WHITE PUMPKIN CARAMEL #EU55232F

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 5/22/2023 Revision date: 7/22/2025 Supersedes version of: 5/22/2023 Version: 2.0

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

1.1. Product identifier

Product form	:	Mixture
Trade name	:	WHITE PUMPKIN CARAMEL #EU55232F
UFI	:	C9PT-R9VT-T002-FQQN
Product code	:	EU55232F
Type of product	:	Perfumes, fragrances
Product group	:	Trade product

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

Relevant identified uses

Main use category	:	Professional use,Industrial use
Industrial/Professional use spec	:	Industrial For professional use only
Use of the substance/mixture	:	Perfumes, fragrances
Function or use category	:	Odour agents

1.3. Details of the supplier of the safety data sheet

FRENCH COLOR & FRAGRANCE INTERNATIONAL GmbH GmbH
Mittlerer Weg 35
DE 79424 Auggen
Germany
T 49-7631-931-8900
SDS@frenchcolor.com, www.frenchcolor.com

1.4. Emergency telephone number

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

Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 2	H319
Skin sensitisation, Category 1	H317

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

Adverse physicochemical, human health and environmental effects

Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.

2.2. Label elements

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

Hazard pictograms (CLP) :

GHS07

Signal word (CLP)	:	Warning
Contains	:	Vertenex; Cinnamic aldehyde; Benzyl alcohol; COUMARIN; 3(2H)-Furanone, 4-hydroxy-2,5-dimethyl-
Hazard statements (CLP)	:	H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation.

Precautionary statements (CLP) : P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Vertenex	CAS-No.: 32210-23-4 EC-No.: 250-954-9 REACH-no: 01-2119976286-24	3.1 – 6.25	Skin Sens. 1B, H317
Cinnamic aldehyde	CAS-No.: 104-55-2 EC-No.: 203-213-9 EC Index-No.: 606-155-00-6 REACH-no: 01-2119935242-45	3.1 – 6.16	Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1A, H317 Aquatic Chronic 3, H412
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: 01-2119492630-38	2.5 – 5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Vanillin	CAS-No.: 121-33-5 EC-No.: 204-465-2 REACH-no: 01-2119516040-60	0.665 – 1.386	Eye Irrit. 2, H319
COUMARIN	CAS-No.: 91-64-5 EC-No.: 202-086-7 REACH-no: 01-2119943756-26	0.5 – 0.94	Acute Tox. 4 (Oral), H302 Skin Sens. 1B, H317
benzyl benzoate	CAS-No.: 120-51-4 EC-No.: 204-402-9 EC Index-No.: 607-085-00-9 REACH-no: 01-2119976371-33	0.3 – 0.54	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
ethyl lactate; ethyl DL-lactate substance with national workplace exposure limit(s) (FI, LT, SE)	CAS-No.: 97-64-3 EC-No.: 202-598-0 EC Index-No.: 607-129-00-7	0.3 – 0.5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1,2-Propanediol substance with national workplace exposure limit(s) (GB, HR, IE, LT, LV, PL, NO)	CAS-No.: 57-55-6 EC-No.: 200-338-0 REACH-no: 01-2119456809-23	0.1 – 0.257	Not classified
Oenanthic ether (Ethyl heptanoate)	CAS-No.: 106-30-9 EC-No.: 203-382-9	0.1 – 0.25	Flam. Liq. 3, H226 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 – 0.2	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
isobutyl acetate substance with national workplace exposure limit(s) (AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK, NO, CH, TR)	CAS-No.: 110-19-0 EC-No.: 203-745-1 EC Index-No.: 607-026-00-7	0.1 – 0.2	Flam. Liq. 2, H225 STOT SE 3, H336
3(2H)-Furanone, 4-hydroxy-2,5-dimethyl-	CAS-No.: 3658-77-3 EC-No.: 222-908-8	0 – 0.04	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Irrit. 2, H319 Skin Sens. 1A, H317
.beta.-Pinene substance with national workplace exposure limit(s) (BE, EE, ES, LT, PT, SE, NO)	CAS-No.: 127-91-3 EC-No.: 204-872-5	≤ 0.00225	Flam. Liq. 3, H226
Dipropylene glycol monomethyl ether substance with national workplace exposure limit(s) (AT, BE, BG, CY, CZ, DE, DK, EE, ES, FI, FR, GB, 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.: 34590-94-8 EC-No.: 252-104-2	≤ 0.00186	Not classified
.alpha.-Pinene substance with national workplace exposure limit(s) (BE, EE, ES, LT, PT, SE, NO)	CAS-No.: 80-56-8 EC-No.: 201-291-9	≤ 0.00015	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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	(0.001 < C < 0.01) EUH208 (0.01 ≤ C < 0.1) Skin Sens. 1; H317 (0.1 ≤ C < 100) Skin Sens. 1A; H317

