





SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier:** ORANGE ZEST - FR5609
- Other means of identification:**
Non-applicable
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**
Relevant uses: Fragrance. For industrial user only.
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:**
FRAGRANCE SCIENCE S.L
POL.IND CAN SINGLA, C/CAN SINGLA N°19
08640 OLESA DE MONTSERRAT - BARCELONA - SPAIN
Phone: +34 937 757 206 - Fax: +34 937 757 206
info@fragrancescience.com
www.fragrancescience.com
- 1.4 Emergency telephone number:** +34 937757206 (Mon-Thu: 8-17h, Fri:7-14h)

SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
- CLP Regulation (EC) No 1272/2008:**
Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.
Acute Tox. 3: Acute inhalation toxicity, Category 3, H331
Aquatic Chronic 2: Hazardous to the aquatic environment, long-term hazard, Category 2, H411
Eye Irrit. 2: Eye irritation, Category 2, H319
Skin Irrit. 2: Skin irritation, Category 2, H315
Skin Sens. 1A: Sensitisation, skin, Category 1A, H317
- 2.2 Label elements:**
- CLP Regulation (EC) No 1272/2008:**
Danger
-  
- Hazard statements:**
Acute Tox. 3: H331 - Toxic if inhaled.
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Skin Irrit. 2: H315 - Causes skin irritation.
Skin Sens. 1A: H317 - May cause an allergic skin reaction.
- Precautionary statements:**
P264: Wash thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area.
P280: Wear protective gloves/protective clothing/respiratory protection/eye protection/protective footwear.
P302+P352: IF ON SKIN: Wash with plenty of water.
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P501: Dispose of contents/container in accordance with regulations on hazardous waste or packaging and packaging waste respectively.
- Supplementary information:**
Contains 2,4-DIMETHYL-3-CYCLOHEXENE CARBOXALDEHYDE, 2-METHYLUNDECANAL, ALLYL CICLOHEXYLPROPIONATE, CITRAL, CITRONELLAL, DIMETHYLCYCLOHEXYL 3-BUTENYL KETONE, GERANIOL, HEXYL CINNAMAL, LAURALDEHYDE, LIMONENE, TOCOPHEROL.
- Substances that contribute to the classification**
ALLYL CAPROATE; ISOAMYL ALLYLGLYCOLATE; HEXEN-2-AL

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SECTION 2: HAZARDS IDENTIFICATION (continued)
2.3 Other hazards:

Product fails to meet PBT/vPvB criteria











SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
3.1 Substance:

Non-applicable

3.2 Mixture:
Chemical description: Mixture of substances

Components:

In accordance with Annex II of Regulation (EC) No 1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification		Concentration
CAS: 5989-27-5 EC: 227-813-5 Index: Non-applicable REACH: 01-2119529223-47-0005	LIMONENE⁽¹⁾ ATP ATP17		2,5 - <10 %
	Regulation 1272/2008	Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Asp. Tox. 1: H304; Flam. Liq. 3: H226; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Danger 	
CAS: 112-31-2 EC: 203-957-4 Index: Non-applicable REACH: 01-2119967771-26-0002	DECANAL⁽¹⁾ Self-classified		2,5 - <10 %
	Regulation 1272/2008	Aquatic Chronic 3: H412; Eye Irrit. 2: H319 - Warning 	
CAS: 5392-40-5 EC: 226-394-6 Index: Non-applicable REACH: Non-applicable	CITRAL⁽¹⁾ ATP CLP00		2,5 - <10 %
	Regulation 1272/2008	Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Warning 	
CAS: 19009-56-4 EC: 242-745-6 Index: Non-applicable REACH: 01-2120750382-59-XXXX	METHYLOCTYL ACETALDEHYDE⁽¹⁾ Self-classified		1 - <2,5 %
	Regulation 1272/2008	Aquatic Chronic 2: H411 	
CAS: 123-68-2 EC: 204-642-4 Index: Non-applicable REACH: 01-2119983573-26-XXXX	ALLYL CAPROATE⁽¹⁾ Self-classified		1 - <2,5 %
	Regulation 1272/2008	Acute Tox. 3: H301+H311+H331; Aquatic Acute 1: H400; Aquatic Chronic 3: H412 - Danger 	
CAS: 67634-00-8 EC: 266-803-5 Index: Non-applicable REACH: Non-applicable *	ISOAMYL ALLYLGLYCOLATE⁽¹⁾ Self-classified		1 - <2,5 %
	Regulation 1272/2008	Acute Tox. 4: H302+H312; Aquatic Acute 1: H400; STOT RE 2: H373 - Warning 	
CAS: 70356-09-1 EC: 274-581-6 Index: Non-applicable REACH: Non-applicable	BUTYL METHOXYDIBENZOYLMETHANE⁽¹⁾ Self-classified		1 - <2,5 %
	Regulation 1272/2008	Aquatic Chronic 4: H413	
CAS: 131-57-7 EC: 205-031-5 Index: Non-applicable REACH: Non-applicable	BENZOPHENONE-3⁽¹⁾ Self-classified		1 - <2,5 %
	Regulation 1272/2008	Aquatic Acute 1: H400; Aquatic Chronic 2: H411 - Warning 	
CAS: 61792-11-8 EC: 263-214-5 Index: Non-applicable REACH: 01-2119967769-11-0000	HOMOGERANYL NITRILE⁽¹⁾ Self-classified		1 - <2,5 %
	Regulation 1272/2008	Aquatic Chronic 2: H411 	
CAS: 68039-49-6 EC: 268-264-1 Index: Non-applicable REACH: 01-2119982384-28-XXXX	2,4-DIMETHYL-3-CYCLOHEXENE CARBOXALDEHYDE⁽¹⁾ Self-classified		<1 %
	Regulation 1272/2008	Aquatic Chronic 2: H411; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Warning 	
CAS: 101-86-0 EC: 202-983-3 Index: Non-applicable REACH: Non-applicable	HEXYL CINNAMAL⁽¹⁾ Self-classified		<1 %
	Regulation 1272/2008	Aquatic Acute 1: H400; Aquatic Chronic 2: H411; Skin Sens. 1B: H317 - Warning 	

*There is not a registration number available for this substance due to the substance or its use are exempt from a registration number; According to article 2, article 15 of Regulation (CE) 1907/2006, the annual tonnage does not need to be registered

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830

⁽²⁾ Substance with a Union workplace exposure limit

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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS (continued)

