

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

Product code : Hygienfresh Odorblok Ammorbidente

Trades code : A32-020

Product line: HygienFresh

UFI: PJ42-60T9-4005-A06W

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

Concentrated fabric softener ODOR blocking - with odorblok technology

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 & 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



Hazard statement Code(s):

H319 - Causes serious eye irritation.

Supplemental Hazard statement Code(s):

not applicable

Precautionary statements:**General**

P101 - If medical advice is needed, have product container or label at hand.

P102 - Keep out of reach of children.

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% < 15% cationic surfactants, < 5% perfumes, Alpha isomethyl ionone, Citronellol, Limonene, Benzyl salicylate, Hexyl cinnamal, Geraniol, Eugenol, Linalool.

Content of VOC ready to use condition: 0,80 %

UFI: PJ42-60T9-4005-A06W

2.3. Other hazards

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

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

No information on other hazards

SECTION 3. Composition/information on ingredients**3.1 Substances**

Irrelevant

3.2 Mixtures

Refer to paragraph 16 for full text of hazard statements

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

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACH
Fatty acids, C16-18 (even numbered) and C18 unsatd., reaction products with	>= 5 < 15%	ATE oral = 5.000,000 mg/kg	ND	157905-74-3	931-203-0	01-2119463 889-16-000 4

SAFETY DATA SHEET

Hygienfresh Odorblok Ammorbidente

Issued on 12/05/2023 - Rel. # 4 on 12/05/2023

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In conformity to Regulation (EU) 2020/878

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACH
triethanolamine, di-Me sulfate-quaternized		ATE dermal = 2.000,000 mg/kg				
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides - FEMA 0	>= 0,1 < 1%	Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Corr. 1B, H314; Eye Dam. 1, H318; Aquatic Acute 1, H400 100 100 ATE oral = 344,000 mg/kg ATE dermal = 3.340,000 mg/kg ATE inhal = 5,000 mg/l/4 h	ND	68424-85-1	270-325-2	ND
Hexyl salicylate - FEMA 0	< 0,1%	Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Irrit. 2, H319; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 1 1 ATE oral = 5.000,000 mg/kg ATE dermal = 5.000,000 mg/kg	ND	6259-76-3	228-408-6	01-2119638 275-36-000 2
4-tert-Butylcyclohexyl acetate - FEMA 0	< 0,1%	Skin Sens. 1B, H317; Aquatic Chronic 2, H411 1 1 ATE oral = 5.000,000 mg/kg ATE dermal = 5.000,000 mg/kg	ND	32210-23-4	250-954-9	01-2119976 286-24
1-(1,2,3,5,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one	< 0,1%	Skin Irrit. 2, H315; Skin Sens. 1, H317; Aquatic Chronic 1, H410 1 1 ATE oral = 5.000,000 mg/kg ATE dermal = 5.000,000 mg/kg	ND	68155-66-8	268-978-3	01-2119489 989-04-000 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 = 5.000,000 mg/kg ATE dermal = 5.000,000 mg/kg	ND	54464-57-2	259-174-3	01-2119489 989-04
3,7-dimethyloctan-3-ol - FEMA 3060	< 0,1%	Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Irrit. 2, H319 ATE oral = 5.000,000 mg/kg ATE dermal = 4.500,000 mg/kg ATE inhal = 0,885	ND	78-69-3	201-133-9	01-2119638 275-36

