

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Issue date: 9/18/2024

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

1.1. Product identifier

Product form : Mixture

Trade name : CINNAMON BUNS FR90087

Product code : FR90087

Type of product : Perfumes, fragrances
Product group : Trade product

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

1.2.1. Relevant identified uses

Main use category : Professional use, Industrial use

Industrial/Professional use spec : Industrial

Use of the substance/mixture : Perfumes, fragrances Function or use category : Odour agents

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Hyggeland Company Russian Federation Krasnodar

Stasova 184, 7

Phone .: +7 (953) 073-39-63

info@hyggeland.ru https://hyggeland.ru/

1.4. Emergency telephone number

Emergency number : 1-800-255-3924; +01-813-248-0585; China:+400-120-0751; Mexico:+01-800-099-0731;

For professional use only

Brazil: +0-800-591-6042; India: +000-800-100-4086

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute toxicity (oral), Category 4 H302
Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2 H319
Skin sensitisation, Category 1 H317
Germ cell mutagenicity, Category 2 H341
Carcinogenicity, Category 1B H350
Hazardous to the aquatic environment – Acute Hazard, H400

Category 1

Hazardous to the aquatic environment – Chronic Hazard, H411

Category 2

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

May cause cancer. Suspected of causing genetic defects. Harmful if swallowed. Causes skin irritation. Causes serious eye irritation. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects. May cause an allergic skin reaction.

9/18/2024 (Issue date) EN (English) 1/30

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)







GHS07

GHS08

GHS09

Signal word (CLP) : Danger

Contains : benzyl benzoate; Cinnamic aldehyde; benzyl alcohol; COUMARIN; Cinnamon leaf oil ; Ethyl maltol; Cinnamic alcohol; Orange oil ; Hexyl cinnamic aldehyde; 1,2-Cyclopentanedione, 3-

methyl-; alpha-Methylcinnamic aldehyde; Anise oil (Spanish); Linalool; Citronellol Pure;

Cassia oil; Calamus oil; Allyl caproate; 2-furaldehyde

Hazard statements (CLP) : H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H317 - May cause an allergic skin reaction.H319 - Causes serious eye irritation.H341 - Suspected of causing genetic defects.

H350 - May cause cancer.

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

Precautionary statements (CLP) : P201 - Obtain special instructions before use.

P202 - Do not handle until all safety precautions have been read and understood.

P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.

P272 - Contaminated work clothing should not be allowed out of the workplace.

Extra phrases : For professional users only.

2.3. Other hazards

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
benzyl benzoate	CAS-No.: 120-51-4 EC-No.: 204-402-9 EC Index-No.: 607-085-00-9 REACH-no: 01-2119976371- 33	17.1 – 34.1259	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Cinnamic aldehyde	CAS-No.: 104-55-2 EC-No.: 203-213-9 EC Index-No.: 606-155-00-6 REACH-no: 01-2119935242-	16.5 – 33.075	Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1A, H317 Aquatic Chronic 3, H412

Safety Data Sheet

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
benzyl alcohol substance with national workplace exposure limit(s) (BG, CZ, DE, FI, LT, LV, PL, SI, CH)	CAS-No.: 100-51-6 EC-No.: 202-859-9 EC Index-No.: 603-057-00-5 REACH-no: 01-2119492630-	2.8 – 5.67	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Ethyl vanillin	CAS-No.: 121-32-4 EC-No.: 204-464-7 REACH-no: 01-211958961-24	2.1 – 4.2525	Eye Irrit. 2, H319
COUMARIN	CAS-No.: 91-64-5 EC-No.: 202-086-7 REACH-no: 01-2119943756- 26	1.6 – 3.1351	Acute Tox. 4 (Oral), H302 Skin Sens. 1B, H317
Vanillin	CAS-No.: 121-33-5 EC-No.: 204-465-2 REACH-no: 01-2119516040- 60	1.4 – 2.835	Eye Irrit. 2, H319
Cinnamyl acetate	CAS-No.: 103-54-8 EC-No.: 203-121-9	0.9 – 1.89	Eye Irrit. 2, H319
Cinnamon leaf oil	CAS-No.: 8015-91-6 EC-No.: 283-479-0 REACH-no: 01-2119487278- 23	0.8 – 1.62	Acute Tox. 3 (Dermal), H311 Eye Irrit. 2, H319 Skin Sens. 1, H317 Muta. 2, H341 Carc. 1B, H350 Aquatic Chronic 3, H412
Ethyl maltol	CAS-No.: 4940-11-8 EC-No.: 225-582-5	0.7 – 1.4175	Acute Tox. 4 (Oral), H302
Cinnamic alcohol	CAS-No.: 104-54-1 EC-No.: 203-212-3 REACH-no: 01-2119934496- 29	0.6 – 1.1487	Acute Tox. 4 (Oral), H302 Skin Sens. 1B, H317
Orange oil	CAS-No.: 8008-57-9 EC-No.: 232-433-8 REACH-no: 01-2119493353- 35	0.2 – 0.4725	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
Hexyl cinnamic aldehyde	CAS-No.: 101-86-0 EC-No.: 202-983-3 REACH-no: 01-2119533092- 50	0.2 – 0.3375	Skin Sens. 1, H317 Aquatic Chronic 2, H411
1,2-Cyclopentanedione, 3-methyl-	CAS-No.: 765-70-8 EC-No.: 212-154-8	0.2 – 0.3375	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317
benzaldehyde substance with national workplace exposure limit(s) (BG, FI, HU, LT, LV, PL)	CAS-No.: 100-52-7 EC-No.: 202-860-4 EC Index-No.: 605-012-00-5 REACH-no: 01-2119455540-	0.1 – 0.27	Acute Tox. 4 (Oral), H302
Benzyl acetate substance with national workplace exposure limit(s) (BE, DK, ES, IE, LT, LV, PT, RO)	CAS-No.: 140-11-4 EC-No.: 205-399-7 REACH-no: 01-2119638272- 42	0.1 – 0.27	Aquatic Chronic 3, H412

Safety Data Sheet

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
alpha-Methylcinnamic aldehyde	CAS-No.: 101-39-3 EC-No.: 202-938-8 REACH-no: 01-2119538797- 21	0.1 – 0.27	Skin Sens. 1, H317 Aquatic Chronic 1, H410
Anise oil (Spanish)	CAS-No.: 8007-70-3 EC-No.: 616-914-3	0.1 – 0.2025	Skin Sens. 1, H317 Muta. 2, H341 Carc. 2, H351 Aquatic Chronic 3, H412
Linalool	CAS-No.: 78-70-6 EC-No.: 201-134-4 EC Index-No.: 603-235-00-2 REACH-no: 01-2119474016- 42	0.1 – 0.2025	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
Citronellol Pure	CAS-No.: 106-22-9 EC-No.: 203-375-0 REACH-no: 01-2119453995- 23	0.1 – 0.2025	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317
isopentyl acetate substance with national workplace exposure limit(s) (AT, BE, BG, CY, DE, DK, EE, ES, FI, FR, GI, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK, NO, CH, TR); substance with a Community workplace exposure limit	CAS-No.: 123-92-2 EC-No.: 204-662-3 EC Index-No.: 607-130-00-2 REACH-no: 01-2119548408- 32	0.1 – 0.2025	Flam. Liq. 3, H226
Cassia oil	CAS-No.: 8007-80-5 EC-No.: 616-916-4	0.1 – 0.135	Acute Tox. 3 (Dermal), H311 Aquatic Chronic 3, H412 Eye Irrit. 2, H319 Skin Irrit. 2, H315 Skin Sens. 1, H317
Calamus oil	CAS-No.: 8015-79-0 EC-No.: 283-869-0	0.1 – 0.135	Acute Tox. 4 (Oral), H302 Skin Sens. 1, H317
Allyl caproate	CAS-No.: 123-68-2 EC-No.: 204-642-4 REACH-no: 01-2119983573- 26	0.1 – 0.135	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
2-furaldehyde substance with national workplace exposure limit(s) (AT, BE, BG, CZ, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, LT, LV, PL, PT, RO, SE, SK, NO, CH, TR)	CAS-No.: 98-01-1 EC-No.: 202-627-7 EC Index-No.: 605-010-00-4	0.1 – 0.135	Flam. Liq. 3, H226 Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Carc. 2, H351 STOT SE 3, H335 Aquatic Chronic 3, H412

Specific concentration limits:		
Name	Product identifier	Specific concentration limits (%)
Cinnamic aldehyde	CAS-No.: 104-55-2 EC-No.: 203-213-9 EC Index-No.: 606-155-00-6 REACH-no: 01-2119935242- 45	(0.01 ≤ C < 100) Skin Sens. 1, H317

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical

advice (show the label where possible). IF exposed or concerned: Get medical

advice/attention. Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Allow affected person to

breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation or rash occurs: Get medical advice/attention.