Identification	Chemical name/Classification		Concentration
CAS: 112-54-9 EC: 203-983-6 Index: Non-applicable REACH: 01-2119969441-33-XXXX	LAURALDEHYDE⁽¹⁾ Self-classified		<1 %
	Regulation 1272/2008	Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1B: H317 - Warning	
CAS: 106-24-1 EC: 203-377-1 Index: Non-applicable REACH: 01-2119552430-49-XXXX	GERANIOL⁽¹⁾ Self-classified		<1 %
	Regulation 1272/2008	Eye Dam. 1: H318; Skin Irrit. 2: H315; Skin Sens. 1: H317 - Danger	
CAS: 2705-87-5 EC: 220-292-5 Index: Non-applicable REACH: 01-2119976355-27-XXXX	ALLYL CICLOHEXYLPROPIONATE⁽¹⁾ Self-classified		<1 %
	Regulation 1272/2008	Acute Tox. 4: H302+H312+H332; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Skin Sens. 1: H317 - Warning	
CAS: 110-41-8 EC: 203-765-0 Index: Non-applicable REACH: 01-2119969443-29-XXXX	2-METHYLUNDECANAL⁽¹⁾ Self-classified		<1 %
	Regulation 1272/2008	Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Skin Irrit. 2: H315; Skin Sens. 1B: H317 - Warning	
CAS: Non-applicable EC: Non-applicable Index: Non-applicable REACH: Non-applicable *	HEXEN-2-AL⁽¹⁾ Self-classified		<1 %
	Regulation 1272/2008	Acute Tox. 3: H311; Acute Tox. 4: H302; Aquatic Chronic 2: H411; Eye Irrit. 2: H319; Flam. Liq. 3: H226; Muta. 2: H341; Skin Irrit. 2: H315; Skin Sens. 1A: H317 - Danger	
CAS: 56973-85-4 EC: 260-486-7 Index: Non-applicable REACH: Non-applicable *	DIMETHYLCYCLOHEXYL 3-BUTENYL KETONE⁽¹⁾ Self-classified		<1 %
	Regulation 1272/2008	Aquatic Chronic 2: H411; Skin Sens. 1: H317 - Warning	
CAS: 123-92-2 EC: 204-662-3 Index: Non-applicable REACH: 01-2119548408-32-XXXX	ISOAMYL ACETATE⁽²⁾ ATP CLP00		<1 %
	Regulation 1272/2008	Flam. Liq. 3: H226; EUH066 - Warning	
CAS: 10191-41-0 EC: 233-466-0 Index: Non-applicable REACH: Non-applicable	TOCOPHEROL⁽¹⁾ Self-classified		<1 %
	Regulation 1272/2008	Skin Sens. 1B: H317 - Warning	
CAS: 106-23-0 EC: 203-376-6 Index: Non-applicable REACH: 01-2119474900-37-XXXX	CITRONELLAL⁽¹⁾ Self-classified		<1 %
	Regulation 1272/2008	Aquatic Chronic 3: H412; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1B: H317 - Warning	

*There is not a registration number available for this substance due to the substance or its use are exempt from a registration number; According to article 2, article 15 of Regulation (CE) 1907/2006, the annual tonnage does not need to be registered

⁽¹⁾ Substances presenting a health or environmental hazard which meet criteria laid down in Regulation (EU) No. 2015/830

⁽²⁾ Substance with a Union workplace exposure limit

To obtain more information on the hazards of the substances consult sections 11, 12 and 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures:

Request medical assistance immediately, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure, provide with fresh air and keep at rest. In serious cases such as cardiorespiratory failure, artificial resuscitation techniques will be necessary (mouth to mouth resuscitation, cardiac massage, oxygen supply, etc.) requiring immediate medical assistance.

By skin contact:

Remove contaminated clothing and footwear, rinse skin or shower the person affected if appropriate with plenty of cold water and neutral soap. In serious cases see a doctor. If the product causes burns or freezing, clothing should not be removed as this could worsen the injury caused if it is stuck to the skin. If blisters form on the skin, these should never be burst as this will increase the risk of infection.

By eye contact:

Rinse eyes thoroughly with water for at least 15 minutes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, in which case removal could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the SDS for the product.

By ingestion/aspiration:

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SECTION 4: FIRST AID MEASURES (continued)

Do not induce vomiting, but if it does happen keep the head down to avoid aspiration. Keep the person affected at rest. Rinse out the mouth and throat, as they may have been affected during ingestion.

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

Acute and delayed effects are indicated in sections 2 and 11.

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

Non-applicable

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media:

Suitable extinguishing media:

Product is non-flammable under normal conditions of storage, manipulation and use, but the product contains flammable substances. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems.

Unsuitable extinguishing media:

IT IS RECOMMENDED NOT to use full jet water as an extinguishing agent.

5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive sub-products are created that can become highly toxic and, consequently, can present a serious health risk.

5.3 Advice for firefighters:

Depending on the magnitude of the fire it may be necessary to use full protective clothing and self-contained breathing apparatus (SCBA). Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Eliminate all sources of ignition. In case of fire, cool the storage containers and tanks for products susceptible to combustion, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Isolate leaks provided that there is no additional risk for the people performing this task. Evacuate the area and keep out those without protection. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Above all prevent the formation of any vapour-air flammable mixtures, through either ventilation or the use of an inert medium. Remove any source of ignition. Eliminate electrostatic charges by interconnecting all the conductive surfaces on which static electricity could form, and also ensuring that all surfaces are connected to the ground.

For emergency responders:

See section 8.

6.2 Environmental precautions:

Avoid at all cost any type of spillage into an aqueous medium. Contain the product absorbed appropriately in hermetically sealed containers. Notify the relevant authority in case of exposure to the general public or the environment.

6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

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SECTION 7: HANDLING AND STORAGE (continued)

A.- General precautions for safe use

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

B.- Technical recommendations for the prevention of fires and explosions

Avoid the evaporation of the product as it contains flammable substances, which could form flammable vapour/air mixtures in the presence of sources of ignition. Control sources of ignition (mobile phones, sparks,...) and transfer at slow speeds to avoid the creation of electrostatic charges. Consult section 10 for conditions and materials that should be avoided.

C.- Technical recommendations on general occupational hygiene

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

D.- Technical recommendations to prevent environmental risks

Due to the danger of this product for the environment it is recommended to use it within an area containing contamination control barriers in case of spillage, as well as having absorbent material in close proximity.

7.2 Conditions for safe storage, including any incompatibilities:

A.- Technical measures for storage

Minimum Temp.: 5 °C
Maximum time: 24 Months

B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food. For additional information see subsection 10.5

7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the workplace (European OEL, not country-specific legislation):

Directive (EU) 2000/39, Directive 2004/37/EC, Directive (EU) 2006/15, Directive (EU) 2009/161, Directive (EU) 2017/164, Directive (EU) 2019/1831:

Identification	Occupational exposure limits		
	IOELV (8h)	50 ppm	270 mg/m ³
ISOAMYL ACETATE CAS: 123-92-2 EC: 204-662-3	IOELV (STEL)	100 ppm	540 mg/m ³

DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
LIMONENE CAS: 5989-27-5 EC: 227-813-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	9,5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	66,7 mg/m ³	Non-applicable
DECANAL CAS: 112-31-2 EC: 203-957-4	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	14,1 mg/kg	Non-applicable	7,05 mg/kg	Non-applicable
	Inhalation	49,71 mg/m ³	124,28 mg/m ³	24,86 mg/m ³	62,14 mg/m ³
CITRAL CAS: 5392-40-5 EC: 226-394-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1,7 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	9 mg/m ³	Non-applicable
ALLYL CAPROATE CAS: 123-68-2 EC: 204-642-4	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	4,3 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	15 mg/m ³	Non-applicable
ISOAMYL ALLYLGLYCOLATE CAS: 67634-00-8 EC: 266-803-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1,4 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	4,93 mg/m ³	Non-applicable

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
BUTYL METHOXYDIBENZOYLMETHANE CAS: 70356-09-1 EC: 274-581-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	6,49 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	22,2 mg/m ³	Non-applicable
BENZOPHENONE-3 CAS: 131-57-7 EC: 205-031-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	39 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	27,7 mg/m ³	Non-applicable
HOMOGERANYL NITRILE CAS: 61792-11-8 EC: 263-214-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1,55 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	5,48 mg/m ³	Non-applicable
LAURALDEHYDE CAS: 112-54-9 EC: 203-983-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	14,1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	49,7 mg/m ³	Non-applicable
GERANIOL CAS: 106-24-1 EC: 203-377-1	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	12,5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	161,6 mg/m ³	Non-applicable
ALLYL CICLOHEXYLPROPIONATE CAS: 2705-87-5 EC: 220-292-5	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	4,3 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	15 mg/m ³	Non-applicable
2-METHYLUNDECANAL CAS: 110-41-8 EC: 203-765-0	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	100 mg/kg	Non-applicable	10,46 mg/kg	Non-applicable
	Inhalation	352,63 mg/m ³	881,58 mg/m ³	36,89 mg/m ³	92,21 mg/m ³
DIMETHYLCYCLOHEXYL 3-BUTENYL KETONE CAS: 56973-85-4 EC: 260-486-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,714 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	2,52 mg/m ³	Non-applicable
TOCOPHEROL CAS: 10191-41-0 EC: 233-466-0	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	125 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	44 mg/m ³	Non-applicable
CITRONELLAL CAS: 106-23-0 EC: 203-376-6	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	1,7 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	9 mg/m ³	Non-applicable

DNEL (General population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
LIMONENE CAS: 5989-27-5 EC: 227-813-5	Oral	Non-applicable	Non-applicable	4,8 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	4,8 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	16,6 mg/m ³	Non-applicable
DECANAL CAS: 112-31-2 EC: 203-957-4	Oral	7,05 mg/kg	Non-applicable	3,52 mg/kg	Non-applicable
	Dermal	7,05 mg/kg	Non-applicable	3,52 mg/kg	Non-applicable
	Inhalation	12,26 mg/m ³	30,65 mg/m ³	6,13 mg/m ³	15,32 mg/m ³
CITRAL CAS: 5392-40-5 EC: 226-394-6	Oral	Non-applicable	Non-applicable	0,6 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	2,7 mg/m ³	Non-applicable
ALLYL CAPROATE CAS: 123-68-2 EC: 204-642-4	Oral	Non-applicable	Non-applicable	2,1 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	2,1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	3,7 mg/m ³	Non-applicable
ISOAMYL ALLYLGLYCOLATE CAS: 67634-00-8 EC: 266-803-5	Oral	Non-applicable	Non-applicable	0,5 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,87 mg/m ³	Non-applicable
BUTYL METHOXYDIBENZOYLMETHANE CAS: 70356-09-1 EC: 274-581-6	Oral	Non-applicable	Non-applicable	2,25 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	2,25 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	Non-applicable	Non-applicable

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
BENZOPHENONE-3 CAS: 131-57-7 EC: 205-031-5	Oral	Non-applicable	Non-applicable	2 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	20 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	6,8 mg/m ³	Non-applicable
HOMOGERANYL NITRILE CAS: 61792-11-8 EC: 263-214-5	Oral	Non-applicable	Non-applicable	0,555 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,555 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,966 mg/m ³	Non-applicable
LAURALDEHYDE CAS: 112-54-9 EC: 203-983-6	Oral	Non-applicable	Non-applicable	7 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	7 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	12,3 mg/m ³	Non-applicable
GERANIOL CAS: 106-24-1 EC: 203-377-1	Oral	Non-applicable	Non-applicable	13,75 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	7,5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	47,8 mg/m ³	Non-applicable
ALLYL CICLOHEXYLPROPIONATE CAS: 2705-87-5 EC: 220-292-5	Oral	Non-applicable	Non-applicable	2,1 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	2,1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	3,7 mg/m ³	Non-applicable
2-METHYLUNDECANAL CAS: 110-41-8 EC: 203-765-0	Oral	25 mg/kg	Non-applicable	5,23 mg/kg	Non-applicable
	Dermal	50 mg/kg	Non-applicable	5,23 mg/kg	Non-applicable
	Inhalation	86,96 mg/m ³	217,39 mg/m ³	9,1 mg/m ³	22,74 mg/m ³
DIMETHYLCYCLOHEXYL 3-BUTENYL KETONE CAS: 56973-85-4 EC: 260-486-7	Oral	Non-applicable	Non-applicable	0,255 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	0,255 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	0,377 mg/m ³	Non-applicable
TOCOPHEROL CAS: 10191-41-0 EC: 233-466-0	Oral	Non-applicable	Non-applicable	6,25 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	62,5 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	10,8 mg/m ³	Non-applicable
CITRONELLAL CAS: 106-23-0 EC: 203-376-6	Oral	Non-applicable	Non-applicable	0,6 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	1 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	2,7 mg/m ³	Non-applicable

PNEC:

Identification				
LIMONENE CAS: 5989-27-5 EC: 227-813-5	STP	1,8 mg/L	Fresh water	0,014 mg/L
	Soil	0,763 mg/kg	Marine water	0,0014 mg/L
	Intermittent	Non-applicable	Sediment (Fresh water)	3,85 mg/kg
	Oral	0,133 g/kg	Sediment (Marine water)	0,385 mg/kg
DECANAL CAS: 112-31-2 EC: 203-957-4	STP	3,16 mg/L	Fresh water	0,00117 mg/L
	Soil	0,019 mg/kg	Marine water	0,000117 mg/L
	Intermittent	0,0117 mg/L	Sediment (Fresh water)	0,097 mg/kg
	Oral	0,313 g/kg	Sediment (Marine water)	0,01 mg/kg
CITRAL CAS: 5392-40-5 EC: 226-394-6	STP	1,6 mg/L	Fresh water	0,007 mg/L
	Soil	0,021 mg/kg	Marine water	0,001 mg/L
	Intermittent	0,068 mg/L	Sediment (Fresh water)	0,125 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,013 mg/kg
METHYLOCTYL ACETALDEHYDE CAS: 19009-56-4 EC: 242-745-6	STP	15,9 mg/L	Fresh water	0,002 mg/L
	Soil	0,288 mg/kg	Marine water	0 mg/L
	Intermittent	0,018 mg/L	Sediment (Fresh water)	1,45 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,145 mg/kg
ALLYL CAPROATE CAS: 123-68-2 EC: 204-642-4	STP	10 mg/L	Fresh water	0,000117 mg/L
	Soil	0,000825 mg/kg	Marine water	0,000012 mg/L
	Intermittent	0,00117 mg/L	Sediment (Fresh water)	0,00446 mg/kg
	Oral	0,04756 g/kg	Sediment (Marine water)	0,000446 mg/kg

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Identification				
ISOAMYL ALLYLGLYCOLATE CAS: 67634-00-8 EC: 266-803-5	STP	Non-applicable	Fresh water	0,00077 mg/L
	Soil	0,00133 mg/kg	Marine water	0,000077 mg/L
	Intermittent	0,0077 mg/L	Sediment (Fresh water)	0,00893 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,000893 mg/kg
BUTYL METHOXYDIBENZOYLMETHANE CAS: 70356-09-1 EC: 274-581-6	STP	100 mg/L	Fresh water	0,027 mg/L
	Soil	2,384 mg/kg	Marine water	0,027 mg/L
	Intermittent	0 mg/L	Sediment (Fresh water)	11,96 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	11,96 mg/kg
BENZOPHENONE-3 CAS: 131-57-7 EC: 205-031-5	STP	10 mg/L	Fresh water	0,00067 mg/L
	Soil	0,013 mg/kg	Marine water	0,000067 mg/L
	Intermittent	0,0067 mg/L	Sediment (Fresh water)	0,066 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,007 mg/kg
HOMOGERANYL NITRILE CAS: 61792-11-8 EC: 263-214-5	STP	0,9 mg/L	Fresh water	0,002 mg/L
	Soil	0,05 mg/kg	Marine water	0 mg/L
	Intermittent	0,024 mg/L	Sediment (Fresh water)	0,248 mg/kg
	Oral	0,0247 g/kg	Sediment (Marine water)	0,025 mg/kg
LAURALDEHYDE CAS: 112-54-9 EC: 203-983-6	STP	10 mg/L	Fresh water	0,004 mg/L
	Soil	0,278 mg/kg	Marine water	0 mg/L
	Intermittent	0,035 mg/L	Sediment (Fresh water)	1,41 mg/kg
	Oral	0,313 g/kg	Sediment (Marine water)	0,141 mg/kg
GERANIOL CAS: 106-24-1 EC: 203-377-1	STP	0,7 mg/L	Fresh water	0,011 mg/L
	Soil	0,017 mg/kg	Marine water	0,001 mg/L
	Intermittent	0,108 mg/L	Sediment (Fresh water)	0,115 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,011 mg/kg
ALLYL CICLOHEXYLPROPIONATE CAS: 2705-87-5 EC: 220-292-5	STP	0,2 mg/L	Fresh water	0,00013 mg/L
	Soil	0,00475 mg/kg	Marine water	0,000013 mg/L
	Intermittent	0,0013 mg/L	Sediment (Fresh water)	0,02413 mg/kg
	Oral	0,143 g/kg	Sediment (Marine water)	0,002413 mg/kg
2-METHYLUNDECANAL CAS: 110-41-8 EC: 203-765-0	STP	10 mg/L	Fresh water	0,00066 mg/L
	Soil	0,0526 mg/kg	Marine water	0,000066 mg/L
	Intermittent	0,0018 mg/L	Sediment (Fresh water)	0,265 mg/kg
	Oral	0,116 g/kg	Sediment (Marine water)	0,0265 mg/kg
DIMETHYLCYCLOHEXYL 3-BUTENYL KETONE CAS: 56973-85-4 EC: 260-486-7	STP	4,6 mg/L	Fresh water	0,0017 mg/L
	Soil	0,047 mg/kg	Marine water	0,00017 mg/L
	Intermittent	0,017 mg/L	Sediment (Fresh water)	0,242 mg/kg
	Oral	0,00567 g/kg	Sediment (Marine water)	0,024 mg/kg
ISOAMYL ACETATE CAS: 123-92-2 EC: 204-662-3	STP	30 mg/L	Fresh water	0,011 mg/L
	Soil	0,06 mg/kg	Marine water	0,001 mg/L
	Intermittent	0,11 mg/L	Sediment (Fresh water)	0,335 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,034 mg/kg
TOCOPHEROL CAS: 10191-41-0 EC: 233-466-0	STP	Non-applicable	Fresh water	0,516 mg/L
	Soil	259000 mg/kg	Marine water	0,052 mg/L
	Intermittent	Non-applicable	Sediment (Fresh water)	735000 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	73500 mg/kg
CITRONELLAL CAS: 106-23-0 EC: 203-376-6	STP	4 mg/L	Fresh water	0,009 mg/L
	Soil	0,027 mg/kg	Marine water	0,001 mg/L
	Intermittent	0,087 mg/L	Sediment (Fresh water)	0,159 mg/kg
	Oral	Non-applicable	Sediment (Marine water)	0,016 mg/kg

8.2 Exposure controls:

A.- Individual protection measures, such as personal protective equipment

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)



In accordance with the order of importance to control professional exposure (Directive 98/24/EC) it is recommended to use localized extraction in the work area as a collective protection measure to avoid exceeding the occupational exposure limits. In case of using personal protective equipment it should have CE marking in accordance with Directive 2016/425/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For additional information see subsection 7.1.