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACH
		mg/l/4 h				
3-methyl-4-(2,6,6-trimethylcyclohex-2-enyl)but-3-en-2-one - FEMA 2714	< 0,1%	Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Irrit. 2, H319; Aquatic Chronic 2, H411 ATE oral = 5.000,000 mg/kg ATE dermal = 5.000,000 mg/kg	ND	127-51-5	204-846-3	ND
Citronellol	< 0,1%	Skin Irrit. 2, H315; Skin Sens. 1B, H317; Eye Irrit. 2, H319; STOT SE 3, H335 ATE oral = 3.450,000 mg/kg ATE dermal = 2.650,000 mg/kg ATE inhal = 1,300 mg/l/4 h	ND	106-22-9	203-375-0	01-2119453 995-23-000 0
dipentene Note: C	< 0,1%	Flam. Liq. 3, H226; Asp. Tox. 1, H304; Skin Irrit. 2, H315; Skin Sens. 1B, H317; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 ATE oral = 4.400,000 mg/kg ATE dermal = 5.000,000 mg/kg	601-096-00-2	5989-27-5	227-813-5	01-2119529 223-47-000 1
Benzyl salicylate	< 0,1%	Skin Sens. 1B, H317; Eye Irrit. 2, H319; Aquatic Chronic 3, H412 ATE oral = 2.227,000 mg/kg	607-754-00-5	118-58-1	204-262-9	01-2119969 442-31
α-Hexylcinnamaldehyde	< 0,1%	Skin Sens. 1, H317; Aquatic Chronic 2, H411 ATE oral = 2.450,000 mg/kg	ND	101-86-0	202-983-3	01-2119533 092-50
2-Methylundecanal - FEMA 2749	< 0,1%	Skin Irrit. 2, H315; Skin Sens. 1B, H317; Aquatic Acute 1, H400; Aquatic Chronic 1, H410 ATE oral = 5.000,000 mg/kg ATE dermal = 10.000,000 mg/kg	ND	110-41-8	203-765-0	01-2119969 443-29-000 0
Dimethylcyclohex-3-ene-1-carboxaldehyde, - FEMA 0	< 0,1%	Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Irrit. 2, H319; Aquatic Chronic 3, H412	ND	27939-60-2	248-742-6	ND

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACH
		1 1 ATE oral = 3.100,000 mg/kg ATE dermal = 5.000,000 mg/kg				
Eugenol	< 0,1%	Skin Sens. 1B, H317; Eye Irrit. 2, H319 ATE oral = 2.000,000 mg/kg	ND	97-53-0	202-589-1	01-2119971 802-33-000 0
ethanol	< 0,1%	Flam. Liq. 2, H225 ATE oral = 7.060,000 mg/kg ATE dermal = 20.000,000 mg/kg ATE inhal = 20.000,000 mg/l/4 h	603-002-00-5	64-17-5	200-578-6	01-2119457 610-43
1,2-benzisothiazol-3(2H)-one	< 0,1%	Acute Tox. 4, H302; Skin Irrit. 2, H315; Skin Sens. 1, H317; Eye Dam. 1, H318; Aquatic Acute 1, H400 Limits: Skin Sens. 1, H317 %C >=0,05; , EUH208 0,005<= %C <0,05; 1 ATE oral = 1.020,000 mg/kg	613-088-00-6	2634-33-5	220-120-9	ND

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.

Direct contact with eyes (of the pure product):

Wash immediately and thoroughly with running water, keeping eyelids open for at least 10 minutes, then protect your eyes with a dry sterile gauze. Seek medical advice immediately

Ingestion:

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

4.2. Most important symptoms and effects, both acute and delayed

No data available.

4.3. Indication of any immediate medical attention and special treatment needed

If 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, CO₂, 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 gloves and protective clothing

6.1.2 For emergency responders:

Wear gloves and protective clothing

Eliminate all unguarded flames and possible sources of ignition. No smoking.

Provision of sufficient ventilation.

Evacuate the danger area and, in case, consult an expert.

6.2. Environmental precautions

Contain spill with earth or sand.

If the product has entered a watercourse in sewers or has contaminated soil or vegetation, notify it to the authorities.

Discharge the remains in compliance with the regulations

6.3. Methods and material for containment and cleaning up

6.3.1 For containment:

Rapidly recover the product, wear a mask and protective clothing

Recover the product for reuse, if possible, or for removal. Possibly absorb it with inert material.

Prevent it from entering the sewer system.

6.3.2 For cleaning up:

After wiping up, wash with water the area and materials involved

6.3.3 Other information:
None in particular.

6.4. Reference to other sections

Refer to paragraphs 8 and 13 for more information

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid contact and inhalation of vapors
At work do not eat or drink.
Wear protective gloves/protective clothing/eye protection/face protection.
See also paragraph 8 below.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original container closed tightly. Do not store in open or unlabeled containers.
Keep containers upright and safe by avoiding the possibility of falls or collisions.
Store in a cool place, away from sources of heat and direct exposure of sunlight.