Specific treatment (see Get medical advice/attention. on this label). If skin irritation occurs: Get medical advice/attention. Wash skin with plenty of water. Take off contaminated

clothing. If skin irritation or rash occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists. Rinse cautiously with water for several minutes. Remove contact lenses, if present

and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Do NOT induce vomiting. Obtain emergency medical attention. Rinse mouth. Call a poison

center or a doctor if you feel unwell.

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

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Eye irritation.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Sand. Water spray. Dry powder. Foam. Carbon dioxide.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any

chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel. Only qualified personnel equipped with suitable

protective equipment may intervene. Avoid breathing dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Equip cleanup crew

with proper protection. For further information refer to section 8: "Exposure

controls/personal protection".

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or

diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

See Section 8. Exposure controls and personal protection. For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling

: Ensure good ventilation of the work station. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Avoid contact with skin and eyes. Avoid breathing

dust/fume/gas/mist/vapours/spray.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated

clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after

handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep away

from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container closed when not in use. Store locked up. Store in a well-ventilated place. Keep

cool

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

Storage temperature : 25 °C

Storage area : Store in a well-ventilated place. Store away from heat.

Special rules on packaging : Store in a closed container.

Packaging materials : Do not store in corrodable metal.

Germany

Storage class (LGK, TRGS 510) : LGK 6.1D - Non-combustible substances of acute toxicity, category 3 / hazardous

substances that are toxic or produce chronic effects

Joint storage table

Substances that are toxic or produce chronic effects

LGK 2A LGK 2B LGK 3 LGK 4.1A _GK 1 LGK 4.1B LGK 4.2 LGK 4.3 LGK 5.1A LGK 5.1B GK 5.1C LGK 5.2 **LGK 6.1A LGK 6.1B** LGK 6.1C LGK 6.1D _GK 6.2 LGK 7 LGK 8A LGK 8B LGK 10 LGK 11 LGK 12 LGK 13 LGK 10-13

Joint storage not permitted for : LGK 1, LGK 2A, LGK 4.1A, LGK 5.1A, LGK 5.1C, LGK 5.2, LGK 6.2, LGK 7

Joint storage with restrictions permitted for : LGK 3, LGK 4.1B, LGK 4.2, LGK 4.3, LGK 5.1B

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Joint storage permitted for : LGK 2B, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11,

LGK 12, LGK 13, LGK 10-13

Switzerland

Storage class (LK) : LK 6.1 - Toxic materials

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

benzyl alcohol (100-51-6)		
Bulgaria - Occupational Exposure Limits		
OEL TWA	5 mg/m³	
Czech Republic - Occupational Exposure Limits		
PEL (OEL TWA)	40 mg/m³	
Finland - Occupational Exposure Limits		
HTP (OEL TWA)	45 mg/m³	
	10 ppm	
Germany - Occupational Exposure Limits (TRGS 90	00)	
AGW (OEL TWA)	22 mg/m³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)	
	5 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)	
Chemical category	Skin notation	
Latvia - Occupational Exposure Limits		
OEL TWA	5 mg/m³	
Lithuania - Occupational Exposure Limits		
IPRV (OEL TWA)	5 mg/m³	
OEL chemical category	Skin notation	
Poland - Occupational Exposure Limits		
NDS (OEL TWA)	240 mg/m³	
Slovenia - Occupational Exposure Limits		
OEL TWA	22 mg/m³	
	5 ppm	
OEL STEL	44 mg/m³	
	10 ppm	
OEL chemical category	Potential for cutaneous absorption	
Switzerland - Occupational Exposure Limits		
MAK (OEL TWA)	22 mg/m³ (aerosol, vapour)	
	5 ppm (aerosol, vapour)	
OEL chemical category	Skin notation	

Safety Data Sheet

benzaldehyde (100-52-7)		
Bulgaria - Occupational Exposure Limits		
OEL TWA	5 mg/m³	
Finland - Occupational Exposure Limits		
HTP (OEL TWA)	4.4 mg/m³	
	1 ppm	
HTP (OEL C)	17.4 mg/m³	
	4 ppm	
Hungary - Occupational Exposure Limits		
AK (OEL TWA)	5 mg/m³	
CK (OEL STEL)	10 mg/m³	
Latvia - Occupational Exposure Limits		
OEL TWA	5 mg/m³	
Lithuania - Occupational Exposure Limits		
IPRV (OEL TWA)	5 mg/m³	
Poland - Occupational Exposure Limits		
NDS (OEL TWA)	10 mg/m³	
NDSCh (OEL STEL)	40 mg/m³	
Benzyl acetate (140-11-4)		
Belgium - Occupational Exposure Limits		
OEL TWA	62 mg/m³	
	10 ppm	
Denmark - Occupational Exposure Limits		
OEL TWA	61 mg/m³	
	10 ppm	
OEL STEL	122 mg/m³	
	20 ppm	
Ireland - Occupational Exposure Limits		
OEL TWA	10 ppm	
OEL STEL	30 ppm (calculated)	
Latvia - Occupational Exposure Limits		
OEL TWA	5 mg/m³	
Lithuania - Occupational Exposure Limits		
IPRV (OEL TWA)	5 mg/m³	
Portugal - Occupational Exposure Limits		
OEL TWA	10 ppm	
OEL chemical category	A4 - Not Classifiable as a Human Carcinogen	
Romania - Occupational Exposure Limits		
OEL TWA	50 mg/m³	
	8 ppm	

Safety Data Sheet

Benzyl acetate (140-11-4)	
OEL STEL	80 mg/m³
	13 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	62 mg/m³
	10 ppm
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	10 ppm
ACGIH chemical category	Not Classifiable as a Human Carcinogen
isopentyl acetate (123-92-2)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	270 mg/m³
	50 ppm
IOEL STEL	540 mg/m³
	100 ppm
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	270 mg/m³ (Pentyl acetate (all isomers))
	50 ppm (Pentyl acetate (all isomers))
MAK (OEL STEL)	540 mg/m³ (Pentylacetate)
	100 ppm (Pentylacetate)
Belgium - Occupational Exposure Limits	
OEL TWA	270 mg/m³
	50 ppm
OEL STEL	540 mg/m³
	100 ppm
Bulgaria - Occupational Exposure Limits	
OEL TWA	270 mg/m³
	50 ppm
OEL STEL	540 mg/m³
	100 ppm
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	270 mg/m³
	50 ppm
KGVI (OEL STEL)	540 mg/m³
	100 ppm
Cyprus - Occupational Exposure Limits	
OEL TWA	270 mg/m³
	50 ppm
OEL STEL	540 mg/m³
	100 ppm

Safety Data Sheet

isopentyl acetate (123-92-2)		
Denmark - Occupational Exposure Limits		
OEL TWA	271 mg/m³ (Amyl acetate, all isomers)	
	50 ppm (Amyl acetate, all isomers)	
OEL STEL	540 mg/m³	
	100 ppm	
Estonia - Occupational Exposure Limits		
OEL TWA	270 mg/m³	
	50 ppm	
OEL STEL	540 mg/m³	
	100 ppm	
Finland - Occupational Exposure Limits		
HTP (OEL TWA)	270 mg/m³ (Pentyl acetate)	
	50 ppm (Pentyl acetate)	
HTP (OEL STEL)	540 mg/m³	
	100 ppm	
France - Occupational Exposure Limits		
VME (OEL TWA)	270 mg/m³ (restrictive limit)	
	50 ppm (restrictive limit)	
VLE (OEL C/STEL)	540 mg/m³ (restrictive limit)	
	100 ppm (restrictive limit)	
Germany - Occupational Exposure Limits (TRGS 900)		
AGW (OEL TWA)	270 mg/m³	
	50 ppm	
Gibraltar - Occupational Exposure Limits		
OEL TWA	270 mg/m³	
	50 ppm	
OEL STEL	540 mg/m³	
	100 ppm	
Greece - Occupational Exposure Limits		
OEL TWA	530 mg/m³	
	100 ppm	
OEL STEL	800 mg/m³	
	150 ppm	
Hungary - Occupational Exposure Limits		
AK (OEL TWA)	270 mg/m³	
CK (OEL STEL)	540 mg/m³	
Ireland - Occupational Exposure Limits		
OEL TWA	260 mg/m³	
	50 ppm	

Safety Data Sheet

isopentyl acetate (123-92-2)		
OEL STEL	520 mg/m³	
	100 ppm	
Italy - Occupational Exposure Limits		
OEL TWA	270 mg/m³	
	50 ppm	
OEL STEL	540 mg/m³	
	100 ppm	
Latvia - Occupational Exposure Limits		
OEL TWA	270 mg/m³	
	50 ppm	
Lithuania - Occupational Exposure Limits		
IPRV (OEL TWA)	270 mg/m³	
	50 ppm	
TPRV (OEL STEL)	540 mg/m³	
	100 ppm	
Luxembourg - Occupational Exposure Limits		
OEL TWA	270 mg/m³	
	50 ppm	
OEL STEL	540 mg/m³	
	100 ppm	
Malta - Occupational Exposure Limits		
OEL TWA	270 mg/m³	
	50 ppm	
OEL STEL	540 mg/m³	
	100 ppm	
Netherlands - Occupational Exposure Limits		
TGG-15min (OEL STEL)	530 mg/m³	
	98.1 ppm	
Poland - Occupational Exposure Limits		
NDS (OEL TWA)	250 mg/m³	
NDSCh (OEL STEL)	500 mg/m³	
Portugal - Occupational Exposure Limits		
OEL TWA	270 mg/m³ (indicative limit value)	
	50 ppm (indicative limit value (Pentyl acetate, all isomers)	
OEL STEL	540 mg/m³ (indicative limit value)	
	100 ppm (indicative limit value)	
Romania - Occupational Exposure Limits		
OEL TWA	270 mg/m³	
	50 ppm	

Safety Data Sheet

isopentyl acetate (123-92-2)		
OEL STEL	540 mg/m³	
	100 ppm	
Slovakia - Occupational Exposure Limits		
NPHV (OEL TWA)	270 mg/m³	
	50 ppm	
NPHV (OEL C)	540 mg/m³	
Slovenia - Occupational Exposure Limits		
OEL TWA	270 mg/m³	
	50 ppm	
OEL STEL	540 mg/m³	
	100 ppm	
Spain - Occupational Exposure Limits		
VLA-ED (OEL TWA)	270 mg/m³ (indicative limit value)	
	50 ppm (indicative limit value)	
VLA-EC (OEL STEL)	540 mg/m³	
	100 ppm	
Sweden - Occupational Exposure Limits		
NGV (OEL TWA)	270 mg/m³ (Pentyl acetates)	
	50 ppm (Pentyl acetates)	
KGV (OEL STEL)	540 mg/m³ (Pentyl acetates)	
	100 ppm (Pentyl acetates)	
Norway - Occupational Exposure Limits		
Grenseverdi (OEL TWA)	260 mg/m³	
	50 ppm	
Korttidsverdi (OEL STEL)	325 mg/m³ (value calculated)	
	75 ppm (value calculated)	
Switzerland - Occupational Exposure Limits		
MAK (OEL TWA)	260 mg/m³ (Pentyl acetate all isomers)	
	50 ppm (Pentyl acetate all isomers)	
KZGW (OEL STEL)	260 mg/m³ (Pentyl acetate all isomers)	
	50 ppm (Pentyl acetate all isomers)	
USA - ACGIH - Occupational Exposure Limits		
ACGIH OEL TWA	50 ppm (Pentyl acetate, all isomers)	
ACGIH OEL STEL	100 ppm (Pentyl acetate, all isomers)	
2-furaldehyde (98-01-1)		
Austria - Occupational Exposure Limits		
MAK (OEL TWA)	20 mg/m³	
	5 ppm	
OEL chemical category	Skin notation, Group B Carcinogen	

Safety Data Sheet

2-furaldehyde (98-01-1)		
Belgium - Occupational Exposure Limits		
OEL TWA	8 mg/m³	
	2 ppm	
OEL chemical category	Skin	
Bulgaria - Occupational Exposure Limits		
OEL TWA	10 mg/m³ (Furfurol)	
Croatia - Occupational Exposure Limits		
GVI (OEL TWA)	8 mg/m³	
	2 ppm	
KGVI (OEL STEL)	20 mg/m³	
	5 ppm	
OEL chemical category	Skin notation	
Czech Republic - Occupational Exposure Limits		
PEL (OEL TWA)	10 mg/m³	
OEL chemical category	Potential for cutaneous absorption	
Denmark - Occupational Exposure Limits		
OEL TWA	7.9 mg/m³	
	2 ppm	
OEL STEL	15.8 mg/m³	
	4 ppm	
OEL chemical category	Potential for cutaneous absorption	
Estonia - Occupational Exposure Limits		
OEL TWA	8 mg/m³	
	2 ppm	
OEL STEL	20 mg/m³	
	5 ppm	
OEL chemical category	Skin notation	
Finland - Occupational Exposure Limits		
HTP (OEL TWA)	8 mg/m³	
	2 ppm	
HTP (OEL STEL)	20 mg/m³	
	5 ppm	
OEL chemical category	Potential for cutaneous absorption	
France - Occupational Exposure Limits		
VLE (OEL C/STEL)	8 mg/m³	
	2 ppm	
OEL chemical category	Carcinogen category 2	

Safety Data Sheet

2-furaldehyde (98-01-1)	
France - Biological limit values	
BLV	Parameter: total Furoic acid - Medium: urine - Sampling time: end of shift (per the Authority, the values for this substance must be decided and/or determined on a case by case basis. Guidance for the calculation of and interpretation of values is provided in the source)
Greece - Occupational Exposure Limits	·
OEL TWA	20 mg/m³
	5 ppm
OEL STEL	40 mg/m³
	10 ppm
OEL chemical category	skin - potential for cutaneous absorption
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	8 mg/m³
CK (OEL STEL)	20 mg/m³
OEL chemical category	Sensitizer, Potential for cutaneous absorption
Ireland - Occupational Exposure Limits	
OEL TWA	8 mg/m³
	2 ppm
OEL STEL	20 mg/m³
	5 ppm
OEL chemical category	Potential for cutaneous absorption
Latvia - Occupational Exposure Limits	
OEL TWA	10 mg/m³
Lithuania - Occupational Exposure Limit	S
IPRV (OEL TWA)	8 mg/m³
	2 ppm
TPRV (OEL STEL)	20 mg/m³
	5 ppm
OEL chemical category	Carcinogen, Skin notation
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	10 mg/m³
NDSCh (OEL STEL)	25 mg/m³
Portugal - Occupational Exposure Limits	
OEL TWA	2 ppm
OEL chemical category	A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans, skin - potential for cutaneous exposure
Romania - Occupational Exposure Limits	
OEL TWA	10 mg/m³
	2.5 ppm
OEL STEL	15 mg/m³