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).

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 with plenty of water/…. Get medical advice/attention. Wash contaminated clothing before reuse. 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 : If eye irritation persists: Get medical advice/attention. 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 : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention. 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 : Causes serious eye irritation. 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

For non-emergency personnel

Emergency procedures : Ventilate spillage area. Evacuate unnecessary personnel. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

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".

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.

6.3. Methods and material for containment and cleaning up

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.

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. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray.

Hygiene measures : Wash hands thoroughly after handling. 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 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 10 - Combustible liquids

Joint storage table :

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 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 5.1A, LGK 6.2, LGK 7

Joint storage with restrictions permitted for : LGK 4.1A, LGK 4.2, LGK 4.3, LGK 5.1B, LGK 5.1C, LGK 5.2

Joint storage permitted for : LGK 2B, LGK 3, LGK 4.1B, 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 10/12 - Liquids

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

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 900)	
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

ethyl lactate; ethyl DL-lactate (97-64-3)	
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	25 mg/m³
	5 ppm
HTP (OEL STEL)	49 mg/m³
	10 ppm

ethyl lactate; ethyl DL-lactate (97-64-3)	
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	25 mg/m³
	5 ppm
TPRV (OEL STEL)	50 mg/m³
	10 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	25 mg/m³ (same limit value expressed in ppm shall be applied for those lactates for which no limit values have been defined)
	5 ppm (same limit value expressed in ppm shall be applied for those lactates for which no limit values have been defined)
KGV (OEL STEL)	50 mg/m³ (same limit value expressed in ppm shall be applied for those lactates for which no limit values have been defined)
	10 ppm (same limit value expressed in ppm shall be applied for those lactates for which no limit values have been defined)

1,2-Propanediol (57-55-6)	
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	474 mg/m³ (total vapor and particles) 10 mg/m³ (particles)
	150 ppm
Ireland - Occupational Exposure Limits	
OEL TWA	10 mg/m³ (particulate) 470 mg/m³ (total vapour and particulates)
	150 ppm (total vapour and particulates)
OEL STEL	1410 mg/m³ (calculated-particulates) 30 mg/m³ (calculated)
	450 ppm (calculated-total vapor and particulates)
Latvia - Occupational Exposure Limits	
OEL TWA	7 mg/m³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	7 mg/m³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	100 mg/m³ (vapor and inhalable fraction)
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	474 mg/m³ (total vapour and particulate) 10 mg/m³ (particulate)
	150 ppm (total vapour and particulate)
WEL STEL (OEL STEL)	1422 mg/m³ (calculated-total vapour and particulate) 30 mg/m³ (calculated-particulate)
	450 ppm (calculated-total vapour and particulate)
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	79 mg/m³
	25 ppm

1,2-Propanediol (57-55-6)	
Korttidsverdi (OEL STEL)	118.5 mg/m³ (value calculated)
	37.5 ppm (value calculated)

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
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

2-furaldehyde (98-01-1)	
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
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 Limits	
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

2-furaldehyde (98-01-1)	
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
	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	
MAK (OEL TWA)	8 mg/m³
	2 ppm