All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

B.- Respiratory protection



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory respiratory tract protection	Filter mask for gases and vapours		EN 405:2002+A1:2010	Replace when there is a taste or smell of the contaminant inside the face mask. If the contaminant comes with warnings it is recommended to use isolation equipment.

C.- Specific protection for the hands



Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Protective gloves against minor risks			Replace gloves in case of any sign of damage. For prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420:2004+A1:2010 and EN ISO 374-1:2016+A1:2018

As the product is a mixture of several substances, the resistance of the glove material can not be calculated in advance with total reliability and has therefore to be checked prior to the application.



D.- Eye and face protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against splash/projections.		EN 166:2002 EN ISO 4007:2018	Clean daily and disinfect periodically according to the manufacturer's instructions. Use if there is a risk of splashing.

E.- Body protection

Pictogram	PPE	Labelling	CEN Standard	Remarks
	Work clothing			Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994.
	Anti-slip work shoes		EN ISO 20347:2012	Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 20345:2012 y EN 13832-1:2007

F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2011, ISO 3864-4:2011	 Eyewash stations	DIN 12 899 ISO 3864-1:2011, ISO 3864-4:2011

Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

Volatile organic compounds:

With regard to Directive 2010/75/EU, this product has the following characteristics:

V.O.C. (Supply):	22,32 % weight
V.O.C. density at 20 °C:	217,38 kg/m ³ (217,38 g/L)
Average carbon number:	9,82

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SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continued)

Average molecular weight: 147,35 g/mol

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

Appearance:

Physical state at 20 °C:	Liquid
Appearance:	Transparent
Colour:	 Yellow
Odour:	Characteristic
Odour threshold:	Non-applicable *

Volatility:

Boiling point at atmospheric pressure:	Non-applicable *
Vapour pressure at 20 °C:	Non-applicable *
Vapour pressure at 50 °C:	Non-applicable *
Evaporation rate at 20 °C:	Non-applicable *

Product description:

Density at 20 °C:	963,9 - 983,9 kg/m ³
Relative density at 20 °C:	Non-applicable *
Dynamic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 20 °C:	Non-applicable *
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	Non-applicable *
Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	Non-applicable *
Solubility properties:	Non-applicable *
Decomposition temperature:	Non-applicable *
Melting point/freezing point:	Non-applicable *

Flammability:

Flash Point:	66 °C
Flammability (solid, gas):	Non-applicable *
Autoignition temperature:	Non-applicable *
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *

Particle characteristics:

Median equivalent diameter:	Non-applicable
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9.2 Other information:

Information with regard to physical hazard classes:

Explosive properties:	Non-applicable *
Oxidising properties:	Non-applicable *
Corrosive to metals:	Non-applicable *
Heat of combustion:	Non-applicable *

*Not relevant due to the nature of the product, not providing information property of its hazards.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continued)

Aerosols-total percentage (by mass) of flammable components: Non-applicable *

Other safety characteristics:

Surface tension at 20 °C: Non-applicable *

Refraction index: 1,4454 - 1,4554

*Not relevant due to the nature of the product, not providing information property of its hazards.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

No hazardous reactions are expected because the product is stable under recommended storage conditions. See section 7.

10.2 Chemical stability:

Chemically stable under the indicated conditions of storage, handling and use.

10.3 Possibility of hazardous reactions:

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Precaution	Precaution	Not applicable

10.5 Incompatible materials:

Acids	Water	Oxidising materials	Combustible materials	Others
Avoid strong acids	Not applicable	Avoid direct impact	Not applicable	Avoid alkalis or strong bases

10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO₂), carbon monoxide and other organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects:

The experimental information related to the toxicological properties of the product itself is not available

Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than the recommended occupational exposure limits, adverse effects on health may result, depending on the means of exposure:

A- Ingestion (acute effect):

- Acute toxicity : Based on available data, the classification criteria are not met, however, it contains substances classified as dangerous for consumption. For more information see section 3.
- Corrosivity/Irritability: The consumption of a considerable dose can cause irritation in the throat, abdominal pain, nausea and vomiting.

B- Inhalation (acute effect):

- Acute toxicity : Inhalation after prolonged exposure may be lethal.
- Corrosivity/Irritability: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

C- Contact with the skin and the eyes (acute effect):

- Contact with the skin: Produces skin inflammation.
- Contact with the eyes: Produces eye damage after contact.

D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

- Carcinogenicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for the effects mentioned. For more information see section 3.
IARC: LIMONENE (3); MYRCENE (2B)
- Mutagenicity: Based on available data, the classification criteria are not met. However, it contains substances classified as dangerous with mutagenic effects. For more information see section 3.
- Reproductive toxicity: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

E- Sensitizing effects:

- Respiratory: Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous with sensitising effects. For more information see section 3.
- Skin: Prolonged contact with the skin can result in episodes of allergic contact dermatitis.

F- Specific target organ toxicity (STOT) - single exposure:

Based on available data, the classification criteria are not met, as it does not contain substances classified as hazardous for this effect. For more information see section 3.

G- Specific target organ toxicity (STOT)-repeated exposure:

- Specific target organ toxicity (STOT)-repeated exposure: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.
- Skin: Based on available data, the classification criteria are not met. However, it does contain substances which are classified as dangerous due to repetitive exposure. For more information see section 3.

H- Aspiration hazard:

Based on available data, the classification criteria are not met. However, it does contain substances classified as hazardous for this effect. For more information see section 3.

Other information:

Non-applicable

Specific toxicology information on the substances:

Identification	Acute toxicity		Genus
	Route	Dose	
ISOAMYL ALLYLGLYCOLATE CAS: 67634-00-8 EC: 266-803-5	LD50 oral	500 mg/kg	Rat
	LD50 dermal	1100 mg/kg (ATEi)	
	LC50 inhalation	0,51 mg/L (4 h)	Rat
BENZOPHENONE-3 CAS: 131-57-7 EC: 205-031-5	LD50 oral	12800 mg/kg	Rat
	LD50 dermal	16000 mg/kg	Rat
	LC50 inhalation	Non-applicable	
ALLYL CAPROATE CAS: 123-68-2 EC: 204-642-4	LD50 oral	220 mg/kg	
	LD50 dermal	300 mg/kg	
	LC50 inhalation	3 mg/L (ATEi)	
CITRAL CAS: 5392-40-5 EC: 226-394-6	LD50 oral	4950 mg/kg	Rat
	LD50 dermal	2250 mg/kg	Rabbit
	LC50 inhalation	Non-applicable	
LIMONENE CAS: 5989-27-5 EC: 227-813-5	LD50 oral	4400 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	Rabbit
	LC50 inhalation	Non-applicable	
HEXEN-2-AL CAS: Non-applicable EC: Non-applicable	LD50 oral	780 mg/kg	Rat
	LD50 dermal	300 mg/kg (ATEi)	
	LC50 inhalation	Non-applicable	
DECANAL CAS: 112-31-2 EC: 203-957-4	LD50 oral	41750 mg/kg	Rat
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	
HOMOGERANYL NITRILE CAS: 61792-11-8 EC: 263-214-5	LD50 oral	2600 mg/kg	Rat
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	
2,4-DIMETHYL-3-CYCLOHEXENE CARBOXALDEHYDE CAS: 68039-49-6 EC: 268-264-1	LD50 oral	2500 mg/kg	
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	

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SECTION 11: TOXICOLOGICAL INFORMATION (continued)

Identification	Acute toxicity		Genus
HEXYL CINNAMAL CAS: 101-86-0 EC: 202-983-3	LD50 oral	3100 mg/kg	Rat
	LD50 dermal	3000 mg/kg	Rabbit
	LC50 inhalation	Non-applicable	
LAURALDEHYDE CAS: 112-54-9 EC: 203-983-6	LD50 oral	23100 mg/kg	Rat
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	
GERANIOL CAS: 106-24-1 EC: 203-377-1	LD50 oral	4200 mg/kg	Rat
	LD50 dermal	5100 mg/kg	Rabbit
	LC50 inhalation	Non-applicable	
ALLYL CICLOHEXYLPROPIONATE CAS: 2705-87-5 EC: 220-292-5	LD50 oral	>5000 mg/kg	Rat
	LD50 dermal	>5000 mg/kg	Rat
	LC50 inhalation	Non-applicable	
2-METHYLUNDECANAL CAS: 110-41-8 EC: 203-765-0	LD50 oral	>5000 mg/kg	Rat
	LD50 dermal	8300 mg/kg	Rabbit
	LC50 inhalation	Non-applicable	
ISOAMYL ACETATE CAS: 123-92-2 EC: 204-662-3	LD50 oral	7400 mg/kg	Rat
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	
CITRONELLAL CAS: 106-23-0 EC: 203-376-6	LD50 oral	2500 mg/kg	Rat
	LD50 dermal	Non-applicable	
	LC50 inhalation	Non-applicable	

SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the eco-toxicological properties of the product itself is not available

12.1 Toxicity:

Acute toxicity:

Identification	Concentration		Species	Genus
LIMONENE CAS: 5989-27-5 EC: 227-813-5	LC50	>0.1 - 1 (96 h)		Fish
	EC50	>0.1 - 1 (48 h)		Crustacean
	EC50	>0.1 - 1 (72 h)		Algae
DECANAL CAS: 112-31-2 EC: 203-957-4	LC50	>10 - 100 (96 h)		Fish
	EC50	>10 - 100 (48 h)		Crustacean
	EC50	>10 - 100 (72 h)		Algae

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Concentration		Species	Genus
METHYLOCTYL ACETALDEHYDE CAS: 19009-56-4 EC: 242-745-6	LC50	>1 - 10 (96 h)		Fish
	EC50	>1 - 10 (48 h)		Crustacean
	EC50	>1 - 10 (72 h)		Algae
ALLYL CAPROATE CAS: 123-68-2 EC: 204-642-4	LC50	>0.1 - 1 (96 h)		Fish
	EC50	>0.1 - 1 (48 h)		Crustacean
	EC50	>0.1 - 1 (72 h)		Algae
ISOAMYL ALLYLGLYCOLATE CAS: 67634-00-8 EC: 266-803-5	LC50	>0.1 - 1 (96 h)		Fish
	EC50	>0.1 - 1 (48 h)		Crustacean
	EC50	>0.1 - 1 (72 h)		Algae
BENZOPHENONE-3 CAS: 131-57-7 EC: 205-031-5	LC50	3,8 mg/L (96 h)	Oryzias latipes	Fish
	EC50	1,87 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	0,72 mg/L (72 h)	Pseudokirchneriella subcapitata	Algae
HOMOGERANYL NITRILE CAS: 61792-11-8 EC: 263-214-5	LC50	2,4 mg/L (96 h)	QSAR	Fish
	EC50	2,7 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	3,6 mg/L (72 h)	Pseudokirchneriella subcapitata	Algae
2,4-DIMETHYL-3-CYCLOHEXENE CARBOXALDEHYDE CAS: 68039-49-6 EC: 268-264-1	LC50	>1 - 10 (96 h)		Fish
	EC50	>1 - 10 (48 h)		Crustacean
	EC50	>1 - 10 (72 h)		Algae
HEXYL CINNAMAL CAS: 101-86-0 EC: 202-983-3	LC50	>0.1 - 1 (96 h)		Fish
	EC50	>0.1 - 1 (48 h)		Crustacean
	EC50	>0.1 - 1 (72 h)		Algae
ALLYL CICLOHEXYLPROPIONATE CAS: 2705-87-5 EC: 220-292-5	LC50	0,13 mg/L (96 h)	Pimephales promelas	Fish
	EC50	3,8 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	3 mg/L (72 h)	Pseudokirchneriella subcapitata	Algae
2-METHYLUNDECANAL CAS: 110-41-8 EC: 203-765-0	LC50	0,35 mg/L (96 h)	Oncorhynchus mykiss	Fish
	EC50	0,21 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	0,11 mg/L (72 h)	Pseudokirchneriella subcapitata	Algae
HEXEN-2-AL CAS: Non-applicable EC: Non-applicable	LC50	>1 - 10 (96 h)		Fish
	EC50	>1 - 10 (48 h)		Crustacean
	EC50	>1 - 10 (72 h)		Algae
DIMETHYLCYCLOHEXYL 3-BUTENYL KETONE CAS: 56973-85-4 EC: 260-486-7	LC50	>1 - 10 (96 h)		Fish
	EC50	>1 - 10 (48 h)		Crustacean
	EC50	>1 - 10 (72 h)		Algae
ISOAMYL ACETATE CAS: 123-92-2 EC: 204-662-3	LC50	Non-applicable		
	EC50	42 mg/L (48 h)	Daphnia magna	Crustacean
	EC50	Non-applicable		

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Concentration		Species	Genus
CITRONELLAL CAS: 106-23-0 EC: 203-376-6	LC50	>10 - 100 (96 h)		Fish
	EC50	>10 - 100 (48 h)		Crustacean
	EC50	>10 - 100 (72 h)		Algae

Chronic toxicity:

Identification	Concentration		Species	Genus
BUTYL METHOXYDIBENZOYLMETHANE CAS: 70356-09-1 EC: 274-581-6	NOEC	Non-applicable		
	NOEC	0,003 mg/L	Daphnia magna	Crustacean
2-METHYLUNDECANAL CAS: 110-41-8 EC: 203-765-0	NOEC	Non-applicable		
	NOEC	0,033 mg/L	Daphnia magna	Crustacean

12.2 Persistence and degradability:

Identification	Degradability		Biodegradability	
LIMONENE CAS: 5989-27-5 EC: 227-813-5	BOD5	Non-applicable	Concentration	10 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	71,4 %
CITRAL CAS: 5392-40-5 EC: 226-394-6	BOD5	0,56 g O2/g	Concentration	100 mg/L
	COD	1,99 g O2/g	Period	28 days
	BOD5/COD	0,28	% Biodegradable	92 %
ISOAMYL ALLYLGLYCOLATE CAS: 67634-00-8 EC: 266-803-5	BOD5	Non-applicable	Concentration	240 mg/L
	COD	Non-applicable	Period	13 days
	BOD5/COD	Non-applicable	% Biodegradable	78 %
BENZOPHENONE-3 CAS: 131-57-7 EC: 205-031-5	BOD5	Non-applicable	Concentration	100 mg/L
	COD	2,2 g O2/g	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	65 %
HOMOGERANYL NITRILE CAS: 61792-11-8 EC: 263-214-5	BOD5	Non-applicable	Concentration	20 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	32 %
GERANIOL CAS: 106-24-1 EC: 203-377-1	BOD5	Non-applicable	Concentration	100 mg/L
	COD	Non-applicable	Period	21 days
	BOD5/COD	Non-applicable	% Biodegradable	70 %
ALLYL CICLOHEXYLPROPIONATE CAS: 2705-87-5 EC: 220-292-5	BOD5	Non-applicable	Concentration	5 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	86 %
2-METHYLUNDECANAL CAS: 110-41-8 EC: 203-765-0	BOD5	Non-applicable	Concentration	100 mg/L
	COD	Non-applicable	Period	28 days
	BOD5/COD	Non-applicable	% Biodegradable	68 %

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SECTION 12: ECOLOGICAL INFORMATION (continued)

12.3 Bioaccumulative potential:

Identification	Bioaccumulation potential	
LIMONENE CAS: 5989-27-5 EC: 227-813-5	BCF	
	Pow Log	4.83
	Potential	
DECANAL CAS: 112-31-2 EC: 203-957-4	BCF	420
	Pow Log	3.76
	Potential	High
CITRAL CAS: 5392-40-5 EC: 226-394-6	BCF	10
	Pow Log	3.45
	Potential	Low
ISOAMYL ALLYLGLYCOLATE CAS: 67634-00-8 EC: 266-803-5	BCF	
	Pow Log	1.85
	Potential	
BUTYL METHOXYDIBENZOYLMETHANE CAS: 70356-09-1 EC: 274-581-6	BCF	85
	Pow Log	4.81
	Potential	Moderate
BENZOPHENONE-3 CAS: 131-57-7 EC: 205-031-5	BCF	160
	Pow Log	3.45
	Potential	High
HOMOGERANYL NITRILE CAS: 61792-11-8 EC: 263-214-5	BCF	60
	Pow Log	3.1
	Potential	Moderate
HEXYL CINNAMAL CAS: 101-86-0 EC: 202-983-3	BCF	17
	Pow Log	
	Potential	Low
GERANIOL CAS: 106-24-1 EC: 203-377-1	BCF	110
	Pow Log	3.56
	Potential	High
ALLYL CICLOHEXYLPROPIONATE CAS: 2705-87-5 EC: 220-292-5	BCF	860
	Pow Log	4.28
	Potential	High
2-METHYLUNDECANAL CAS: 110-41-8 EC: 203-765-0	BCF	
	Pow Log	5
	Potential	

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Bioaccumulation potential	
ISOAMYL ACETATE CAS: 123-92-2 EC: 204-662-3	BCF	10
	Pow Log	
	Potential	Low
CITRONELLAL CAS: 106-23-0 EC: 203-376-6	BCF	280
	Pow Log	3.53
	Potential	High

12.4 Mobility in soil:

Identification	Absorption/desorption		Volatility	
LIMONENE CAS: 5989-27-5 EC: 227-813-5	Koc	6324	Henry	2533,13 Pa·m ³ /mol
	Conclusion	Immobile	Dry soil	Yes
	Surface tension	2,675E-2 N/m (25 °C)	Moist soil	Yes
DECANAL CAS: 112-31-2 EC: 203-957-4	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2,811E-2 N/m (25 °C)	Moist soil	Non-applicable
ISOAMYL ALLYLGLYCOLATE CAS: 67634-00-8 EC: 266-803-5	Koc	80	Henry	Non-applicable
	Conclusion	Very High	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable
BUTYL METHOXYDIBENZOYLMETHANE CAS: 70356-09-1 EC: 274-581-6	Koc	1700	Henry	2,128E-5 Pa·m ³ /mol
	Conclusion	Low	Dry soil	No
	Surface tension	Non-applicable	Moist soil	No
BENZOPHENONE-3 CAS: 131-57-7 EC: 205-031-5	Koc	955	Henry	1,52E-3 Pa·m ³ /mol
	Conclusion	Low	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable
HOMOGERANYL NITRILE CAS: 61792-11-8 EC: 263-214-5	Koc	1000	Henry	Non-applicable
	Conclusion	Low	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable
LAURALDEHYDE CAS: 112-54-9 EC: 203-983-6	Koc	Non-applicable	Henry	Non-applicable
	Conclusion	Non-applicable	Dry soil	Non-applicable
	Surface tension	2,867E-2 N/m (25 °C)	Moist soil	Non-applicable
ALLYL CICLOHEXYLPROPIONATE CAS: 2705-87-5 EC: 220-292-5	Koc	1820	Henry	Non-applicable
	Conclusion	Low	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable
2-METHYLUNDECANAL CAS: 110-41-8 EC: 203-765-0	Koc	4000	Henry	Non-applicable
	Conclusion	Low	Dry soil	Non-applicable
	Surface tension	Non-applicable	Moist soil	Non-applicable

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SECTION 12: ECOLOGICAL INFORMATION (continued)

Identification	Absorption/desorption		Volatility	
ISOAMYL ACETATE	Koc	70	Henry	59,78 Pa·m ³ /mol
CAS: 123-92-2	Conclusion	Very High	Dry soil	Non-applicable
EC: 204-662-3	Surface tension	2,388E-2 N/m (25 °C)	Moist soil	Yes

12.5 Results of PBT and vPvB assessment:

Product fails to meet PBT/vPvB criteria

12.6 Other adverse effects:

Not described

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

Code	Description	Waste class (Regulation (EU) No 1357/2014)
	It is not possible to assign a specific code, as it depends on the intended use by the user	Dangerous

Type of waste (Regulation (EU) No 1357/2014):

HP14 Ecotoxic, HP4 Irritant — skin irritation and eye damage

Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2014/955/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. Waste should not be disposed of to drains. See paragraph 6.2.

Regulations related to waste management:

In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land:

With regard to ADR 2021 and RID 2021:



- 14.1 UN number:** UN2810
- 14.2 UN proper shipping name:** TOXIC LIQUID, ORGANIC, N.O.S. (ALLYL CAPROATE; LIMONENE)
- 14.3 Transport hazard class(es):** 6.1
Labels: 6.1
- 14.4 Packing group:** III
- 14.5 Environmental hazards:** Yes
- 14.6 Special precautions for user**
Special regulations: 274, 614
Tunnel restriction code: E
Physico-Chemical properties: see section 9
Limited quantities: 5 L
- 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code:** Non-applicable

Transport of dangerous goods by sea:

With regard to IMDG 40-20:



SECTION 14: TRANSPORT INFORMATION (continued)



- 14.1 UN number:** UN2810
14.2 UN proper shipping name: TOXIC LIQUID, ORGANIC, N.O.S. (ALLYL CAPROATE; LIMONENE)
14.3 Transport hazard class(es): 6.1
 Labels: 6.1
14.4 Packing group: III
14.5 Marine pollutant: Yes
14.6 Special precautions for user
 Special regulations: 274, 223
 EmS Codes: F-A, S-A
 Physico-Chemical properties: see section 9
 Limited quantities: 5 L
 Segregation group: Non-applicable
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

Transport of dangerous goods by air:

With regard to IATA/ICAO 2022:



- 14.1 UN number:** UN2810
14.2 UN proper shipping name: TOXIC LIQUID, ORGANIC, N.O.S. (ALLYL CAPROATE; LIMONENE)
14.3 Transport hazard class(es): 6.1
 Labels: 6.1
14.4 Packing group: III
14.5 Environmental hazards: Yes
14.6 Special precautions for user
 Physico-Chemical properties: see section 9
14.7 Transport in bulk according to Annex II of Marpol and the IBC Code: Non-applicable

SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) No 1907/2006 (REACH): Non-applicable
 Substances included in Annex XIV of REACH ("Authorisation List") and sunset date: Non-applicable
 Regulation (EC) No 1005/2009, about substances that deplete the ozone layer: Non-applicable
 Article 95, REGULATION (EU) No 528/2012: GERANIOL (Product-type 18, 19) ; CITRONELLAL
 REGULATION (EU) No 649/2012, in relation to the import and export of hazardous chemical products: Non-applicable

Seveso III:

Section	Description	Lower-tier requirements	Upper-tier requirements
H2	ACUTE TOXIC	50	200
E2	ENVIRONMENTAL HAZARDS	200	500

Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII REACH, etc):

Shall not be used in:

- ornamental articles intended to produce light or colour effects by means of different phases, for example in ornamental lamps and ashtrays,
- tricks and jokes,
- games for one or more participants, or any article intended to be used as such, even with ornamental aspects.

Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

Other legislation:

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SECTION 15: REGULATORY INFORMATION (continued)

The product could be affected by sectorial legislation

15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

SECTION 16: OTHER INFORMATION

Legislation related to safety data sheets:

The SDS shall be supplied in an official language of the country where the product is placed on the market. This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) No 1907/2006 (Regulation (EC) No 2015/830).

Modifications related to the previous Safety Data Sheet which concerns the ways of managing risks.:

Non-applicable

Texts of the legislative phrases mentioned in section 2:

H319: Causes serious eye irritation.
H411: Toxic to aquatic life with long lasting effects.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H331: Toxic if inhaled.

Texts of the legislative phrases mentioned in section 3:

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3

CLP Regulation (EC) No 1272/2008:

Acute Tox. 3: H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled.
Acute Tox. 3: H311 - Toxic in contact with skin.
Acute Tox. 4: H302 - Harmful if swallowed.
Acute Tox. 4: H302+H312 - Harmful if swallowed or in contact with skin.
Acute Tox. 4: H302+H312+H332 - Harmful if swallowed, in contact with skin or if inhaled.
Aquatic Acute 1: H400 - Very toxic to aquatic life.
Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.
Aquatic Chronic 2: H411 - Toxic to aquatic life with long lasting effects.
Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.
Aquatic Chronic 4: H413 - May cause long lasting harmful effects to aquatic life.
Asp. Tox. 1: H304 - May be fatal if swallowed and enters airways.
Eye Dam. 1: H318 - Causes serious eye damage.
Eye Irrit. 2: H319 - Causes serious eye irritation.
Flam. Liq. 3: H226 - Flammable liquid and vapour.
Muta. 2: H341 - Suspected of causing genetic defects.
Skin Irrit. 2: H315 - Causes skin irritation.
Skin Sens. 1: H317 - May cause an allergic skin reaction.
Skin Sens. 1A: H317 - May cause an allergic skin reaction.
Skin Sens. 1B: H317 - May cause an allergic skin reaction.
STOT RE 2: H373 - May cause damage to organs through prolonged or repeated exposure.

Classification procedure:

Eye Irrit. 2: Calculation method
Aquatic Chronic 2: Calculation method
Skin Irrit. 2: Calculation method
Skin Sens. 1A: Calculation method
Acute Tox. 3: Calculation method

Advice related to training:

Training is recommended in order to prevent industrial risks for staff using this product and to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

Principal bibliographical sources:

<http://echa.europa.eu>
<http://eur-lex.europa.eu>

Abbreviations and acronyms:



SECTION 16: OTHER INFORMATION (continued)

ADR: European agreement concerning the international carriage of dangerous goods by road
IMDG: International maritime dangerous goods code
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
COD: Chemical Oxygen Demand
BOD5: 5day biochemical oxygen demand
BCF: Bioconcentration factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
EC50: Effective concentration 50
LogPOW: Octanolwater partition coefficient
Koc: Partition coefficient of organic carbon
UFI: unique formula identifier
IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -