 = Causes serious eye damage.

H412 = Harmful to aquatic life with long lasting effects.

H315 = Causes skin irritation.

H319 = Causes serious eye irritation.

H317 = May cause an allergic skin reaction.

H411 = Toxic to aquatic life with long lasting effects.

H335 = May cause respiratory irritation.

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

H373 = May cause damage to organs through prolonged or repeated exposure .



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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