Safety Data Sheet

2-furaldehyde (98-01-1)			
	4 ppm		
OEL chemical category	C2		
Slovakia - Occupational Exposure Limits			
NPHV (OEL TWA)	7.9 mg/m³		
	2 ppm		
OEL chemical category	Potential for cutaneous absorption		
Spain - Occupational Exposure Limits			
VLA-ED (OEL TWA)	8 mg/m³		
	2 ppm		
OEL chemical category	skin - potential for cutaneous absorption		
Spain - Biological limit values			
BLV	200 mg/l Parameter: Furoic acid - Medium: urine - Sampling time: end of shift (with hydrolysis)		
Sweden - Occupational Exposure Limits			
NGV (OEL TWA)	8 mg/m³		
	2 ppm		
KGV (OEL STEL)	20 mg/m³		
	5 ppm		
OEL chemical category	Skin notation		
United Kingdom - Occupational Exposure Limits			
WEL TWA (OEL TWA)	8 mg/m³		
	2 ppm		
WEL STEL (OEL STEL)	20 mg/m³		
	5 ppm		
WEL chemical category	Potential for cutaneous absorption		
Norway - Occupational Exposure Limits			
Grenseverdi (OEL TWA)	8 mg/m³		
	2 ppm		
Korttidsverdi (OEL STEL)	16 mg/m³ (value calculated)		
	4 ppm (value calculated)		
OEL chemical category	Skin notation		
Switzerland - Occupational Exposure Limits	Switzerland - Occupational Exposure Limits		
MAK (OEL TWA)	8 mg/m³		
	2 ppm		
OEL chemical category	Skin notation		
USA - ACGIH - Occupational Exposure Limits			
ACGIH OEL TWA	0.2 ppm		
ACGIH chemical category	Confirmed Animal Carcinogen with Unknown Relevance to Humans, Skin - potential significant contribution to overall exposure by the cutaneous route		

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

2-furaldehyde (98-01-1)	
USA - ACGIH - Biological Exposure Indices	
BEI	200 mg/l Parameter: Furoic acid with hydrolysis - Medium: urine - Sampling time: end of shift (nonspecific)

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Personal protective equipment symbol(s):





8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses. Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Wear protective gloves.

8.2.2.3. Respiratory protection

Respiratory protection:

Wear appropriate mask. [In case of inadequate ventilation] wear respiratory protection.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Do not eat, drink or smoke during use.

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : Conforms to standard.

characteristic. Odour Odour threshold Not available Melting point : Not applicable Freezing point Not available Boiling point Not available Flammability : Not applicable Lower explosion limit : Not available : Not available Upper explosion limit : > 93.3 °C Flash point : Not available Auto-ignition temperature Decomposition temperature Not available рΗ Not available

Viscosity, kinematic : Not available Solubility : Not available

Partition coefficient n-octanol/water (Log Kow) : Not available

Vapour pressure : 0.001509945 mm Hg (calculated value)

Vapour pressure at 50°C : Not available
Density : Not available
Relative density : Not available
Relative vapour density at 20°C : Not available
Particle characteristics : Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

VOC content : 4.59 % (calculated value)(CARB VOC) (%w/w)

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 11: Toxicological information

1.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Acute toxicity (dermal) : Acute toxicity (inhalation) :	Not classified Not classified	
CINNAMON BUNS FR90087		
ATE CLP (oral)	1089.064 mg/kg bodyweight	
benzyl benzoate (120-51-4)		
LD50 oral rat	> 2000 mg/kg (Source: ECHA_API)	
LD50 oral	1160 mg/kg bodyweight	
LD50 dermal rabbit	4000 mg/kg (Source: NLM_CIP)	
Cinnamic aldehyde (104-55-2)		
LD50 oral rat	2220 mg/kg (Source: NLM_CIP)	
LD50 oral	2220 mg/kg	
LD50 dermal rabbit	1260 mg/kg (Source: EPA_HPV)	
benzyl alcohol (100-51-6)		
LD50 oral rat	1230 mg/kg (Source: NLM_CIP)	
LD50 oral	1570 mg/kg	
Ethyl vanillin (121-32-4)		
LD50 oral rat	1590 mg/kg (Source: NLM_CIP)	
LD50 oral	3000 mg/kg bodyweight	
LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)	
COUMARIN (91-64-5)		
LD50 oral rat	> 5000 mg/kg (Source: JAPAN_GHS)	
LD50 dermal rat	293 mg/kg (Source: ECHA_API)	
Vanillin (121-33-5)		
LD50 dermal rabbit	> 5010 mg/kg (Source: OECD_SIDS)	
LD50 dermal	2600 mg/kg bodyweight	
Cinnamyl acetate (103-54-8)		
LD50 oral rat	3300 mg/kg (Source: NLM_CIP)	
LD50 oral	3330 mg/kg	
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)	
Cinnamon leaf oil (8015-91-6)		
LD50 oral rat	2650 mg/kg (Source: NZ_CCID)	
LD50 oral	2650 mg/kg	
LD50 dermal rabbit	702 mg/kg (Source: ECHA_API)	
Ethyl maltol (4940-11-8)		
LD50 oral rat	1150 mg/kg (Source: NLM_CIP)	
LD50 oral	1200 mg/kg bodyweight	

9/18/2024 (Issue date) EN (English) 18/30

Safety Data Sheet

Ethyl maltol (4940-11-8)				
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)			
Cinnamic alcohol (104-54-1)	Cinnamic alcohol (104-54-1)			
LD50 oral	2000 mg/kg bodyweight			
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)			
Orange oil (8008-57-9)				
LD50 oral rat	4400 mg/kg (Source: NZ_CCID)			
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)			
Hexyl cinnamic aldehyde (101-86-0)				
LD50 oral rat	3100 mg/kg (Source: NLM_CIP)			
LD50 oral	3100 mg/kg bodyweight			
LD50 dermal rabbit	> 3000 mg/kg (Source: EPA_HPV)			
LC50 Inhalation - Rat	> 5 mg/l/4h			
1,2-Cyclopentanedione, 3-methyl- (765-70-8)				
LD50 oral	1067 mg/kg bodyweight			
benzaldehyde (100-52-7)				
LD50 oral rat	1292 mg/kg (Source: JAPAN_GHS)			
LD50 dermal rabbit	> 1250 mg/kg (Source: JAPAN_GHS)			
LC50 Inhalation - Rat	< 5 mg/l/4h			
Benzyl acetate (140-11-4)				
LD50 oral rat	2490 mg/kg (Source: JAPAN_GHS)			
LD50 oral	2490 mg/kg bodyweight			
LD50 dermal rabbit	> 5000 mg/kg (Source: JAPAN_GHS)			
alpha-Methylcinnamic aldehyde (101-39-3)				
LD50 oral rat	2050 mg/kg (Source: NLM_CIP)			
LD50 oral	2050 mg/kg			
LD50 dermal rabbit	> 5 g/kg (Source: NLM_CIP)			
Anise oil (Spanish) (8007-70-3)				
LD50 oral rat	2250 mg/kg (Source: NLM_CIP)			
LD50 oral	2200 mg/kg			
Linalool (78-70-6)				
LD50 oral	2790 mg/kg			
Citronellol Pure (106-22-9)				
LD50 oral rat	3450 mg/kg (Source: NLM_CIP)			
LD50 oral	3450 mg/kg bodyweight			
LD50 dermal rabbit	2650 mg/kg (Source: EPA_HPV)			
LD50 dermal	2650 mg/kg bodyweight			

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Cassia oil (8007-80-5)	
LD50 oral rat	2800 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	320 mg/kg (Source: NZ_CCID)
Calamus oil (8015-79-0)	
LD50 oral rat	777 mg/kg (Source: NLM_CIP)
LD50 oral	780 mg/kg bodyweight
Allyl caproate (123-68-2)	
LD50 oral	218 mg/kg
LD50 dermal rabbit	820 mg/kg (Source: ECHA_API)
LD50 dermal	300 mg/kg
2-furaldehyde (98-01-1)	
LD50 oral rat	125 mg/kg (Source: JAPAN_GHS)
LD50 dermal rabbit	500 – 1000 mg/kg (Source: JAPAN_GHS)
LC50 Inhalation - Rat	756 mg/m³ (Exposure time: 1 h Source: WHO)
LC50 Inhalation - Rat (Vapours)	1 mg/l
Serious eye damage/irritation : Respiratory or skin sensitisation : Germ cell mutagenicity :	Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. Suspected of causing genetic defects. May cause cancer.
COUMARIN (91-64-5)	may sudde surrest.
IARC group	3 - Not classifiable
Benzyl acetate (140-11-4)	
IARC group	3 - Not classifiable
2-furaldehyde (98-01-1)	
IARC group	3 - Not classifiable
	Not classified Not classified
2-furaldehyde (98-01-1)	TVOT GRADATING
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure :	Not classified Not classified
benzyl benzoate (120-51-4)	
Viscosity, kinematic	7.456 mm²/s
Orange oil (8008-57-9)	
Hydrocarbon	Yes

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

11.2.2. Other information

Potential adverse human health effects and

symptoms

: Based on available data, the classification criteria are not met

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term

(acute)

: Very toxic to aquatic life.

Hazardous to the aquatic environment, long-term

: Toxic to aquatic life with long lasting effects.

(chronic)			
benzyl benzoate (120-51-4)			
LC50 - Fish [1]	2.32 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA)		
NOEC (chronic)	0.168 mg/l		
benzyl alcohol (100-51-6)			
LC50 - Fish [1]	460 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA)		
LC50 - Fish [2]	10 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static] Source: EPA)		
EC50 - Crustacea [1]	23 mg/l (Exposure time: 48 h - Species: water flea)		
Ethyl vanillin (121-32-4)			
LC50 - Fish [1]	81.4 – 94.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)		
Vanillin (121-33-5)			
LC50 - Fish [1]	53 – 61.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)		
LC50 - Fish [2]	88 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA)		
NOEC (acute)	10000 mg/kg (Exposure time: 42 Days - Species: Eisenia foetida [soil dry weight])		
Ethyl maltol (4940-11-8)			
LC50 - Fish [1] > 85 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss Source:			
benzaldehyde (100-52-7)			
LC50 - Fish [1]	10.6 – 11.8 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through] Source: EPA)		
LC50 - Fish [2]	12.69 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static] Source: IUCLID)		
Linalool (78-70-6)			
EC50 96h - Algae [1]	88.3 mg/l (Species: Desmodesmus subspicatus)		
Allyl caproate (123-68-2)			
LC50 - Fish [1]	0.117 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA)		
2-furaldehyde (98-01-1)			
LC50 - Fish [1]	13.4 – 19.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA)		
LC50 - Fish [2]	16.79 – 26.35 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)		

Safety Data Sheet

12.2. Persistence and degradability	12.2. Persistence and degradability		
CINNAMON BUNS FR90087			
Persistence and degradability	Not established.		
benzyl benzoate (120-51-4)			
Persistence and degradability	May cause long-term adverse effects in the environment.		
Cinnamic aldehyde (104-55-2)			
Persistence and degradability	Rapidly degradable		
benzyl alcohol (100-51-6)			
Persistence and degradability	Rapidly degradable		
Ethyl vanillin (121-32-4)			
Persistence and degradability	Rapidly degradable		
COUMARIN (91-64-5)			
Persistence and degradability	Rapidly degradable		
Vanillin (121-33-5)			
Persistence and degradability	Rapidly degradable		
Cinnamyl acetate (103-54-8)			
Persistence and degradability	Rapidly degradable		
Cinnamon leaf oil (8015-91-6)			
Persistence and degradability	Rapidly degradable		
Ethyl maltol (4940-11-8)			
Persistence and degradability	Rapidly degradable		
Cinnamic alcohol (104-54-1)			
Persistence and degradability	Rapidly degradable		
Orange oil (8008-57-9)			
Persistence and degradability	Rapidly degradable		
Hexyl cinnamic aldehyde (101-86-0)			
Persistence and degradability	Rapidly degradable		
1,2-Cyclopentanedione, 3-methyl- (765-70-8)			
Persistence and degradability	Rapidly degradable		
benzaldehyde (100-52-7)			
Persistence and degradability	Rapidly degradable		
Benzyl acetate (140-11-4)			
Persistence and degradability	Rapidly degradable		
alpha-Methylcinnamic aldehyde (101-39-3)			
Persistence and degradability	Rapidly degradable		
Anise oil (Spanish) (8007-70-3)			
Persistence and degradability	Rapidly degradable		
-			

Safety Data Sheet

Persistence and degradability Cassia oil (3007-80-5) Persistence and degradability Rapidly degradable Cassia oil (3007-80-5) Persistence and degradability Rapidly degradable Cassia oil (3007-80-5) Persistence and degradability Rapidly degradabile Cassia oil (3007-80-5) Persistence and degradability Rapidly degradabile Calamus oil (3015-79-0) Persistence and degradability Rapidly degradabile Allyl caproate (123-88-2) Persistence and degradability Rapidly degradabile 2-furaldehyde (38-01-1) Persistence and degradability Rapidly degradabile 12.3. Bioaccumulative potential CINNAMON BUNS FR80087 Bioaccumulative potential Denzyl bonzoate (120-51-4) Partition coefficient n-octanoliwater (Log Pow) Soloccumulative potential Cinnamic aldehyde (100-51-6) Partition coefficient n-octanoliwater (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanoliwater (Log Pow) 1.61 (at 25 °C) Vanillin (121-33-4) Partition coefficient n-octanoliwater (Log Pow) 1.63 (at 25 °C) Vanillin (121-33-4) Partition coefficient n-octanoliwater (Log Pow) 1.64 (at 25 °C) Vanillin (121-33-4) Partition coefficient n-octanoliwater (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maitol (4940-11-8) Partition coefficient n-octanoliwater (Log Pow) 2.9 (at 25 °C) Cinnamyl accetate (103-54-3) Partition coefficient n-octanoliwater (Log Pow) 2.9 (at 25 °C) Cinnamyl accetate (103-54-3) Partition coefficient n-octanoliwater (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanoliwater (Log Pow) 1.58 (at 27 °C (at pH 7) Ethyl maitol (4940-11-8) Partition coefficient n-octanoliwater (Log Pow) 1.58 (at 27 °C (at pH 3.52) benzaldohyde (100-52-7) BCF - Fish [1] (no significant bioaccumulation)	inalool (78-70-6)			
Persistence and degradability Rapidly degradable isopentyl acetate (123-92-2) Persistence and degradability Rapidly degradable Casia oil (8007-80-5) Persistence and degradability Rapidly degradable Calamus oil (8015-79-0) Persistence and degradability Rapidly degradable Allyl caproate (123-88-2) Persistence and degradability Rapidly degradable 2-furaldehyde (98-01-1) Persistence and degradability Rapidly degradable 12.3. Bioaccumulative potential CINNAMON BURS F89087 Bioaccumulative potential Not estabilished. Denzyl benzoste (120-51-4) Partition coefficient n-octanoliwater (Log Pow) 3.97 (at 25 °C) Bioaccumulative potential Not estabilished. Cinnamic aldehyde (104-55-2) Partition coefficient n-octanoliwater (Log Pow) 2.1065 (at 25 °C) benzyl alcohol (100-51-6) Partition coefficient n-octanoliwater (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanoliwater (Log Pow) 1.23 (at 22 °C) Vanillin (121-33-5) Partition coefficient n-octanoliwater (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl mallot (4940-41-8) Partition coefficient n-octanoliwater (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanoliwater (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanoliwater (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanoliwater (Log Pow) 1.63 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Persistence and degradability	Rapidly degradable		
isopentyl acetate (123-92-2) Persistence and degradability Rapidly degradable Casia oil (8007-80-5) Persistence and degradability Rapidly degradable Calamus oil (8015-79-0) Persistence and degradability Rapidly degradable Allyl caproate (123-68-2) Persistence and degradability Rapidly degradable 2-furaldehyde (98-01-1) Persistence and degradability Rapidly degradable 12.3. Bioaccumulative potential CINNAMON BUNS FR90087 Bioaccumulative potential Not established. benzyl benzoate (120-51-4) Partition coefficient n-octanol/water (Log Pow) 3.97 (at 25 °C) benzyl acetic endolester (Log Pow) 2.1085 (at 25 °C) benzyl accoefficient n-octanol/water (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.23 (at 22 °C) Cinnamic cefficient n-octanol/water (Log Pow) 1.23 (at 22 °C) Cinnamy acetate (103-58-8) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl matiol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamy acetate (103-58-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-58-1) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-58-1) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-58-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Citronellol Pure (106-22-9)			
Persistence and degradability Rapidly degradable Casia oil (8007-80-5) Persistence and degradability Rapidly degradable Calamus oil (3015-79-0) Persistence and degradability Rapidly degradable Allyl caproate (123-68-2) Persistence and degradability Rapidly degradable 2-furaldehyde (98-01-1) Persistence and degradability Rapidly degradable 12.3. Bioaccumulative potential CINNAMON BUNS FR90087 Bioaccumulative potential Not established. benzyl benzoate (120-51-4) Partition coefficient n-octanol/water (Log Pow) 3.97 (at 25 °C) Bioaccumulative potential Not established. Cinnamic aldehyde (104-55-2) Partition coefficient n-octanol/water (Log Pow) [2.1085 (at 25 °C)] benzyl abcohol (100-51-6) Partition coefficient n-octanol/water (Log Pow) [1.05] Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) [1.23 (at 22 °C)] Cinnamy acceptable (103-54-8) Partition coefficient n-octanol/water (Log Pow) [1.23 (at 22 °C)] Cinnamy acceptable (103-54-8) Partition coefficient n-octanol/water (Log Pow) [2.7 (at 35 °C (at pH 7)] Ethyl matiol (4840-11-8) Partition coefficient n-octanol/water (Log Pow) [2.9 (at 25 °C)] Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) [2.9 (at 25 °C)] Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) [2.9 (at 25 °C)] Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) [1.636 (at 27 °C (at pH 3.52)] benzaldehyde (100-52-7)	Persistence and degradability	Rapidly degradable		
Cassia oil (8007-80-5) Persistence and degradability Rapidly degradable Calamus oil (8015-79-0) Persistence and degradability Rapidly degradable Allyl caproate (123-68-2) Persistence and degradability Rapidly degradable 2-furaldehyde (98-01-1) Persistence and degradability Rapidly degradable 12.3. Bloaccumulative potential CINNAMON BUNS FR80087 Bioaccumulative potential Persitience officient n-octanol/water (Log Pow) Bioaccumulative potential Not established. benzyl benzoate (120-51-4) Partition coefficient n-octanol/water (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.05 Ethyl vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) 1.23 (at 22 °C) Cinnamy acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maitol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamy acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamy acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamy acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.836 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	isopentyl acetate (123-92-2)			
Persistence and degradability Rapidly degradable Calamus oil (8015-79-0) Persistence and degradability Rapidly degradable Aliyi caproate (123-68-2) Persistence and degradability Rapidly degradable 2-furaldehyde (98-01-1) Persistence and degradability Rapidly degradable 12.3. Bioaccumulative potential CINNAMON BUNS FR90087 Bioaccumulative potential Not established. benzyl benzoate (120-51-4) Partition coefficient n-octanol/water (Log Pow) 3.97 (at 25 °C) Bioaccumulative potential Not established. Cinnamic aldehyde (140-55-2) Partition coefficient n-octanol/water (Log Pow) 2.1065 (at 25 °C) benzyl alcohol (100-51-6) Partition coefficient n-octanol/water (Log Pow) 1.05 Ethyl manillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.61 (at 25 °C) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.836 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Persistence and degradability	Rapidly degradable		
Calamus oil (8015-79-0) Persistence and degradability Rapidly degradable Altyl caproate (123-68-2) Persistence and degradability Rapidly degradable 2-furaldehyde (98-01-1) Persistence and degradability Rapidly degradable 12.3. Bloaccumulative potential CINNAMON BUNS FR90087 Bloaccumulative potential Not established. benzyl benzoate (120-51-4) Partition coefficient n-octanol/water (Log Pow) 3.97 (at 25 °C) Bloaccumulative potential Not established. Cinnamic aldehyde (104-55-2) Partition coefficient n-octanol/water (Log Pow) 2.1065 (at 25 °C) benzyl alcohol (100-51-6) Partition coefficient n-octanol/water (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.61 (at 25 °C) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Cassia oil (8007-80-5)			
Persistence and degradability Rapidly degradable Allyl caproate (123-68-2) Persistence and degradability Rapidly degradable 2-furaldehyde (98-01-1) Persistence and degradability Rapidly degradable 12.3. Bioaccumulative potential CINNAMON BUNS FR90087 Bioaccumulative potential Not established. Denzyl benzoate (120-51-4) Partition coefficient n-octanol/water (Log Pow) 2.1065 (at 25 °C) Bioaccumulative potential Not established. Cinnamic aldehyde (104-55-2) Partition coefficient n-octanol/water (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.61 (at 25 °C) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamyl acetate (103-54-1) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Persistence and degradability	Rapidly degradable		
Allyl caproate (123-68-2) Persistence and degradability Rapidly degradable 2-furaldehyde (98-01-1) Persistence and degradability Rapidly degradable 12.3. Bioaccumulative potential CINNAMON BUNS FR90087 Bioaccumulative potential Not established. Pertition coefficient n-octanol/water (Log Pow) 3.97 (at 25 °C) Bioaccumulative potential Not established. Cinnamic aldehyde (104-55-2) Partition coefficient n-octanol/water (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.61 (at 25 °C) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl mattol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl mattol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Calamus oil (8015-79-0)			
Persistence and degradability Rapidly degradable 2-furaldehyde (98-01-1) Persistence and degradability Rapidly degradable 12.3. Bloaccumulative potential CINNAMON BUNS FR90087 Bioaccumulative potential Not established. benzyl benzoate (120-51-4) Partition coefficient n-octanol/water (Log Pow) 3.97 (at 25 °C) Bioaccumulative potential Not established. Cinnamic aldehyde (104-55-2) Partition coefficient n-octanol/water (Log Pow) 2.1065 (at 25 °C) benzyl alcohol (100-51-6) Partition coefficient n-octanol/water (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.23 (at 22 °C) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Persistence and degradability	Rapidly degradable		
2-furaldehyde (98-01-1) Persistence and degradability Rapidly degradable 12.3. Bioaccumulative potential CINNAMON BUNS FR90087 Bioaccumulative potential Not established. benzyl benzoate (120-51-4) Partition coefficient n-octanol/water (Log Pow) 3.97 (at 25 °C) Bioaccumulative potential Not established. Cinnamic aldehyde (104-55-2) Partition coefficient n-octanol/water (Log Pow) 2.1065 (at 25 °C) benzyl alcohol (100-51-6) Partition coefficient n-octanol/water (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.61 (at 25 °C) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl matcol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (104-52-7)	Allyl caproate (123-68-2)			
Persistence and degradability Rapidly degradable 12.3. Bloaccumulative potential CINNAMON BUNS FR90087 Bioaccumulative potential Not established. benzyl benzoate (120-51-4) Partition coefficient n-octanol/water (Log Pow) 3.97 (at 25 °C) Bioaccumulative potential Not established. Cinnamic aldehyde (104-55-2) Partition coefficient n-octanol/water (Log Pow) 2.1065 (at 25 °C) benzyl alcohol (100-51-6) Partition coefficient n-octanol/water (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.23 (at 22 °C) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Persistence and degradability	Rapidly degradable		
12.3. Bioaccumulative potential CINNAMON BUNS FR90087 Bioaccumulative potential Not established. benzyl benzoate (120-51-4) Partition coefficient n-octanol/water (Log Pow) 3.97 (at 25 °C) Bioaccumulative potential Not established. Cinnamic aldehyde (104-55-2) Partition coefficient n-octanol/water (Log Pow) 2.1065 (at 25 °C) benzyl alcohol (100-51-6) Partition coefficient n-octanol/water (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.81 (at 25 °C) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	2-furaldehyde (98-01-1)			
CINNAMON BUNS FR90087 Bioaccumulative potential Not established. benzyl benzoate (120-51-4) Partition coefficient n-octanol/water (Log Pow) 3.97 (at 25 °C) Bioaccumulative potential Not established. Cinnamic aldehyde (104-55-2) Partition coefficient n-octanol/water (Log Pow) 2.1085 (at 25 °C) benzyl alcohol (100-51-6) Partition coefficient n-octanol/water (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.81 (at 25 °C) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.836 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Persistence and degradability	Rapidly degradable		
Bioaccumulative potential Not established. benzyl benzoate (120-51-4) Partition coefficient n-octanol/water (Log Pow) 3.97 (at 25 °C) Bioaccumulative potential Not established. Cinnamic aldehyde (104-55-2) Partition coefficient n-octanol/water (Log Pow) 2.1065 (at 25 °C) benzyl alcohol (100-51-6) Partition coefficient n-octanol/water (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.61 (at 25 °C) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) 1.23 (at 22 °C) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	12.3. Bioaccumulative potential			
benzyl benzoate (120-51-4) Partition coefficient n-octanol/water (Log Pow) 3.97 (at 25 °C) Bioaccumulative potential Not established. Cinnamic aldehyde (104-55-2) Partition coefficient n-octanol/water (Log Pow) 2.1065 (at 25 °C) benzyl alcohol (100-51-6) Partition coefficient n-octanol/water (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.61 (at 25 °C) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) 1.23 (at 22 °C) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	CINNAMON BUNS FR90087			
Partition coefficient n-octanol/water (Log Pow) Bioaccumulative potential Not established. Cinnamic aldehyde (104-55-2) Partition coefficient n-octanol/water (Log Pow) Denzyl alcohol (100-51-6) Partition coefficient n-octanol/water (Log Pow)	Bioaccumulative potential	Not established.		
Bioaccumulative potential Cinnamic aldehyde (104-55-2) Partition coefficient n-octanol/water (Log Pow) benzyl alcohol (100-51-6) Partition coefficient n-octanol/water (Log Pow) I.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) I.61 (at 25 °C) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) I.23 (at 22 °C) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) Z.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) Z.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) I.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	benzyl benzoate (120-51-4)			
Cinnamic aldehyde (104-55-2) Partition coefficient n-octanol/water (Log Pow) benzyl alcohol (100-51-6) Partition coefficient n-octanol/water (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.61 (at 25 °C) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) 1.23 (at 22 °C) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Partition coefficient n-octanol/water (Log Pow)	3.97 (at 25 °C)		
Partition coefficient n-octanol/water (Log Pow) benzyl alcohol (100-51-6) Partition coefficient n-octanol/water (Log Pow) 1.05 Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.61 (at 25 °C) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) 1.23 (at 22 °C) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Bioaccumulative potential	Not established.		
benzyl alcohol (100-51-6) Partition coefficient n-octanol/water (Log Pow) Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) I.61 (at 25 °C) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) I.23 (at 22 °C) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Cinnamic aldehyde (104-55-2)			
Partition coefficient n-octanol/water (Log Pow) Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) 1.61 (at 25 °C) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) 1.23 (at 22 °C) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Partition coefficient n-octanol/water (Log Pow)	2.1065 (at 25 °C)		
Ethyl vanillin (121-32-4) Partition coefficient n-octanol/water (Log Pow) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) 1.23 (at 22 °C) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	benzyl alcohol (100-51-6)			
Partition coefficient n-octanol/water (Log Pow) 1.61 (at 25 °C) Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) 1.23 (at 22 °C) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Partition coefficient n-octanol/water (Log Pow)	1.05		
Vanillin (121-33-5) Partition coefficient n-octanol/water (Log Pow) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Ethyl vanillin (121-32-4)			
Partition coefficient n-octanol/water (Log Pow) 1.23 (at 22 °C) Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) 2.7 (at 35 °C (at pH 7) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Partition coefficient n-octanol/water (Log Pow)	1.61 (at 25 °C)		
Cinnamyl acetate (103-54-8) Partition coefficient n-octanol/water (Log Pow) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Vanillin (121-33-5)			
Partition coefficient n-octanol/water (Log Pow) Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Partition coefficient n-octanol/water (Log Pow)	1.23 (at 22 °C)		
Ethyl maltol (4940-11-8) Partition coefficient n-octanol/water (Log Pow) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Cinnamyl acetate (103-54-8)			
Partition coefficient n-octanol/water (Log Pow) 2.9 (at 25 °C) Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Partition coefficient n-octanol/water (Log Pow)	2.7 (at 35 °C (at pH 7)		
Cinnamic alcohol (104-54-1) Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Ethyl maltol (4940-11-8)	Ethyl maltol (4940-11-8)		
Partition coefficient n-octanol/water (Log Pow) 1.636 (at 27 °C (at pH 3.52) benzaldehyde (100-52-7)	Partition coefficient n-octanol/water (Log Pow)	2.9 (at 25 °C)		
benzaldehyde (100-52-7)	Cinnamic alcohol (104-54-1)			
	Partition coefficient n-octanol/water (Log Pow)	1.636 (at 27 °C (at pH 3.52)		
BCF - Fish [1] (no significant bioaccumulation)	benzaldehyde (100-52-7)			
	BCF - Fish [1]	(no significant bioaccumulation)		

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

benzaldehyde (100-52-7)		
Partition coefficient n-octanol/water (Log Pow)	1.4 (at 25 °C)	
Benzyl acetate (140-11-4)		
Partition coefficient n-octanol/water (Log Pow)	1.96 (at 25 °C (at pH 7)	
Citronellol Pure (106-22-9)		
Partition coefficient n-octanol/water (Log Pow)	3.41 (at 25 °C)	
isopentyl acetate (123-92-2)		
Partition coefficient n-octanol/water (Log Pow)	2.7 (at 35 °C)	
Allyl caproate (123-68-2)		
Partition coefficient n-octanol/water (Log Pow)	3.191 (at 20 °C (at pH 5)	
2-furaldehyde (98-01-1)		
Partition coefficient n-octanol/water (Log Pow)	0.67	

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods Product/Packaging disposal recommendations Ecological information HP Code

- : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- : Dispose in a safe manner in accordance with local/national regulations.
- : Avoid release to the environment.
- : HP6 "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.
- HP7 "Carcinogenic:" waste which induces cancer or increases its incidence
- HP4 "Irritant skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.
- HP11 "Mutagenic:" waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell.
- HP13 "Sensitising:" waste which contains one or more substances known to cause sensitising effects to the skin or the respiratory organs.
- HP14 "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID n	14.1. UN number or ID number			
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
14.2. UN proper shippin	g name			
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate)	Environmentally hazardous substance, liquid, n.o.s. (Benzyl Benzoate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate)
Transport document descr	iption			
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Benzyl Benzoate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Benzyl Benzoate), 9, III
14.3. Transport hazard o	class(es)			
9	9	9	9	9
**************************************	**************************************	**************************************	**************************************	**************************************
14.4. Packing group	14.4. Packing group			
III	111	111	III	III
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information	n available			

14.6. Special precautions for user

Overland transport

Classification code (ADR) : M6

Special provisions (ADR) : 274, 335, 375, 601

Limited quantities (ADR) : 5I Excepted quantities (ADR) : E1

Packing instructions (ADR) : P001, IBC03, LP01, R001

Special packing provisions (ADR) : PP1
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions : TP1, TP29

(ADR)

Tank code (ADR) : LGBV
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Special provisions for carriage - Loading, unloading : CV13

and handling (ADR)

Hazard identification number (Kemler No.) : 90

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Orange plates : 90 3082

Tunnel restriction code (ADR) : -

EAC code : •3Z

Transport by sea

Special provisions (IMDG) : 274, 335, 969

Limited quantities (IMDG) : 5 L Excepted quantities (IMDG) : E1 : LP01, P001 Packing instructions (IMDG) : PP1 Special packing provisions (IMDG) IBC packing instructions (IMDG) : IBC03 : T4 Tank instructions (IMDG) Tank special provisions (IMDG) TP1, TP29 : F-A EmS-No. (Fire) EmS-No. (Spillage) : S-F Stowage category (IMDG) : A

Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y964
PCA limited quantity max net quantity (IATA) : 30kgG
PCA packing instructions (IATA) : 964
PCA max net quantity (IATA) : 450L
CAO packing instructions (IATA) : 964
CAO max net quantity (IATA) : 450L

Special provisions (IATA) : A97, A158, A197, A215

ERG code (IATA) : 9L

Inland waterway transport

Classification code (ADN) : M6

Special provisions (ADN) : 274, 335, 375, 601

Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E1
Carriage permitted (ADN) : T
Equipment required (ADN) : PP
Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : M6

Special provisions (RID) : 274, 335, 375, 601

Limited quantities (RID) : 5L Excepted quantities (RID) : E1

Packing instructions (RID) : P001, IBC03, LP01, R001

Special packing provisions (RID) : PP1
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions : TP1, TP29

(RID)

Tank codes for RID tanks (RID) : LGBV

Transport category (RID) : 3

Special provisions for carriage – Packages (RID) : W12

Special provisions for carriage - Loading, unloading : CW13, CW31

and handling (RID)

Colis express (express parcels) (RID) : CE8
Hazard identification number (RID) : 90

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(a)	Orange oil ; isopentyl acetate ; 2-furaldehyde	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	CINNAMON BUNS FR90087; benzyl benzoate; Cinnamic aldehyde; benzyl alcohol; Cinnamyl acetate; Cinnamon leaf oil; Orange oil; Hexyl cinnamic aldehyde; benzaldehyde; alpha-Methylcinnamic aldehyde; Anise oil (Spanish); Linalool; Citronellol Pure; Cassia oil; Calamus oil; Allyl caproate; 2-furaldehyde	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	CINNAMON BUNS FR90087; benzyl benzoate; Cinnamic aldehyde; Cinnamon leaf oil; Orange oil; Hexyl cinnamic aldehyde; Benzyl acetate; alpha- Methylcinnamic aldehyde; Anise oil (Spanish); Cassia oil; Allyl caproate; 2-furaldehyde	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
40.	Orange oil ; isopentyl acetate ; 2-furaldehyde	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Council Regulation (EC) for the control of dual-use items

Contains substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

VOC Directive (2004/42)

VOC content : 4.59 % (calculated value)(CARB VOC) (%w/w)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

France

Occupational diseases	
Code	Description
RG 74	Occupational disorders caused by furfural and furfuryl alcohol
RG 84	Conditions caused by liquid organic solvents for professional use: saturated or unsaturated aliphatic or cyclic liquid hydrocarbons and mixtures thereof; liquid halogenated hydrocarbons; nitrated derivatives of aliphatic hydrocarbons; alcohols; glycols, glycol ethers; ketones; aldehydes; aliphatic and cyclic ethers, including tetrahydrofuran; esters; dimethylformamide and dimethylacetamine; acetonitrile and propionitrile; pyridine; dimethylsulfone and dimethylsulfoxide

Germany

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1).

List of sensitizing substances (TRGS 907) : Contains sensitizing substances according TRGS 907.

Chemicals Prohibition Ordinance (ChemVerbotsV) : This product is subject to ChemVerbotsV Annex 2 Entry 1. The following requirements must be observed: authorization requirement (according to § 6 paragraph 1 sentence 1), basic

requirements for carrying out the delivery (according to § 8 paragraph 1, 3 and 4), identification and documentation (according to § 9 paragraph 1 to 3) and exclusion of the

shipping route (according to § 10).

Hazardous Incident Ordinance (12. BImSchV) : Is not subject to the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

ABM category : A(1) - highly toxic for aquatic organisms, may have longterm hazardous effects in aquatic

environment

SZW-lijst van kankerverwekkende stoffen : Cinnamon leaf oil ,Orange oil ,Calamus oil are listed

SZW-lijst van mutagene stoffen : Cinnamon leaf oil ,Orange oil ,Calamus oil are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen – : None of the components are listed

SZW-iljst van reprotoxische stollen – : None of the components are liste Vruchtbaarheid

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product

Pregnant/breastfeeding women working with the product must not be in direct contact with

the product

The requirements from the Danish Working Environment Authorities regarding work with

carcinogens must be followed during use and disposal

Switzerland

Chemicals Ordinance (ChemO, SR 813.11) : Group 1

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

9/18/2024 (Issue date) EN (English) 28/30

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 16: Other information

Other information : None.

Full text of H- and EUH-statements:		
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3	
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3	
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4	
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1	
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1	
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2	
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3	
Asp. Tox. 1	Aspiration hazard, Category 1	
Carc. 1B	Carcinogenicity, Category 1B	
Carc. 2	Carcinogenicity, Category 2	
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2	
Flam. Liq. 3	Flammable liquids, Category 3	
H226	Flammable liquid and vapour.	
H301	Toxic if swallowed.	
H302	Harmful if swallowed.	
H304	May be fatal if swallowed and enters airways.	
H311	Toxic in contact with skin.	
H312	Harmful in contact with skin.	
H315	Causes skin irritation.	
H317	May cause an allergic skin reaction.	
H319	Causes serious eye irritation.	
H331	Toxic if inhaled.	
H332	Harmful if inhaled.	
H335	May cause respiratory irritation.	
H341	Suspected of causing genetic defects.	
H350	May cause cancer.	
H351	Suspected of causing cancer.	
H400	Very toxic to aquatic life.	
H410	Very toxic to aquatic life with long lasting effects.	
H411	Toxic to aquatic life with long lasting effects.	
H412	Harmful to aquatic life with long lasting effects.	
Muta. 2	Germ cell mutagenicity, Category 2	
Skin Irrit. 2	Skin corrosion/irritation, Category 2	

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Full text of H- and EUH-statements:	
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
Skin Sens. 1B	Skin sensitisation, category 1B
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU