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

1.1. Product identifier

Product code : Hygienfresh Detergente BioMusk
Trades code : A39-518
Product line: Hygienfresh

UFI: 2XQ0-305M-H00R-9K64

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

Enzymatic Deodetergente of white musk perfume
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):
Skin Irrit. 2, Eye Irrit. 2

Hazard statement Code(s):
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.

If brought into contact with eyes, the product causes significant irritations which may last for more than 24 hours, if brought into contact with skin, it causes significant inflammation with erythema, scabs, or edema

2.2. Label elements

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

Pictogram, Signal Word Code(s):
GHS07 - Warning

Hazard statement Code(s):
H315 - Causes skin irritation.
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), Isoeugenol. 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
P302+P352 - IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.

Contains (Reg.EC 648/2004):
5% < 15% anionic surfactants,< 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, enzymes, non-ionic surfactants, Benzyl salicylate, Linalool, ALPHA ISOMETHYLE IONONE, Coumarin, Citronellol, a-Hexylcinnamaldehyde

Content of VOC ready to use condition: 0,10 %

UFI: 2XQ0-305M-H00R-9K64

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[w/w]	Classification	Index	CAS	EINECS	REACh
Dodecylbenzenesulphonic acid, compound with 2,2',2"nitrilotriethanol (1:1).	>= 5 < 15%	Skin Irrit. 2, H315; Eye Irrit. 2, H319 ATE oral = 1.653,0	ND	27323-41-7	248-406-9	NR

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACh
		mg/kg ATE dermal = 4.199,0 mg/kg				
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; 1 1 ATE oral = 300,0 mg/kg	ND	157627-86-6	ND	NR
Coconut diethanolamide	>= 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
2,2',2"-nitrilotriethanol	>= 0,1 < 1%	Eye Irrit. 2, H319 ATE oral = 5.000,0 mg/kg ATE dermal = 2.000,0 mg/kg	ND	102-71-6	203-049-8	01-2119486 428-31-xxxx
2-aminoethanol, monoester with boric acid	>= 0,1 < 1%	Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335 ATE oral = 2.000,0 mg/kg ATE dermal = 2.000,0 mg/kg	ND	10377-81-8	233-829-3	NR
1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran	>= 0,1 < 1%	Aquatic Acute 1, H400; Aquatic Chronic 1, H410 ATE oral = 3.250,0 mg/kg ATE dermal = 3.250,0 mg/kg	603-212-00-7	1222-05-5	214-946-9	01-2119488 227-29-000 0
Benzyl salicylate	< 0,1%	Skin Sens. 1B, H317; Eye Irrit. 2, H319; Aquatic Chronic 3, H412 1 1 ATE oral = 2.227,0 mg/kg	607-754-00-5	118-58-1	204-262-9	01-2119969 442-31
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
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 = 5.000,0	ND	127-51-5	204-846-3	NR

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACh
		mg/kg ATE dermal = 5.000,0 mg/kg				
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	01-2119943756-26-0000
Subtilisin	< 0,1%	Skin Irrit. 2, H315; Eye Dam. 1, H318; Resp. Sens. 1, H334; STOT SE 3, H335 ATE oral = 1.800,0 mg/kg ATE inhal = 0,1mg/l/4 h	647-012-00-8	9014-01-1	232-752-2	01-2119480434-38
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 h	ND	106-22-9	203-375-0	01-2119453995-23-0000
amylase, α-	< 0,1%	Resp. Sens. 1, H334 ATE oral = 2.000,0 mg/kg	647-015-00-4	9000-90-2	232-565-6	NR
α-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	01-2119533092-50
Reaction Mass of Cis-4-(isopropyl) cyclohexanemethanol and Trans-4-(isopropyl) cyclohexanemethanol	< 0,1%	Skin Irrit. 2, H315; Skin Sens. 1B, H317 ATE oral = 10.000,0 mg/kg ATE dermal = 2.000,0 mg/kg	ND	5502-75-0	939-719-8	01-2119983532-32-xxx

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

SECTION 5. Firefighting measures

5.1. Extinguishing media

Advised extinguishing agents:
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 Suitable: LaTeX, nitrile, PVC
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:
2,2',2''-nitrilotriethanol:
TWA: 5 from ACGIH (TLV) [United States] [2001]

Subtilisin:
ACGIH TLV: Ceiling: 0.00006 mg/m3 Ceiling (as crystalline active enzyme, listed under Subtilisins)
Belgium: 0.00006 mg/m3 Maximum Limit Value (8 hours)
Denmark: Ceiling: 0.00006 mg/m3
Ireland: TWA: 0.00006 mg/m3 STEL: 0.00006 mg/m3
Netherlands: Ceiling: 0.00006 mg/m3
Norway: 0.00006 mg/m3 Ceiling
Portugal: Ceiling: 0.00006 mg/m3
Spain: VLA-EC: 0.00006 mg/m3
Sweden: 1 glycineunit/m3 LLV 3 glycineunit/m3 LLV
Switzerland: STEL: 0.00006 mg/m3
Germany: = 1 glycineunit/m3 LLV = 3 glycineunit/m3 LLV
United Kingdom: 0.00004 mg/m3 TWA

amylase, α-:
Alpha-amylase: DMEL = 60 ng/m3
Fresh Water PNEC 0.06 g/L
PNEC seawater 0.006 g/L
PNEC waste treatment plants (STP) 65000 g/L

- Substance: Coconut diethanolamide
DNEL
Systemic effects Long term Workers inhalation = 73,4 (mg/m3)
Systemic effects Long term Workers dermal = 4,16 (mg/kg bw/day)
Systemic effects Long term Consumers inhalation = 21,73 (mg/m3)
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: 2,2',2''-nitrilotriethanol
DNEL
Systemic effects Long term Workers inhalation = 5 (mg/m3)
Systemic effects Long term Workers dermal = 6,3 (mg/kg bw/day)
Systemic effects Long term Consumers inhalation = 1,25 (mg/m3)
Systemic effects Long term Consumers dermal = 3,1 (mg/kg bw/day)
Systemic effects Long term Consumers oral = 13 (mg/kg bw/day)
Local effects Long term Workers inhalation = 5 (mg/m3)
Local effects Long term Consumers inhalation = 1,25 (mg/m3)
PNEC
Sweet water = 0,32 (mg/l)
sediment Sweet water = 1,7 (mg/kg/sediment)
Sea water = 0,03 (mg/l)
sediment Sea water = 0,17 (mg/kg/sediment)
intermittent emissions = 5,12 (mg/l)
STP = 10 (mg/l)
ground = 0,15 (mg/kg ground)

- Substance: 2-aminoethanol, monoester with boric acid

DNEL
Systemic effects Long term Workers inhalation = 5,9 (mg/m3)
Systemic effects Long term Workers dermal = 3,3 (mg/kg bw/day)
Systemic effects Long term Consumers inhalation = 1,4 (mg/m3)
Systemic effects Long term Consumers dermal = 1,7 (mg/kg bw/day)
Systemic effects Long term Consumers oral = 1,7 (mg/kg bw/day)
PNEC
Sweet water = 0,026 (mg/l)
sediment Sweet water = 0,054 (mg/kg/sediment)
Sea water = 0,003 (mg/l)
sediment Sea water = 0,005 (mg/kg/sediment)
intermittent emissions = 0,26 (mg/l)
STP = 10 (mg/l)
ground = 0,014 (mg/kg ground)

- Substance: 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran
DNEL
Systemic effects Long term Workers inhalation = 22 (mg/m3)
Systemic effects Long term Workers dermal = 60 (mg/kg bw/day)
Systemic effects Long term Consumers inhalation = 6,5 (mg/m3)
Systemic effects Long term Consumers dermal = 36 (mg/kg bw/day)
Systemic effects Long term Consumers oral = 3,8 (mg/kg bw/day)
PNEC
Sweet water = 0,0044 (mg/l)
sediment Sweet water = 2 (mg/kg/sediment)
Sea water = 0,00044 (mg/l)
sediment Sea water = 0,394 (mg/kg/sediment)
ground = 0,31 (mg/kg ground)

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

- Substance: Subtilisin
DNEL
Systemic effects Long term Consumers oral = 1,8 (mg/kg bw/day)
Systemic effects Short term Consumers oral = 3,6 (mg/kg bw/day)
Local effects Long term Workers inhalation = 0,06 (mg/m3)
Local effects Long term Consumers inhalation = 0,000015 (mg/m3)
PNEC
Sweet water = 0,0017 (mg/l)
Sea water = 0,00017 (mg/l)
intermittent emissions = 0,0009 (mg/l)
STP = 65 (mg/l)
ground = 0,568 (mg/kg ground)

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

- Substance: amylase, α-
DNEL

Local effects Long term Workers inhalation = 0,00006 (mg/m3)
Local effects Long term Consumers inhalation = 0,000015 (mg/m3)
PNEC
Sweet water = 0,0052 (mg/l)
Sea water = 0,00052 (mg/l)
intermittent emissions = 0,052 (mg/l)
STP = 65 (mg/l)
ground = 0,001 (mg/kg ground)

- 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)

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:
Related to contained substances:
Subtilisin:
The local authority must be informed if the losses cannot be limited
Waste water must be conveyed to the waste water treatment plant

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	Green	
Odour	characteristic	
Odour threshold	not determined	
pH	8.5 - 9.5	
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)	irrelevant	
Upper/lower flammability or explosive limits	not determined	
Vapour pressure	not determined	
Vapour density	not determined	
Relative density	1.03 -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	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: 0,10 %

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 solfide, 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 = 15.827,0 mg/kg
ATE(mix) dermal = ∞
ATE(mix) inhal = ∞

(a) acute toxicity: 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran: Acute Oral Toxicity
(1) Wistar rats (10/sex) were administered commercial grade HHCB (65% HHCB in either diethyl phthalate or isopropyl myristate) via gavage at 5000 mg/kg-bw and observed for 14 days. The corrected dose of HHCB was 3250 mg/kg-bw. One death occurred at this dose.
LD50 > 3250 mg/kg-bw
(2) Rats (10 females/dose; strain not specified) were administered commercial sample (65% HHCB in either diethyl phthalate or isopropyl myristate) via gavage at 3000 mg/kg-bw and observed for 14 days. It is not clear whether the reported dose reflected dose of the mixture or of HHCB. Therefore, a conservative estimate of the LD50 is considered to be 65% of the test concentration. No mortality was observed during the study.
LD50 > 1950 mg/kg-bw
Benzyl salicylate: Oral Rat LD50 = 2227 mg/kg bw
Citronellol: orl-rat LD50:3450 mg/kg
skn-rbt LD50:2650 mg/kg
ihl-rat LCLo:1.3 mg/m3/4H
α-Hexylcinnamaldehyde: Oral (rat) LD50: 2450 mg/kg
(b) skincorrosion/irritation: If brought into contact with the skin, the product causes significant inflammation with erythema, scabs, or edema.
Dodecylbenzenesulphonic acid, compound with 2,2',2"nitrilotriethanol (1:1).: Irritating
Coconut diethanolamide: Irritating
2-aminoethanol, monoester with boric acid: Irritation of the skin:

Rabbit (New Zealand White): non-irritant, (1993). Eye irritation:
Rabbit (New Zealand White): moderately irritating, 1998
Bovine (in vitro study): not severely irritating or corrosive, 2010
Benzyl salicylate: Skin - rabbit
Result: No skin irritation
(OECD Test Guideline 404)
Citronellol: skn-rbt 100 mg/24H SEV
Skin - Human - Skin irritation - 48 h
(c) serious eye damage/irritation: If brought into contact with eyes, the product, causes significant irritations which may last for more than 24 hours.
Dodecylbenzenesulphonic acid, compound with 2,2',2"nitrilotriethanol (1:1).: Irritating
Coconut diethanolamide: Acute Irritazione\Corrosione eyes
Benzyl salicylate: Eyes - In vitro study
Result: Moderate eye irritation
(OECD Test Guideline 437)

Eyes - rabbit
Result: Irritating to eyes.
(Draize Test)
(d) respiratoryorskinsensitisation: Coconut diethanolamide: Non-sensitizing
Coumarin: Test: Inhalation Sesitization Route: Inhalation Species: Rat = 293 mg/kg
Test: Inhalation Sesitization Route: Inhalation Species: Mouse = 196 mg/kg
Subtilisin: Respiratory system: substance-sensitizing (human experience)
Citronellol: mouse - May cause sensitization by skin contact.
(e) germ cell mutagenicity: Subtilisin: No indication of mutagenic effects (OECD TG 471, 473, 476)
(f) carcinogenicity: Coconut diethanolamide: IARC Group 2B carcinogen-possible carcinogenic to humans
(g) eproductivetoxicity: 1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran: Mated female Crl:CD(SD)Br rats (animals/sex/dose not specified) were administered HHCB via gavage at 0, 2, 6 or
20 mg/kg-bw/day beginning on gestation day 14. The F1 offspring were exposed in utero and throughout lactation. At the end of the pre-weaning period, 24 male and 24 female pups per dose were retained for further study. On day 22 post-partum, excess pups and parents were sacrificed and examined for abnormalities. When offspring were 84 days of age, males and females were mated and produced litters. After day 21 post-partum, all F2 pups and F1 dams were sacrificed and examined internally and externally for abnormalities. No adverse effects on behavior or reproduction were observed at any dose in parental animals or in F1 or F2 pups.
NOAEL (systemic and reproductive toxicity) = 20 mg/kg-bw/day (based on no effects at the highest dose tested)
(h) specific target organ toxicity (STOT) single exposure: Subtilisin: Target organ-specific toxic (single exposure) Irritant, respiratory tract (ACGIH 2001)
(i) specific target organ toxicity (STOT) repeated exposureDodecylbenzenesulphonic acid, compound with 2,2',2"nitrilotriethanol (1:1).: Rabbit 90-day dermal NOAEL > 5 mg/kg bw (only dose tested)
1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran: Sprague-Dawley rats (15/sex/dose) were administered HHCB via the diet at 0, 5, 15, 50 or 150 mg/kg-bw/day for 13
weeks. Test concentrations were determined from a range finding study in which a LOAEL of 300 mg/kg-bw/day (based on hepatic effects) was determined. Mean estimated test substance intakes were 5.4, 15.7, 51.8 or 155.8 mg/kg-bw/day for males and 5.1, 15.6, 51.9 or 154.6 mg/kg-bw/day for females. There were no mortalities, adverse clinical signs or treatment-related effects on body weight, hematology or ophthalmologic evaluation. Slightly lower mean plasma triglyceride levels were observed at week13 in males at 50 and 150 mg/kg-bw/day. Slightly lower plasma glucose concentrations were noted at week 7 in males and females given 15, 50 and 150 mg/kg-bw/day and at week 13 in males given 50 and 150 mg/kg-bw/day; these effects were not seen at the end of the 4-week recovery period. There were no treatment-related differences in absolute organ weights or organ weight
(j) aspiration hazard: Benzyl salicylate: in vivo assay - mouse
May cause allergic skin reaction.
(OECD Test Guideline 429)

Related to contained substances:
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

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

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

Coconut diethanolamide:
Ingestion: oral rat LD50: > 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

2,2',2''-nitrilotriethanol:
Routes of Entry: Absorbed through skin. Dermal contact. Eye contact.
Toxicity to Animals: Acute oral toxicity (LD50): 2200 mg/kg [Rabbit].
Chronic Effects on Humans:
CARCINOGENIC EFFECTS: 3 (Not classifiable for human.) by IARC.
MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells.
May cause damage to the following organs: kidneys, liver, skin.
Other Toxic Effects on Humans:
Hazardous in case of skin contact (permeator), of ingestion, of inhalation.
Slightly hazardous in case of skin contact (irritant).
Special Remarks on Toxicity to Animals:
LD50 [Rat] - Route: Oral; Dose: 4920 ul/kg
LD50 [Rabbit] - Route: Skin; Dose: >20ml/kg
Special Remarks on Chronic Effects on Humans:
May cause cancer (tumorigenic) based on animal data.
May affect genetic material (mutagen): cytogenic analysis (human lymphocyte) = 100 umol/L; sister chromatid exchange (human lymphocyte) = 1mmol/L.
Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects:
Skin: May cause skin irritaiton with burning pain, itching, and redness. May be absorbed through the skin amd affect the liver, metabolism, and urinary tract.
Eyes: Causes eye irritation with tearing and burning pain. May cause transient corneal injury.
Ingestion: Causes gastrointestinal (digestive) tract irritation with nausea, vomitig, and diarrhea. May also affect behavior, sense organs, liver and urinary system.
Inhalation: Inhalation of mist may cause respiratory tract irritation. May also affect the liver, blood, urinary system and cardiovascular system.
Chronic Potential Health Effects: May cause liver and kidney damage. Prolonged or repeated contact may cause skin necrosis and /or ulceration of the skin.
LD50 (rat) Oral (mg/kg body weight) = 5000
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 2000

2-aminoethanol, monoester with boric acid:
Acute oral toxicity
Parameter: LD50 (2-aminoethanol, monoester with boric acid; CAS No.: 10377-81-8)
Exposure route: Orally
Species: Rat
Effective dose:> 2000 mg / kg
Acute dermal toxicity
Parameter: discriminating dose. (2-aminoethanol, monoester with boric acid; CAS No.: 10377-81-8)
Exposure route: Dermal
Species: Rat
Effective dose:> 2000 mg / kg
LD50 (rat) Oral (mg/kg body weight) = 2000
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 2000

1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran:
LD50 (rat) Oral (mg/kg body weight) = 3250
LD50 Dermal (rat or rabbit) (mg/kg body weight) = 3250

Benzyl salicylate:

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

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

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

Coumarin:
Acute oral LD50 for rats: 293mg/kg
Acute oral LD50 for mice: 196mg/kg
Irritant date: 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

Subtilisin:
LD50 (rat) Oral (mg/kg body weight) = 1800
CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 0,13

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

amylase, α-:
LD50 oral, rat-2,000 mg/kg
LD50 (rat) Oral (mg/kg body weight) = 2000

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

Reaction Mass of Cis-4-(isopropyl) cyclohexanemethanol and Trans-4-(isopropyl) cyclohexanemethanol:
LD50 (rat) Oral (mg/kg body weight) = 10000
LD50 Dermal (rat or rabbit) (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:
Dodecylbenzenesulphonic acid, compound with 2,2',2"nitrilotriethanol (1:1).:
C(E)L50 (mg/l) = 2,6

Alcohols, C13-15, branched and linear, ethoxylated:
C(E)L50 (mg/l) = 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

2,2',2''-nitrilotriethanol:
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) = 1390

2-aminoethanol, monoester with boric acid:
Acute (short-term) toxicity on fish
Parameter: LC50 (2-aminoethanol, monoester with boric acid; CAS No.: 10377-81-8)
Species: Cyprinus carpio
Effective dose: = 617 mg / l
Exposure time: 96 h
Acute (short-term) toxicity to Daphnia
Parameter: EC50 (2-aminoethanol, monoester with boric acid; CAS No.: 10377-81-8)
Species: Daphnia magna
Effective dose: = 423 mg / l
Exposure time: 48 h
Acute (short-term) toxicity to algae
Parameter: EC50 (2-aminoethanol, monoester with boric acid; CAS No.: 10377-81-8)
Species: Pseudokirchneriella subcapitata
Effective dose: = 26 mg / l
Exposure time: 72 h
C(E)L50 (mg/l) = 26

1,3,4,6,7,8-hexahydro-4,6,6,7,8,8-hexamethylindeno[5,6-c]pyran:
21 days Daphnia magna NOEC 111 g/L NOEC 21 days Bluegill sunfish (lepomismacrochirus) 68 g/L NOEC 35-day early life stage test Fathead minnows (Pimephales promelas) 68 g/L NOEC 72 h Algae (Pseudokirchneriella subcapitata) 201 g/L 8 weeks NOEC Earthworm (Eisenia fetida) 45 g/kg Soil DM 4 weeks Springtails NOEC (Folsomia candida) 45 g/kg Soil DM
C(E)L50 (mg/l) = 0,282

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

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

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 specifc growth rate;
C(E)L50 (mg/l) = 0,597

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

Subtilisin:
C(E)L50 (mg/l) = 0,586

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

amylase, α-:
EC50 (72 h): 100 mg/l > Desmodesmus subspic
LC50 (96 h): 100 mg/l > Pimephales promelas EC50 (48 h): > 100 mg/l Daphnia Magna
C(E)L50 (mg/l) = 100

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

Reaction Mass of Cis-4-(isopropyl) cyclohexanemethanol and Trans-4-(isopropyl) cyclohexanemethanol:
The substance was toxic to Oncorhynchus mykiss when tested according to OECD 203. The 96 hr LC50 for was reported to be 4.2 mg/L (based on nominal concentrations, measured concentrations were >80% to nominal).

The substance was harmful to Daphnia magna when tested according to OECD 202. The 48 hr EC50 for was reported to be 13 mg/L (based on nominal concentrations, measured concentrations were >80% to nominal).

The substance was toxic to aquatic algae when tested according to OECD 201. The 72 hr EC50 based on growth rate was reported to be 10 mg/L (based on nominal concentrations, measured concentrations were >80% to nominal).The 72h EC10 based on growth rate was reported to be 5.2 mg/L (based on nominal concentrations, measured concentrations were >80% to nominal).

The substance was not acutely toxic to microorganisms when tested according to OECD 209. The 3 hr EC50 for activated sludge respiration inhibition was reported to be 190 mg/L (nominal).
C(E)L50 (mg/l) = 4,2

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

12.2. Persistence and degradability

Related to contained substances:
2-aminoethanol, monoester with boric acid:
Parameter: Biodegradation
Effective dose: approx. 73%
Exposure time: 28 days
Parameter: Biodegradation
Effective dose:> 60%
Exposure time: 10 days
Easily biodegradable.

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

Subtilisin:
Rapidly biodegradable (OECD TG 301B)

amylase, α-:
Quickly ecologic (96% after 14 days)

12.3. Bioaccumulative potential

Related to contained substances:
Linalool:
106

Coumarin:
Bioaccumulation Leuciscus idus melanotus - 3 d -46 µg/l
Bioconcentration factor (BCF): < 10

Subtilisin:
Do not bio-accumulate

12.4. Mobility in soil

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

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

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

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, 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, 12.3. Bioaccumulative potential, 12.4. Mobility in soil, 12.5. Results of PBT and vPvB assessment, 12.6. Endocrine disrupting properties

Description of the hazard statements exposed to point 3
H315 = Causes skin irritation.
H319 = Causes serious eye irritation.
H302 = Harmful if swallowed.
H318 = Causes serious eye damage.
H412 = Harmful to aquatic life with long lasting effects.
H335 = May cause respiratory irritation.
H400 = Very toxic to aquatic life.
H410 = Very toxic to aquatic life with long lasting effects.
H317 = May cause an allergic skin reaction.
H411 = Toxic to aquatic life with long lasting effects.
H373 = May cause damage to organs through prolonged or repeated exposure .
H334 = May cause allergy or asthma symptoms or breathing difficulties if inhaled

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.