2-furaldehyde (98-01-1)	
OEL chemical category	Skin notation
USA - ACGIH - Occupational Exposure Limits	
ACGIH® TLV® 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
USA - ACGIH - Biological Exposure Indices	
BEI	200 mg/l Parameter: Furoic acid with hydrolysis - Medium: urine - Sampling time: end of shift (nonspecific)

isobutyl acetate (110-19-0)	
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	241 mg/m³ (Butyl acetates)
	50 ppm (Butyl acetates)
MAK (OEL STEL)	480 mg/m³ (Butyl acetate)
	100 ppm (Butyl acetate)
Belgium - Occupational Exposure Limits	
OEL TWA	238 mg/m³
	50 ppm
OEL STEL	712 mg/m³
	150 ppm
Bulgaria - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	241 mg/m³
	50 ppm
KGVI (OEL STEL)	723 mg/m³
	150 ppm
Cyprus - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	241 mg/m³
Denmark - Occupational Exposure Limits	
OEL TWA	241 mg/m³ (Butyl acetate, all isomers)
	50 ppm (Butyl acetate, all isomers)

isobutyl acetate (110-19-0)	
OEL STEL	723 mg/m³
	150 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	240 mg/m³ (Butyl acetate)
	50 ppm (Butyl acetate)
HTP (OEL STEL)	725 mg/m³ (Butyl acetate)
	150 ppm (Butyl acetate)
France - Occupational Exposure Limits	
VME (OEL TWA)	241 mg/m³ (restrictive limit)
	50 ppm (restrictive limit)
VLE (OEL C/STEL)	723 mg/m³ (restrictive limit)
	150 ppm (restrictive limit)
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	300 mg/m³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
	62 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Greece - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	241 mg/m³
CK (OEL STEL)	723 mg/m³
OEL chemical category	Sensitizer
Ireland - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³ (calculated)
	150 ppm (calculated)
Italy - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³

isobutyl acetate (110-19-0)	
	150 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	241 mg/m³
	50 ppm
TPRV (OEL STEL)	723 mg/m³
	150 ppm
Luxembourg - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm
Malta - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	241 mg/m³
	50 ppm
TGG-15min (OEL STEL)	723 mg/m³
	150 ppm
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	240 mg/m³
NDSCh (OEL STEL)	720 mg/m³
Portugal - Occupational Exposure Limits	
OEL TWA	241 mg/m³ (indicative limit value)
	50 ppm (indicative limit value)
OEL STEL	723 mg/m³ (indicative limit value)
	150 ppm (indicative limit value)
Romania - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	241 mg/m³

isobutyl acetate (110-19-0)	
	50 ppm
NPHV (OEL C)	723 mg/m³
Slovenia - Occupational Exposure Limits	
OEL TWA	241 mg/m³
	50 ppm
OEL STEL	723 mg/m³
	150 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	241 mg/m³
	50 ppm
VLA-EC (OEL STEL)	723 mg/m³
	150 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	241 mg/m³
	50 ppm
KGV (OEL STEL)	723 mg/m³
	150 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	724 mg/m³
	150 ppm
WEL STEL (OEL STEL)	903 mg/m³
	187 ppm
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	241 mg/m³
	50 ppm
Korttidsverdi (OEL STEL)	723 mg/m³ (value from the regulation)
	150 ppm (value from the regulation)
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	240 mg/m³
	50 ppm
KZGW (OEL STEL)	720 mg/m³
	150 ppm
USA - ACGIH - Occupational Exposure Limits	
ACGIH® TLV® TWA	50 ppm (Butyl acetates, all isomers)
ACGIH® TLV® STEL	150 ppm (Butyl acetates, all isomers)

Dipropylene glycol monomethyl ether (34590-94-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	308 mg/m³
	50 ppm

Dipropylene glycol monomethyl ether (34590-94-8)	
Remark	Possibility of significant uptake through the skin
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	307 mg/m³ (mixed isomers)
	50 ppm (mixed isomers)
MAK (OEL STEL)	614 mg/m³ (isomers mixtures)
	100 ppm (isomers mixtures)
OEL chemical category	Skin notation
Belgium - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	Skin, Skin notation
Bulgaria - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
Croatia - Occupational Exposure Limits	
GVI (OEL TWA)	308 mg/m³
	50 ppm
OEL chemical category	Skin notation
Cyprus - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	Skin-potential for cutaneous absorption
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	270 mg/m³
OEL chemical category	Potential for cutaneous absorption
Denmark - Occupational Exposure Limits	
OEL TWA	309 mg/m³
	50 ppm
OEL STEL	618 mg/m³
	100 ppm
OEL chemical category	Potential for cutaneous absorption
Estonia - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	Skin notation
Finland - Occupational Exposure Limits	
HTP (OEL TWA)	310 mg/m³
	50 ppm
OEL chemical category	Potential for cutaneous absorption

Dipropylene glycol monomethyl ether (34590-94-8)	
France - Occupational Exposure Limits	
VME (OEL TWA)	308 mg/m³ (restrictive limit)
	50 ppm (restrictive limit)
OEL chemical category	Risk of cutaneous absorption
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA)	310 mg/m³ (isomer mixture)
	50 ppm (isomer mixture)
Gibraltar - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	Skin notation
Greece - Occupational Exposure Limits	
OEL TWA	600 mg/m³
	100 ppm
OEL STEL	900 mg/m³
	150 ppm
OEL chemical category	skin - potential for cutaneous absorption
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	308 mg/m³
Ireland - Occupational Exposure Limits	
OEL TWA	308 mg/m³ ((2-Methoxymethylethoxy)propanol)
	50 ppm ((2-Methoxymethylethoxy)propanol)
OEL STEL	924 mg/m³ (calculated (2-(2-Methoxypropoxy)-1-propanol)
	150 ppm (calculated (2-(2-Methoxypropoxy)-1-propanol)
OEL chemical category	Potential for cutaneous absorption
Italy - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	skin - potential for cutaneous absorption
Latvia - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	skin - potential for cutaneous exposure
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	300 mg/m³ (2-(2-Methoxypropoxy)-propanol)
	50 ppm (2-(2-Methoxypropoxy)-propanol)
TPRV (OEL STEL)	450 mg/m³ (2-(2-Methoxypropoxy)-propanol)
	75 ppm (2-(2-Methoxypropoxy)-propanol)
OEL chemical category	Skin notation

Dipropylene glycol monomethyl ether (34590-94-8)	
Luxembourg - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	Possibility of significant uptake through the skin
Malta - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	Possibility of significant uptake through the skin
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	300 mg/m³
	48.7 ppm
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	240 mg/m³ (mixture of isomers: 1-(2-Methoxy-1-methylethoxy)propan-2-ol, 1-(2-Methoxy-2-methylethoxy)propan-2-ol and 2-(2-Methoxy-1-methylethoxy)propan-1-ol)
NDSCh (OEL STEL)	480 mg/m³ (mixture of isomers: 1-(2-Methoxy-1-methylethoxy)propan-2-ol, 1-(2-Methoxy-2-methylethoxy)propan-2-ol, 2-(2-Methoxy-1-methylethoxy)propan-1-ol)
Portugal - Occupational Exposure Limits	
OEL TWA	308 mg/m³ (indicative limit value)
	50 ppm (indicative limit value)
OEL STEL	150 ppm
OEL chemical category	skin - potential for cutaneous exposure indicative limit value
Romania - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL chemical category	Skin notation
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA)	308 mg/m³
	50 ppm
OEL chemical category	Potential for cutaneous absorption
Slovenia - Occupational Exposure Limits	
OEL TWA	308 mg/m³
	50 ppm
OEL STEL	308 mg/m³
	50 ppm
OEL chemical category	Potential for cutaneous absorption
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	308 mg/m³ (indicative limit value)
	50 ppm (indicative limit value)
OEL chemical category	skin - potential for cutaneous absorption

Dipropylene glycol monomethyl ether (34590-94-8)	
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	300 mg/m³
	50 ppm
KGV (OEL STEL)	450 mg/m³
	75 ppm
OEL chemical category	Skin notation
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA)	308 mg/m³
	50 ppm
WEL STEL (OEL STEL)	924 mg/m³ (calculated)
	150 ppm (calculated)
WEL chemical category	Potential for cutaneous absorption
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	300 mg/m³
	50 ppm
Korttidsverdi (OEL STEL)	375 mg/m³ (value calculated)
	75 ppm (value calculated)
OEL chemical category	Skin notation
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA)	300 mg/m³ (aerosol, vapour)
	50 ppm (aerosol, vapour)
KZGW (OEL STEL)	300 mg/m³ (aerosol, vapour)
	50 ppm (aerosol, vapour)
USA - ACGIH - Occupational Exposure Limits	
ACGIH® TLV® TWA	50 ppm (Dipropylene glycol methyl ether)

.alpha.-Pinene (80-56-8)	
Belgium - Occupational Exposure Limits	
OEL TWA	20 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	150 mg/m³ (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
	25 ppm (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
OEL STEL	300 mg/m³ (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
	50 ppm (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	150 mg/m³
	25 ppm

.alpha.-Pinene (80-56-8)	
TPRV (OEL STEL)	300 mg/m³
	50 ppm
Portugal - Occupational Exposure Limits	
OEL TWA	20 ppm (Turpentine and selected Monoterpenes)
OEL chemical category	Sensitizer dermal, A4 - Not Classifiable as a Human Carcinogen
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	113 mg/m³
	20 ppm
OEL chemical category	Sensitizer
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	150 mg/m³
	25 ppm
KGV (OEL STEL)	300 mg/m³
	50 ppm
OEL chemical category	Skin sensitizer
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	140 mg/m³
	25 ppm
Korttidsverdi (OEL STEL)	175 mg/m³ (value calculated)
	37.5 ppm (value calculated)
OEL chemical category	Skin notation
USA - ACGIH - Occupational Exposure Limits	
ACGIH® TLV® TWA	20 ppm (Turpentine and selected Monoterpenes)
ACGIH chemical category	Not Classifiable as a Human Carcinogen, dermal sensitizer

.beta.-Pinene (127-91-3)	
Belgium - Occupational Exposure Limits	
OEL TWA	20 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	150 mg/m³ (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
	25 ppm (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
OEL STEL	300 mg/m³ (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
	50 ppm (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	150 mg/m³
	25 ppm
TPRV (OEL STEL)	300 mg/m³

.beta.-Pinene (127-91-3)	
	50 ppm
Portugal - Occupational Exposure Limits	
OEL TWA	20 ppm (Turpentine and selected Monoterpenes)
OEL chemical category	Sensitizer dermal, A4 - Not Classifiable as a Human Carcinogen
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA)	113 mg/m³
	20 ppm
OEL chemical category	Sensitizer
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	150 mg/m³
	25 ppm
KGV (OEL STEL)	300 mg/m³
	50 ppm
OEL chemical category	Skin sensitizer
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA)	140 mg/m³
	25 ppm
Korttidsverdi (OEL STEL)	175 mg/m³ (value calculated)
	37.5 ppm (value calculated)
USA - ACGIH - Occupational Exposure Limits	
ACGIH® TLV® TWA	20 ppm (Turpentine and selected Monoterpenes)
ACGIH chemical category	Not Classifiable as a Human Carcinogen, dermal sensitizer

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:
Avoid all unnecessary exposure.
Personal protective equipment symbol(s):

Eye and face protection

Eye protection:
Chemical goggles or safety glasses. Safety glasses

Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Wear protective gloves.

Respiratory protection

Respiratory protection:
Wear appropriate mask

Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.
Other information:
Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Conforms to standard.
Odour	:	characteristic.
Odour threshold	:	Not available
Melting point	:	Not applicable
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Not applicable
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	> 93.3 °C
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	Not available
Viscosity, kinematic	:	Not available
Solubility	:	Not available
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	0.004680007 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

Other safety characteristics

VOC content	:	2.491835 % (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.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Vertenex (32210-23-4)	
LD50 oral rat	5 g/kg (Source: NLM_CIP)
LD50 oral	3370 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)

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)
LD50 dermal	1260 mg/kg

benzyl alcohol (100-51-6)	
LD50 oral rat	1230 mg/kg (Source: NLM_CIP)
LD50 oral	1570 mg/kg

Vanillin (121-33-5)	
LD50 dermal rabbit	> 5010 mg/kg (Source: OECD_SIDS)
LD50 dermal	2600 mg/kg bodyweight

COUMARIN (91-64-5)	
LD50 oral rat	> 5000 mg/kg (Source: JAPAN_GHS)
LD50 dermal rat	293 mg/kg (Source: ECHA_API)

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)

ethyl lactate; ethyl DL-lactate (97-64-3)	
LD50 oral rat	8200 mg/kg (Source: NLM_CIP)
LD50 oral	2500 mg/kg bodyweight
LD50 dermal rabbit	> 5 g/kg (Source: NLM_HSDB)

1,2-Propanediol (57-55-6)	
LD50 oral rat	20 g/kg (Source: NLM_CIP)
LD50 dermal rabbit	20800 mg/kg (Source: NLM_CIP)

Oenanthic ether (Ethyl heptanoate) (106-30-9)	
LD50 oral rat	> 34640 mg/kg (Source: NLM_CIP)

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

isobutyl acetate (110-19-0)	
LD50 oral rat	15400 mg/kg (Source: JAPAN_GHS)
LD50 dermal rabbit	> 17400 mg/kg (Source: NLM_CIP)

3(2H)-Furanone, 4-hydroxy-2,5-dimethyl- (3658-77-3)	
LD50 oral	1608 mg/kg bodyweight

Dipropylene glycol monomethyl ether (34590-94-8)	
LD50 oral rat	5.35 g/kg (Source: NLM_HSDB)
LD50 dermal rabbit	9500 mg/kg (Source: NLM_CIP)

.alpha.-Pinene (80-56-8)	
LD50 oral rat	3700 mg/kg (Source: NLM_CIP)
LD50 dermal rat	> 5000 mg/kg (Source: CHEMVIEW)

.beta.-Pinene (127-91-3)	
LD50 oral rat	> 5000 mg/kg (Source: EPA_HPV)
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

COUMARIN (91-64-5)	
IARC group	3 - Not classifiable

2-furaldehyde (98-01-1)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

ethyl lactate; ethyl DL-lactate (97-64-3)	
STOT-single exposure	May cause respiratory irritation.

2-furaldehyde (98-01-1)	
STOT-single exposure	May cause respiratory irritation.

isobutyl acetate (110-19-0)	
STOT-single exposure	May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

benzyl benzoate (120-51-4)	
Viscosity, kinematic	7.456 mm²/s

.alpha.-Pinene (80-56-8)	
Hydrocarbon	Yes

.beta.-Pinene (127-91-3)	
Hydrocarbon	Yes

11.2. Information on other hazards

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 : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Not classified

Vertenex (32210-23-4)	
LC50 - Fish [1]	8.6 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static] Source: ECHA)

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)

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])

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

1,2-Propanediol (57-55-6)	
LC50 - Fish [1]	51600 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static] Source: IUCLID)
LC50 - Fish [2]	41 – 47 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static] Source: EPA)
EC50 - Crustacea [1]	> 1000 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 96h - Algae [1]	19000 mg/l (Species: Pseudokirchneriella subcapitata)

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)

isobutyl acetate (110-19-0)	
LC50 - Fish [1]	17 mg/l (Exposure time: 96 h - Species: Oryzias latipes Source: ECHA)

Dipropylene glycol monomethyl ether (34590-94-8)	
LC50 - Fish [1]	> 10000 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 - Crustacea [1]	1919 mg/l (Exposure time: 48 h - Species: Daphnia magna)

.alpha.-Pinene (80-56-8)	
LC50 - Fish [1]	0.28 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: IUCLID)
EC50 - Crustacea [1]	41 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

WHITE PUMPKIN CARAMEL #EU55232F	
Persistence and degradability	Not established.

Vertenex (32210-23-4)	
Persistence and degradability	Rapidly degradable

Cinnamic aldehyde (104-55-2)	
Persistence and degradability	Rapidly degradable

benzyl alcohol (100-51-6)	
Persistence and degradability	Rapidly degradable

Vanillin (121-33-5)	
Persistence and degradability	Not established.

COUMARIN (91-64-5)	
Persistence and degradability	Rapidly degradable

benzyl benzoate (120-51-4)	
Persistence and degradability	May cause long-term adverse effects in the environment.

ethyl lactate; ethyl DL-lactate (97-64-3)	
Persistence and degradability	Rapidly degradable

1,2-Propanediol (57-55-6)	
Persistence and degradability	Rapidly degradable

Oenanthic ether (Ethyl heptanoate) (106-30-9)	
Persistence and degradability	Rapidly degradable

2-furaldehyde (98-01-1)	
Persistence and degradability	Rapidly degradable

isobutyl acetate (110-19-0)	
Persistence and degradability	Rapidly degradable

3(2H)-Furanone, 4-hydroxy-2,5-dimethyl- (3658-77-3)	
Persistence and degradability	Rapidly degradable

Dipropylene glycol monomethyl ether (34590-94-8)	
Persistence and degradability	Rapidly degradable

.alpha.-Pinene (80-56-8)	
Persistence and degradability	Rapidly degradable

.beta.-Pinene (127-91-3)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

WHITE PUMPKIN CARAMEL #EU55232F	
Bioaccumulative potential	Not established.

Vertenex (32210-23-4)	
Partition coefficient n-octanol/water (Log Pow)	4.8 (at 25 °C)

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

Vanillin (121-33-5)	
Partition coefficient n-octanol/water (Log Pow)	1.23 (at 22 °C)
Bioaccumulative potential	Not established.

COUMARIN (91-64-5)	
Partition coefficient n-octanol/water (Log Pow)	≥ 1.91 – ≤ 1.51 (at 25 °C (at pH 7)

benzyl benzoate (120-51-4)	
Partition coefficient n-octanol/water (Log Pow)	3.97 (at 25 °C)
Bioaccumulative potential	Not established.

ethyl lactate; ethyl DL-lactate (97-64-3)	
Partition coefficient n-octanol/water (Log Pow)	0.7 (at 25 °C (at pH >2-<8)

1,2-Propanediol (57-55-6)	
BCF - Fish [1]	(1 dimensionless)
Partition coefficient n-octanol/water (Log Pow)	-1.07 (at 20.5 °C (at pH >=6.2-<=6.4)

Oenanthic ether (Ethyl heptanoate) (106-30-9)	
Partition coefficient n-octanol/water (Log Pow)	3.98 (at 35 °C (at pH 7)

2-furaldehyde (98-01-1)	
Partition coefficient n-octanol/water (Log Pow)	0.67

isobutyl acetate (110-19-0)	
BCF - Fish [1]	(no significant bioconcentration)
Partition coefficient n-octanol/water (Log Pow)	2.3 (at 25 °C (at pH 7)

3(2H)-Furanone, 4-hydroxy-2,5-dimethyl- (3658-77-3)	
Partition coefficient n-octanol/water (Log Pow)	0.95 (at 20 °C (at pH 2.5)

Dipropylene glycol monomethyl ether (34590-94-8)	
Partition coefficient n-octanol/water (Log Pow)	0.35 (at 25 °C (at pH 7)

.alpha.-Pinene (80-56-8)	
Partition coefficient n-octanol/water (Log Pow)	4.1

.beta.-Pinene (127-91-3)	
Partition coefficient n-octanol/water (Log Pow)	4.4 (at 25 °C)

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

WHITE PUMPKIN CARAMEL #EU55232F	
Other information	Avoid release to the environment.

Vanillin (121-33-5)	
Other information	Avoid release to the environment.

benzyl benzoate (120-51-4)	
Other information	Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container in accordance with local/national laws and regulations.

Ecological waste information : Avoid release to the environment.

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

ADR	IMDG	IATA	ADN	RID
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	**Applicable on**	**Entry title or description**
3(a)	Ethyl lactate ; Oenanthic ether (Ethyl heptanoate) ; Furfural ; Isobutyl acetate ; .alpha.-Pinene ; .beta.-Pinene	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)	WHITE PUMPKIN CARAMEL #EU55232F ; Vertenex ; Cinnamic aldehyde ; Benzyl alcohol ; Benzyl benzoate ; Ethyl lactate ; Furfural ; Isobutyl acetate ; 3(2H)-Furanone, 4-hydroxy-2,5-dimethyl- ; .alpha.-Pinene	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)	Cinnamic aldehyde ; Benzyl benzoate ; Oenanthic ether (Ethyl heptanoate) ; Furfural ; .alpha.-Pinene	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

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 (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

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

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

VOC Directive (2004/42)

VOC content : 2.491835 % (calculated value)(CARB VOC) (%w/w)

Explosives Precursors Regulation (EU 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 (EC 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)

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

VOC ordinance (ChemVOCFarbV) : VOC content : 2.491835 % (calculated value)(CARB VOC) (%w/w)

Water hazard class (WGK) : WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1).
List of sensitizing substances (TRGS 907) : Contains sensitizing substances according TRGS 907.
Major Accidents Ordinance (12. BImSchV) : Is not subject to the Major Accidents Ordinance (12. BImSchV)

Netherlands

ABM category : A(3) - hazardous for aquatic organisms, may have longterm hazardous effects in aquatic environment
SZW-lijst van kankerverwekkende stoffen : None of the components are listed
SZW-lijst van mutagene stoffen : None of the components are listed
SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed
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

Poland

Polish National Regulations : Act of 25 February 2011 on chemical substances and their mixtures (J. o L. No. 63, item 322 as amended; consolidated text J. o L. 2019, item 1225).
Act of 14 December 2012 on waste (J. o L. 2013, item 322 as amended; consolidated text J. o L. 2020, item 797).
The announcement of Marshal of the Sejm of the Republic of Poland dated 19 October 2016 concerning the consolidated text announcement of the decree on the management of packaging and packaging waste (J. o L. 2016, item 1863 as amended).
Decree of the Minister of Environment of 14 December 2014 on the catalogue of waste (J. o L. 2014, item 1923).
Act of 19 August 2011 on the Carriage of Dangerous Goods (J. o L. 2011 No. 227, item 1367 as amended; consolidated text J. o L. 2020, item 154).
Regulation of the Minister of Family, Labour and Social Policy of 12 June 2018 on the highest permissible concentration and intensity of noxious agents for health at work environment (J. o L. item 1286 as amended).
The announcement of Minister of Health dated 9 September 2016 concerning the consolidated text announcement of the decree of the Minister of Health of 30 December 2004 on health and safety at work related to exposure to chemical agents at work (J. o L. of 16 September 2016, item 1488)
Regulation of the Minister of Health of 2 February 2011 on tests and measurements of the noxious agents for health at work environment (J. o L. No. 33, item 166 as amended).
Regulation of the Minister of Environment of 9 December 2003 on particularly hazardous substances to the environment (J. o L. No. 217, item 2141).
ADR Agreement: Government Statement of 13 March 2023 on the entry into force of amendments to Annexes A and B to the Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), signed in Geneva on 30 September 1957 (J. o. L. 2023, item 891)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Other information : None.

Full text of H- and EUH-statements:	
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. 2	Carcinogenicity, Category 2
EUH208	Contains {0|message≤name of sensitising substance>|fieldvalue=_SENSITIZER_COMPONENTS}. May produce an allergic reaction.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2

Full text of H- and EUH-statements:	
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
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
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
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.

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.