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

ethanol:
Component CAS-No. Value Control parameters
Basis
Ethanol-17-64 TWA 5 ppm 1.000
1.920 mg/m³

UK. EH40 WEL-Workplace Exposure Limits

Remarks Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used

- Substance: Fatty acids, C16-18 (even numbered) and C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized

DNEL

Systemic effects Long term Workers inhalation = 44 (mg/m³)

Systemic effects Long term Workers dermal = 312,5 (mg/kg bw/day)

Systemic effects Long term Consumers inhalation = 13 (mg/m³)

Systemic effects Long term Consumers dermal = 187,5 (mg/kg bw/day)

Systemic effects Long term Consumers oral = 7,5 (mg/kg bw/day)

PNEC

Sweet water = 0,00191 (mg/l)

sediment Sweet water = 0,58 (mg/kg/sediment)

Sea water = 0,000191 (mg/l)

sediment Sea water = 0,058 (mg/kg/sediment)

intermittent emissions = 0,0191 (mg/l)

STP = 2,96 (mg/l)

ground = 0,115 (mg/kg ground)

- Substance: Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides

DNEL

Systemic effects Long term Workers inhalation = 3,96 (mg/m³)

Systemic effects Long term Workers dermal = 5,7 (mg/kg bw/day)

Systemic effects Long term Consumers inhalation = 1,64 (mg/m³)

Systemic effects Long term Consumers dermal = 3,4 (mg/kg bw/day)

Systemic effects Long term Consumers oral = 3,4 (mg/kg bw/day)

PNEC

Sweet water = 0,0009 (mg/l)

sediment Sweet water = 12,27 (mg/kg/sediment)

Sea water = 0,00096 (mg/l)

sediment Sea water = 13,09 (mg/kg/sediment)

intermittent emissions = 0,00016 (mg/l)

STP = 0,4 (mg/l)

ground = 7 (mg/kg ground)

- Substance: Hexyl salicylate

DNEL

Systemic effects Long term Workers inhalation = 0,79 (mg/m³)

Systemic effects Long term Workers dermal = 2083 (mg/kg bw/day)

Systemic effects Short term Workers inhalation = 0,79 (mg/m³)

Systemic effects Short term Workers dermal = 2083 (mg/kg bw/day)

- Substance: 1-(1,2,3,5,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one

DNEL

Systemic effects Short term Workers inhalation = 1,76 (mg/m³)

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-(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/m³)

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

Systemic effects Short term Workers inhalation = 1,76 (mg/m³)

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: Citronellol

DNEL

Systemic effects Long term Workers inhalation = 161,6 (mg/m³)

- Substance: α-Hexylcinnamaldehyde

DNEL

Systemic effects Long term Workers inhalation = 0,000078 (mg/m³)

Systemic effects Short term Workers inhalation = 0,00628 (mg/m³)

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: ethanol

DNEL

Systemic effects Long term Workers inhalation = 950 (mg/m³)

Systemic effects Long term Workers dermal = 343 (mg/kg bw/day)

Systemic effects Long term Consumers inhalation = 114 (mg/m³)

Systemic effects Long term Consumers dermal = 206 (mg/kg bw/day)

Systemic effects Long term Consumers oral = 87 (mg/kg bw/day)

PNEC

Sweet water = 0,96 (mg/l)

sediment Sweet water = 3,6 (mg/kg/sediment)

Sea water = 0,79 (mg/l)

sediment Sea water = 2,9 (mg/kg/sediment)

intermittent emissions = 2,75 (mg/l)

STP = 580 (mg/l)

ground = 0,63 (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

Not needed for normal use.

(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

Wear normal work clothing.

(c) Respiratory protection

Not needed for normal use.

(d) Thermal hazards

No hazard to report

Environmental exposure controls:

Related to contained substances:

dipentene:

Do not let this chemical agent contaminate the environment.

SECTION 9. Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical and chemical properties	Value	Determination method
Physical state	Liquid	
Colour	white	
Odour	Characteristic	
Odour threshold	not determined	
Melting point/freezing point	not determined	
Boiling point or initial boiling point and boiling range	not determined	
Flammability	irrelevant	
Lower and upper explosion limit	not determined	
Flash point	>65°C	
Auto-ignition temperature	not determined	
Decomposition temperature	not determined	
pH	3-4	
Kinematic viscosity	undefined	
Solubility	Completely soluble in water	
Water solubility	not determined	
Partition coefficient n-octanol/water (log value)	not determined	
Vapour pressure	not determined	
Density and/or relative density	0,99 - 0,9 g/cm ³ @ 20 °C	

Physical and chemical properties	Value	Determination method
Relative vapour density	not determined	
Particle characteristics	irrelevant	

9.2. Other information

Content of VOC ready to use condition: 0,80 %

9.2.1 Information with regard to physical hazard classes

Irrilevant

9.2.2 Other safety characteristics

Irrilevant

SECTION 10. Stability and reactivity**10.1. Reactivity**

No reactivity hazards

10.2. Chemical stability

No hazardous reaction when handled and stored according to provisions.

10.3. Possibility of hazardous reactions

There are no hazardous reactions

10.4. Conditions to avoid

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 = 149.891,1 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.

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)

Citronellol: orl-rat LD50:3450 mg/kg

skn-rbt LD50:2650 mg/kg

ihl-rat LCLo:1.3 mg/m3/4H

dipentene: LD50 Oral-rat-4.400 mg/kg

Remarks: Behavioral: Change in motor activity (specific assay). Respiratory disorder Skin and Appendages:

Other: Hair. Inhalation: Irritating to respiratory system.

LD50 Dermal-rabbit->5.000 mg/kg

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

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

ethanol: LD50 Oral-rat-7.060 mg/kg

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

LC50 Inhalation-rat-10:0-20000 ppm

(b) skin corrosion/irritation: Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides: rabbit Result: Method: DOT Corrosive Exposure time: 12:0 am

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

Benzyl salicylate: Skin - rabbit

Result: No skin irritation

(OECD Test Guideline 404)

ethanol: Skin-rabbit

Result: Irritating to skin. -12:0 am

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

ethanol: Eyes-rabbit

Result: Mild eye irritation-12:0 am

(Draize Test)

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides: rabbit Result: Caustic Method: DOT

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.

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 sensitisation: Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides: Buehler guinea pig Test Classification: Did not cause sensitization on laboratory animals.

Result: not sensitizing Method: OECD Test Guideline 406

Citronellol: mouse - May cause sensitization 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: dipentene: Carcinogenicity-rat-Oral

Tumorigenic: Carcinogenic by RTECS criteria. Kidney, Ureter, Bladder: Kidney tumors. Tumorigenic Effects: Testicular tumors.

Carcinogenicity-mouse-Oral

Equivocal tumorigenic agent by RTECS criteria: Tumorigenic. Gastrointestinal: Tumors.

This product is or contains a component that is not classifiable as to its carcinogenicity IARC, ACGIH, NTP, based on its or EPA classification.

IARC: Group 3-3: Not classifiable as to its carcinogenicity to humans (D-Limonene)

(g) eproductivetoxicity: ethanol: Reproductive toxicity-Human-female-Oral

Effects on Newborn: Apgar score (human only). Effects on Newborn: Other measures or neonatal effects.

Effects on Newborn: Drug dependence.

(h) specific target organ toxicity (STOT) single exposure: based on available data, the classification criteria are not met.

(i) specific target organ toxicity (STOT) repeated exposure 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: Benzyl salicylate: in vivo assay - mouse

May cause allergic skin reaction.

(OECD Test Guideline 429)

Related to contained substances:

Fatty acids, C16-18 (even numbered) and C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized:

Oral, LD50: 5000 mg / kg (rat)

Dermal, LD50: > 2000 mg / kg (rat)

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

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

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

LD50 (rat) Oral (mg/kg body weight) = 344

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 3340

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 5

Hexyl salicylate:

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

LD50 Dermal (rat or rabbit) (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

1-(1,2,3,5,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:

Acute oral toxicity

LD50 rat

Dose: > 5,000 mg/kg

Method: OECD Test Guideline 401

Remarks: IFF

Acute dermal toxicity

LD50 rat

Dose: > 5,000 mg/kg

Method: OECD Test Guideline 402

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

3,7-dimethyloctan-3-ol:

LD50 oral, rat-> 5,000 mg/kg oral rat

Ld50-4,500 mg/kg Inhalation-rat

LCLO-male and female-8h-0.885 mg/l

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

LD50 Dermal (rat or rabbit) (mg/kg body weight) = 4500

CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 0,885

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

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

dipentene:

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:

Acute oral toxicity (LD50): 4400 mg/kg [Rat].

Acute dermal toxicity (LD50): >5000 mg/kg [Rabbit].

Chronic Effects on Humans: CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.

Other Toxic Effects on Humans:

Hazardous in case of skin contact (irritant, sensitizer), of inhalation (lung irritant).

Slightly hazardous in case of skin contact (permeator), of ingestion.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans: May cause adverse reproductive effects and birth defects (teratogenic)

Special Remarks on other Toxic Effects on Humans:

Acute Potential Health Effects:

Skin: Causes skin irritation. It can be absorbed through intact skin. However, it is generally regarded to have low toxicity by dermal route.

Eyes: Causes eye irritation.

Inhalation: Aspiration of large doses may produce pulmonary edema and chemical pneumonitis. May cause dizziness and suffocation. No nasal or pharyngeal irritation has been reported.

Ingestion: It is generally regarded to have low toxicity by oral route. It may produce burning pain in the mouth and throat, abdominal pain, nausea, vomiting, and diarrhea. There may an odor of terpenes in the vomitus or breath.

It may affect behavior/central nervous and peripheral nervous system. Central nervous system effects may include excitement, somnolence, delirium, ataxia, convulsions, and stupor while peripheral system effects may include spastic paralysis. It may affect respiration (respiratory depression, choking, coughing, dyspnea, cyanosis). Other symptoms may include cyanosis, fever, and tachycardia. Systemic absorption of large doses may produce pulmonary edema and chemical pneumonitis. The urine may smell like violets.

Chronic Potential Health Effects:

Ingestion: Prolonged or repeated ingestion may produce nausea, lowered blood sugar and cholesterol, and kidney damage (hematuria, albuminuria, tubular necrosis), and may also affect the liver.

Skin: It may be a weak sensitizer and responsible for some rare allergic responses (dermatitis)

LD50 (rat) Oral (mg/kg body weight) = 4400

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

Benzyl salicylate:

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

α -Hexylcinnamaldehyde:

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

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

Dimethylcyclohex-3-ene-1-carboxaldehyde,:

oral-rat LD50 3100 mg/kg

International Flavors & Fragrances Inc.

oral-rat LD50 3600 mg/kg

Food and Chemical Toxicology. Vol. 30, Pg. 29S, 1992.

skin-rabbit LD50 5000 mg/kg

Food and Chemical Toxicology. Vol. 30, Pg. 29S, 1992.

LD50 (rat) Oral (mg/kg body weight) = 3100

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

Eugenol:

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

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

1,2-benzisothiazol-3(2H)-one:

LD50 (rat) Oral (mg/kg body weight) = 1020

11.2. Information on other hazards

No data available.

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

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

Related to contained substances:

Fatty acids, C16-18 (even numbered) and C18 unsatd., reaction products with triethanolamine, di-Me sulfate-quaternized:

fish, CL50 : 1,91 mg/l (OECD 203 (96h))

daphnia, CE50 : 2,23 mg/l (EU Method C.2 (48h))

alga, Cl50 : 2,14 mg/l (OECD 201 (72h))

C(E)L50 (mg/l) = 1,91 1

1

Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:

C(E)L50 (mg/l) = 0,01 100

100

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 1

1

1-(1,2,3,5,6,7,8,8a-octahydro-2,3,8,8-tetramethyl-2-naphthyl)ethan-1-one:

Toxicity to fish:

semi-static test LC50

Species: *Lepomis macrochirus* (Bluegill sunfish)

Dose: 1.3 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates.:

semi-static test EC50

Species: *Daphnia magna* (Water flea)

Dose: 1.38 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

IFF

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

NOEC (mg/l) = 100 1

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

Endpoint: LC50 species: *lepomismacrochirus* (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 1

1

3,7-dimethyloctan-3-ol:

Toxic to fish LC50 semi-static test-Danio rerio (zebrafish)-8.9 mg/l-96 h

method: OECD 203 semi-static test TG

NOEC-Danio rerio (zebrafish)-5 mg/l-96 h

method: OECD 203 Toxic TG to daphnia and other aquatic invertebrates – *Daphnia magna* Ec50 Immobilization (big

water Flea)-14.2 mg/l-48 h method: OECD TG 202 Immobilization NOEC-*Daphnia magna* (water Flea grande)-8.2

mg/l-48 h Method: OECD TG 202 Toxic for algae growth Inhibition Ec50 *Desmodesmus subspicatus*-(green algae)-13.2

mg/l-72 h method: OECD 201 TG NOEC growth-inhibitor *Desmodesmus subspicatus* (green algae)-8.5 mg/l-72 h

method: OECD 201 TG

C(E)L50 (mg/l) = 8,9 1

1

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

Citronellol:

LC50 (96 h) 14,66 mg/l, *Leuciscus idus*

EC50 (48 h) 17 mg/l, *Daphnia magna*

EC50 (72 h) 2,4 mg/l, *Scenedesmus subspicatus*

C(E)L50 (mg/l) = 2,4 1

1

dipentene:

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic.

Special Remarks on the Products of Biodegradation: Not available.

C(E)L50 (mg/l) = 0,702 1

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 1

1

α -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

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

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

1,2-benzisothiazol-3(2H)-one:
C(E)L50 (mg/l) = 0,8

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

12.2. Persistence and degradability

Related to contained substances:
Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl, chlorides:
Biodegradability:
OECD Confirmatory > 90% Test Method: OECD 303 A Modified SCAS Test Exposure time: 99% 7 d > Method: OECD Test 302 Evolution CO2 Concentration: 5 mg/litre Exposure time: 28 d Result: Readily biodegradable.
95.5% Method: OECD 301 B

3,7-dimethyloctan-3-ol:
aerobic-28 d exposure time Result: 60-70%-Rapidly biodegradable.
Method: OECD TG 301

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

No adverse effects

SECTION 13. Disposal considerations

13.1. Waste treatment methods

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

Recover if possible. 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

REGULATION (EU) No 1357/2014 - waste:
HP14 - Ecotoxic

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

15.2. Chemical safety assessment

The supplier has made an assessment of chemical safety

SECTION 16. Other information

16.1. Other information

Points modified compared to previous release: 2.1. Classification of the substance or mixture, 2.2. Label elements, 2.3. Other hazards, 3.2 Mixtures, 4.1. Description of first aid measures, 4.3. Indication of any immediate medical attention and special treatment needed, 6.3. Methods and material for containment and cleaning up, 7.1. Precautions for safe handling, 8.1. Control parameters, 8.2. Exposure controls, 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

Description of the hazard statements exposed to point 3

H302 = Harmful if swallowed.
H312 = Harmful in contact with skin.
H314 = Causes severe skin burns and eye damage.
H318 = Causes serious eye damage.
H400 = Very toxic to aquatic life.
H315 = Causes skin irritation.
H317 = May cause an allergic skin reaction.
H319 = Causes serious eye irritation.
H410 = Very toxic to aquatic life with long lasting effects.
H411 = Toxic to aquatic life with long lasting effects.
H335 = May cause respiratory irritation.
H226 = Flammable liquid and vapour.
H304 = May be fatal if swallowed and enters airways.
H412 = Harmful to aquatic life with long lasting effects.
H225 = Highly flammable liquid and vapour.

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

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

H319 - Causes serious eye irritation. Classification procedure: Calculation method

Main normative references:

Directive 1999/45/EC

Directive 2001/60/EC

Regulation 1272/2008/EC

Regulation 2010/453/EC

** The information contained herein is based on our knowledge at the date above.

Related solely to the product and do not constitute a guarantee of a particular quality.

It is the duty of the user to ensure that these are appropriate and complete information regarding the specific use intended.

This data sheet cancels and replaces any previous edition.
