

Strawberry #EU22966F

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 20.12.2023 Revision date: 11.05.2023

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

1.1. Product identifier

Product form : Mixture
Trade name : Strawberry #EU22966F
UFI : FRK1-32GC-V000-K2YK
Product code : EU22966F
Type of product : Perfumes, fragrances
Product group : Trade product

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

1.2.1. Relevant identified uses

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

1.2.2. Uses advised against

No additional information available

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 sensitisation, Category 1 H317
Hazardous to the aquatic environment – Chronic Hazard, Category 3 H412
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Harmful to aquatic life with long lasting effects. 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

: Aldehyde C-16; Triplal (Vertocitral); Hexyl salicylate; Methyl heptine carbonate; 2-Buten-1-one, 1-(2,6,6-trimethyl-2-cyclohexen-1-yl)-, (E)-; Benzyl salicylate; Lemon oil ; d-Limonene

Strawberry #EU22966F

Safety Data Sheet

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

Hazard statements (CLP)	: H317 - May cause an allergic skin reaction. H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray. P272 - Contaminated work clothing should not be allowed out of the workplace. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. P302+P352 - IF ON SKIN: Wash with plenty of water. P321 - Specific treatment (see supplemental first aid instruction on this label).
Extra phrases	: For professional users only.

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ 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 is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Aldehyde C-16	CAS-No.: 77-83-8 EC-No.: 201-061-8 REACH-no: 01-2119967770-28	4,68 – 9,36	Skin Sens. 1B, H317 Aquatic Chronic 2, H411
Verdorex	CAS-No.: 88-41-5 EC-No.: 201-828-7 REACH-no: 01-2119970713-33	2,62 – 5,24	Aquatic Chronic 2, H411
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	1,405 – 2,81	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319
2(3H)-Furanone, 5-heptyldihydro-	CAS-No.: 104-67-6 EC-No.: 203-225-4 REACH-no: 01-2119959333-34	0,7 – 1,4	Aquatic Chronic 3, H412
Floropal	CAS-No.: 5182-36-5 EC-No.: 225-963-6	0,68 – 1,36	Acute Tox. 4 (Oral), H302 Aquatic Chronic 3, H412
Ethyl vanillin	CAS-No.: 121-32-4 EC-No.: 204-464-7 REACH-no: 01-211958961-24	0,655 – 1,31	Eye Irrit. 2, H319
Dimethylbenzyl carbinyl butyrate(DMBCB)	CAS-No.: 10094-34-5 EC-No.: 233-221-8 REACH-no: 01-2120742578-44	0,61 – 1,22	Skin Irrit. 2, H315 Aquatic Chronic 3, H412

Strawberry #EU22966F

Safety Data Sheet

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

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethyl acetoacetate substance with national workplace exposure limit(s) (RO)	CAS-No.: 141-97-9 EC-No.: 205-516-1	0,47 – 0,94	Not classified
Triplal (Vertocitral)	CAS-No.: 68039-49-6 EC-No.: 268-264-1	0,28 – 0,56	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 3, H412
Citrus medica limonum (Lemon) peel oil	CAS-No.: 8008-56-8 EC-No.: 284-515-8	0,25 – 0,5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Repr. 2, H361 Aquatic Chronic 2, H411
isopentyl acetate substance with national workplace exposure limit(s) (AT, BE, BG, CY, DE, DK, EE, ES, FI, FR, GI, GR, HR, HU, IE, IT, LT, LU, LV, MT, NL, PL, PT, RO, SE, SI, SK, NO, TR); substance with a Community workplace exposure limit	CAS-No.: 123-92-2 EC-No.: 204-662-3 EC Index-No.: 607-130-00-2 REACH-no: 01-2119548408-32	0,2 – 0,4	Flam. Liq. 3, H226
Hexyl salicylate	CAS-No.: 6259-76-3 EC-No.: 228-408-6	0,185 – 0,37	Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Allyl heptanoate	CAS-No.: 142-19-8 EC-No.: 205-527-1 REACH-no: 01-2119488961-23	0,15 – 0,3	Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Orange oil	CAS-No.: 8008-57-9 EC-No.: 232-433-8 REACH-no: 01-2119493353-35	0,14 – 0,28	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 2, H411
(R)-p-mentha-1,8-diene; d-limonene substance with national workplace exposure limit(s) (DE, ES, FI, SI, NO, CH)	CAS-No.: 5989-27-5 EC-No.: 205-341-0 EC Index-No.: 601-096-00-2 REACH-no: 01-2119493353-35	0,13356 – 0,26712	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
Methyl heptine carbonate	CAS-No.: 111-12-6 EC-No.: 203-836-6	0,1 – 0,2	Aquatic Acute 1, H400 Aquatic Chronic 3, H412 Skin Sens. 1A, H317
2-Buten-1-one, 1-(2,6,6-trimethyl-2-cyclohexen-1-yl)-, (E)-	CAS-No.: 24720-09-0 EC-No.: 246-430-4	0,07 – 0,14	Acute Tox. 4 (Oral), H302 Skin Sens. 1B, H317 Aquatic Chronic 2, H411
Benzyl salicylate	CAS-No.: 118-58-1 EC-No.: 204-262-9 EC Index-No.: 607-754-00-5 REACH-no: 01-2119969442-31	0,055 – 0,11	Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 3, H412

Strawberry #EU22966F

Safety Data Sheet

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

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Benzyl acetate substance with national workplace exposure limit(s) (BE, DK, ES, IE, LT, LV, PT, RO)	CAS-No.: 140-11-4 EC-No.: 205-399-7 REACH-no: 01-2119638272-42	0,055 – 0,11	Aquatic Chronic 3, H412
benzaldehyde substance with national workplace exposure limit(s) (BG, FI, HU, LT, LV, PL)	CAS-No.: 100-52-7 EC-No.: 202-860-4 EC Index-No.: 605-012-00-5 REACH-no: 01-2119455540-44	0 – 0,07	Acute Tox. 4 (Oral), H302
Diphenyl oxide 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); substance with a Community workplace exposure limit	CAS-No.: 101-84-8 EC-No.: 202-981-2 REACH-no: 01-2119472545-33	0 – 0,01	Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Dimethyl sulfide substance with national workplace exposure limit(s) (BE, EE, ES, IE, LT, LV, PT, SE)	CAS-No.: 75-18-3 EC-No.: 200-846-2	0 – 0,01	Flam. Liq. 2, H225 Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319
.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	0,0007 – 0,0014	Flam. Liq. 3, H226
.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	0,00014 – 0,00028	Flam. Liq. 3, H226

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 after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after skin contact	: May cause an allergic skin reaction.
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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	: Water spray. Dry powder. Foam. Carbon dioxide.
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5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: Toxic fumes may be released.
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Strawberry #EU22966F

Safety Data Sheet

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

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

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

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

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. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.
Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. 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 : Store in a well-ventilated place. Keep cool.
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.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

benzyl alcohol (100-51-6)

Bulgaria - Occupational Exposure Limits

OEL TWA	5 mg/m³
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Strawberry #EU22966F

Safety Data Sheet

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

benzyl alcohol (100-51-6)	
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	40 mg/m ³
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	45 mg/m ³
HTP (OEL TWA) [2]	10 ppm
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	22 mg/m ³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
AGW (OEL TWA) [2]	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/m ³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	5 mg/m ³
OEL chemical category	Skin notation
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	240 mg/m ³
Slovenia - Occupational Exposure Limits	
OEL TWA	22 mg/m ³
OEL TWA	5 ppm
OEL STEL	44 mg/m ³
OEL STEL	10 ppm
OEL chemical category	Potential for cutaneous absorption
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA) [1]	22 mg/m ³ (aerosol, vapour)
MAK (OEL TWA) [2]	5 ppm (aerosol, vapour)
OEL chemical category	Skin notation
Ethyl acetoacetate (141-97-9)	
Romania - Occupational Exposure Limits	
OEL TWA	100 mg/m ³
OEL TWA	19 ppm
OEL STEL	200 mg/m ³
OEL STEL	38 ppm
isopentyl acetate (123-92-2)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	270 mg/m ³
IOEL TWA [ppm]	50 ppm
IOEL STEL	540 mg/m ³

Strawberry #EU22966F

Safety Data Sheet

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

isopentyl acetate (123-92-2)	
IOEL STEL [ppm]	100 ppm
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	270 mg/m ³ (Pentyl acetate (all isomers))
MAK (OEL TWA) [ppm]	50 ppm (Pentyl acetate (all isomers))
MAK (OEL STEL)	540 mg/m ³ (Pentylacetate)
MAK (OEL STEL) [ppm]	100 ppm (Pentylacetate)
Belgium - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
OEL TWA	50 ppm
OEL STEL	540 mg/m ³
OEL STEL	100 ppm
Bulgaria - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
OEL TWA	50 ppm
OEL STEL	540 mg/m ³
OEL STEL	100 ppm
Croatia - Occupational Exposure Limits	
GVI (OEL TWA) [1]	270 mg/m ³
GVI (OEL TWA) [2]	50 ppm
KGVI (OEL STEL)	540 mg/m ³
KGVI (OEL STEL) [ppm]	100 ppm
Cyprus - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
OEL TWA	50 ppm
OEL STEL	540 mg/m ³
OEL STEL	100 ppm
Denmark - Occupational Exposure Limits	
OEL TWA [1]	271 mg/m ³ (Amyl acetate, all isomers)
OEL TWA [2]	50 ppm (Amyl acetate, all isomers)
OEL STEL	540 mg/m ³
OEL STEL	100 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
OEL TWA	50 ppm
OEL STEL	540 mg/m ³
OEL STEL	100 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	270 mg/m ³ (Pentyl acetate)
HTP (OEL TWA) [2]	50 ppm (Pentyl acetate)

Strawberry #EU22966F

Safety Data Sheet

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

isopentyl acetate (123-92-2)	
HTP (OEL STEL)	540 mg/m ³
HTP (OEL STEL) [ppm]	100 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	270 mg/m ³ (restrictive limit)
VME (OEL TWA) [ppm]	50 ppm (restrictive limit)
VLE (OEL C/STEL)	540 mg/m ³ (restrictive limit)
VLE (OEL C/STEL) [ppm]	100 ppm (restrictive limit)
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	270 mg/m ³
AGW (OEL TWA) [2]	50 ppm
Gibraltar - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
OEL TWA	50 ppm
OEL STEL	540 mg/m ³
OEL STEL	100 ppm
Greece - Occupational Exposure Limits	
OEL TWA	530 mg/m ³
OEL TWA	100 ppm
OEL STEL	800 mg/m ³
OEL STEL	150 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	270 mg/m ³
CK (OEL STEL)	540 mg/m ³
Ireland - Occupational Exposure Limits	
OEL TWA [1]	260 mg/m ³
OEL TWA [2]	50 ppm
OEL STEL	520 mg/m ³
OEL STEL	100 ppm
Italy - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
OEL TWA	50 ppm
OEL STEL	540 mg/m ³
OEL STEL	100 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
OEL TWA	50 ppm
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	270 mg/m ³
IPRV (OEL TWA) [ppm]	50 ppm

Strawberry #EU22966F

Safety Data Sheet

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

isopentyl acetate (123-92-2)	
TPRV (OEL STEL)	540 mg/m ³
TPRV (OEL STEL) [ppm]	100 ppm
Luxembourg - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
OEL TWA	50 ppm
OEL STEL	540 mg/m ³
OEL STEL	100 ppm
Malta - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
OEL TWA	50 ppm
OEL STEL	540 mg/m ³
OEL STEL	100 ppm
Netherlands - Occupational Exposure Limits	
TGG-15min (OEL STEL)	530 mg/m ³
TGG-15min (OEL STEL) [ppm]	98,1 ppm
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	250 mg/m ³
NDSch (OEL STEL)	500 mg/m ³
Portugal - Occupational Exposure Limits	
OEL TWA	270 mg/m ³ (indicative limit value)
OEL TWA	50 ppm (indicative limit value (Pentyl acetate, all isomers))
OEL STEL	540 mg/m ³ (indicative limit value)
OEL STEL	100 ppm (indicative limit value)
Romania - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
OEL TWA	50 ppm
OEL STEL	540 mg/m ³
OEL STEL	100 ppm
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA) [1]	270 mg/m ³
NPHV (OEL TWA) [2]	50 ppm
NPHV (OEL C)	540 mg/m ³
Slovenia - Occupational Exposure Limits	
OEL TWA	270 mg/m ³
OEL TWA	50 ppm
OEL STEL	540 mg/m ³
OEL STEL	100 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	270 mg/m ³ (indicative limit value)

Strawberry #EU22966F

Safety Data Sheet

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

isopentyl acetate (123-92-2)	
VLA-ED (OEL TWA) [2]	50 ppm (indicative limit value)
VLA-EC (OEL STEL)	540 mg/m ³
VLA-EC (OEL STEL) [ppm]	100 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	270 mg/m ³ (Pentyl acetates)
NGV (OEL TWA) [ppm]	50 ppm (Pentyl acetates)
KTV (OEL STEL)	540 mg/m ³ (Pentyl acetates)
KTV (OEL STEL) [ppm]	100 ppm (Pentyl acetates)
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA) [1]	260 mg/m ³
Grenseverdi (OEL TWA) [2]	50 ppm
Korttidsverdi (OEL STEL)	325 mg/m ³ (value calculated)
Korttidsverdi (OEL STEL) [ppm]	75 ppm (value calculated)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	50 ppm (Pentyl acetate, all isomers)
ACGIH OEL STEL [ppm]	100 ppm (Pentyl acetate, all isomers)
Diphenyl oxide (101-84-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	7 mg/m ³
IOEL TWA [ppm]	1 ppm
IOEL STEL	14 mg/m ³
IOEL STEL [ppm]	2 ppm
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	7 mg/m ³
MAK (OEL TWA) [ppm]	1 ppm
MAK (OEL STEL)	14 mg/m ³
MAK (OEL STEL) [ppm]	2 ppm
Belgium - Occupational Exposure Limits	
OEL TWA	7 mg/m ³ (vapor)
OEL TWA	1 ppm (vapor)
OEL STEL	14 mg/m ³ (vapor)
OEL STEL	2 ppm (vapor)
Bulgaria - Occupational Exposure Limits	
OEL TWA	7 mg/m ³
OEL TWA	1 ppm
OEL STEL	14 mg/m ³
OEL STEL	2 ppm
Croatia - Occupational Exposure Limits	
GVI (OEL TWA) [1]	7 mg/m ³

Strawberry #EU22966F

Safety Data Sheet

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

Diphenyl oxide (101-84-8)	
GVI (OEL TWA) [2]	1 ppm
KGVI (OEL STEL)	14 mg/m ³
KGVI (OEL STEL) [ppm]	2 ppm
Cyprus - Occupational Exposure Limits	
OEL TWA	7 mg/m ³
OEL TWA	1 ppm
OEL STEL	14 mg/m ³
OEL STEL	2 ppm
Czech Republic - Occupational Exposure Limits	
PEL (OEL TWA)	5 mg/m ³
Denmark - Occupational Exposure Limits	
OEL TWA [1]	7 mg/m ³
OEL TWA [2]	1 ppm
OEL STEL	14 mg/m ³
OEL STEL	2 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	7 mg/m ³
OEL TWA	1 ppm
OEL STEL	14 mg/m ³
OEL STEL	2 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	7 mg/m ³
HTP (OEL TWA) [2]	1 ppm
HTP (OEL STEL)	14 mg/m ³
HTP (OEL STEL) [ppm]	2 ppm
France - Occupational Exposure Limits	
VME (OEL TWA)	7 mg/m ³
VME (OEL TWA) [ppm]	1 ppm
VLE (OEL C/STEL)	14 mg/m ³ (indicative limit)
VLE (OEL C/STEL) [ppm]	2 ppm (indicative limit)
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	7,1 mg/m ³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed-vapor)
AGW (OEL TWA) [2]	1 ppm (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed-vapor)
Gibraltar - Occupational Exposure Limits	
OEL TWA	7 mg/m ³
OEL TWA	1 ppm
OEL STEL	14 mg/m ³
OEL STEL	200 ppm

Strawberry #EU22966F

Safety Data Sheet

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

Diphenyl oxide (101-84-8)	
Greece - Occupational Exposure Limits	
OEL TWA	7 mg/m ³
OEL TWA	1 ppm
OEL STEL	14 mg/m ³
OEL STEL	2 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	7 mg/m ³
CK (OEL STEL)	14 mg/m ³
Ireland - Occupational Exposure Limits	
OEL TWA [1]	7 mg/m ³ (vapour)
OEL TWA [2]	1 ppm (vapour)
OEL STEL	14 mg/m ³ (vapour)
OEL STEL	2 ppm (vapour)
Italy - Occupational Exposure Limits	
OEL TWA	7 mg/m ³
OEL TWA	1 ppm
Latvia - Occupational Exposure Limits	
OEL TWA	7 mg/m ³
OEL TWA	1 ppm
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	7 mg/m ³
IPRV (OEL TWA) [ppm]	1 ppm
TPRV (OEL STEL)	14 mg/m ³
TPRV (OEL STEL) [ppm]	2 ppm
Luxembourg - Occupational Exposure Limits	
OEL TWA	7 mg/m ³
OEL TWA	1 ppm
OEL STEL	14 mg/m ³
OEL STEL	2 ppm
Malta - Occupational Exposure Limits	
OEL TWA	7 mg/m ³
OEL TWA	1 ppm
OEL STEL	14 mg/m ³
OEL STEL	2 ppm
Netherlands - Occupational Exposure Limits	
TGG-8u (OEL TWA)	7 mg/m ³
TGG-8u (OEL TWA) [ppm]	1 ppm
TGG-15min (OEL STEL)	14 mg/m ³
TGG-15min (OEL STEL) [ppm]	2 ppm

Strawberry #EU22966F

Safety Data Sheet

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

Diphenyl oxide (101-84-8)	
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	7 mg/m ³
NDSch (OEL STEL)	14 mg/m ³
Portugal - Occupational Exposure Limits	
OEL TWA	7 mg/m ³
OEL TWA	1 ppm (vapor)
OEL STEL	14 mg/m ³ (indicative limit value)
OEL STEL	2 ppm (indicative limit value-vapor)
Romania - Occupational Exposure Limits	
OEL TWA	7 mg/m ³
OEL TWA	1 ppm
OEL STEL	14 mg/m ³
OEL STEL	2 ppm
Slovakia - Occupational Exposure Limits	
NPHV (OEL TWA) [1]	7 mg/m ³
NPHV (OEL TWA) [2]	1 ppm
NPHV (OEL C)	7,1 mg/m ³
Slovenia - Occupational Exposure Limits	
OEL TWA	7 mg/m ³
OEL TWA	1 ppm
OEL STEL	14 mg/m ³
OEL STEL	2 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	7,1 mg/m ³ (vapor)
VLA-ED (OEL TWA) [2]	1 ppm (vapor)
VLA-EC (OEL STEL)	14,2 mg/m ³ (vapor)
VLA-EC (OEL STEL) [ppm]	2 ppm (vapor)
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	7 mg/m ³
NGV (OEL TWA) [ppm]	1 ppm
KTV (OEL STEL)	14 mg/m ³
KTV (OEL STEL) [ppm]	2 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	7 mg/m ³
WEL TWA (OEL TWA) [2]	1 ppm
WEL STEL (OEL STEL)	14 mg/m ³
WEL STEL (OEL STEL) [ppm]	2 ppm
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA) [1]	7 mg/m ³

Strawberry #EU22966F

Safety Data Sheet

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

Diphenyl oxide (101-84-8)	
Grenseverdi (OEL TWA) [2]	1 ppm
Korttidsverdi (OEL STEL)	14 mg/m ³ (value from the regulation)
Korttidsverdi (OEL STEL) [ppm]	2 ppm (value from the regulation)
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA) [1]	7 mg/m ³ (aerosol, vapour)
MAK (OEL TWA) [2]	1 ppm (aerosol, vapour)
KZGW (OEL STEL)	14 mg/m ³ (aerosol, vapour)
KZGW (OEL STEL) [ppm]	2 ppm (aerosol, vapour)
OEL chemical category	Category 2 reproductive toxin
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	1 ppm (vapor)
ACGIH OEL STEL [ppm]	2 ppm (vapor fraction)
benzaldehyde (100-52-7)	
Bulgaria - Occupational Exposure Limits	
OEL TWA	5 mg/m ³
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	4,4 mg/m ³
HTP (OEL TWA) [2]	1 ppm
HTP (OEL C)	17,4 mg/m ³
HTP (OEL C) [ppm]]	4 ppm
Hungary - Occupational Exposure Limits	
AK (OEL TWA)	5 mg/m ³
CK (OEL STEL)	10 mg/m ³
Latvia - Occupational Exposure Limits	
OEL TWA	5 mg/m ³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	5 mg/m ³
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	10 mg/m ³
NDSch (OEL STEL)	40 mg/m ³
Benzyl acetate (140-11-4)	
Belgium - Occupational Exposure Limits	
OEL TWA	62 mg/m ³
OEL TWA	10 ppm
Denmark - Occupational Exposure Limits	
OEL TWA [1]	61 mg/m ³
OEL TWA [2]	10 ppm
OEL STEL	122 mg/m ³

Strawberry #EU22966F

Safety Data Sheet

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

Benzyl acetate (140-11-4)	
OEL STEL	20 ppm
Ireland - Occupational Exposure Limits	
OEL TWA [2]	10 ppm
OEL STEL	30 ppm (calculated)
Latvia - Occupational Exposure Limits	
OEL TWA	5 mg/m ³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	5 mg/m ³
Portugal - Occupational Exposure Limits	
OEL TWA	10 ppm
OEL chemical category	A4 - Not Classifiable as a Human Carcinogen
Romania - Occupational Exposure Limits	
OEL TWA	50 mg/m ³
OEL TWA	8 ppm
OEL STEL	80 mg/m ³
OEL STEL	13 ppm
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	62 mg/m ³
VLA-ED (OEL TWA) [2]	10 ppm
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	10 ppm
ACGIH chemical category	Not Classifiable as a Human Carcinogen
Dimethyl sulfide (75-18-3)	
Belgium - Occupational Exposure Limits	
OEL TWA	26 mg/m ³
OEL TWA	10 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	1 ppm (total concentration of Dimethyl disulphide, Dimethyl sulphide and Methyl mercaptan)
Ireland - Occupational Exposure Limits	
OEL TWA [2]	10 ppm
OEL STEL	30 ppm (calculated)
Latvia - Occupational Exposure Limits	
OEL TWA	50 mg/m ³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA) [ppm]	1 ppm
Portugal - Occupational Exposure Limits	
OEL TWA	10 ppm

Strawberry #EU22966F

Safety Data Sheet

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

Dimethyl sulfide (75-18-3)	
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [2]	10 ppm
Sweden - Occupational Exposure Limits	
NGV (OEL TWA) [ppm]	1 ppm (total sum of Dimethyl disulfide, Dimethyl sulfide and Methyl thiol (Sulfides))
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	10 ppm
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	140 mg/m ³
HTP (OEL TWA) [2]	25 ppm
HTP (OEL STEL)	280 mg/m ³
HTP (OEL STEL) [ppm]	50 ppm
Germany - Occupational Exposure Limits (TRGS 900)	
AGW (OEL TWA) [1]	28 mg/m ³ (the risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
AGW (OEL TWA) [2]	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, Skin sensitization
Slovenia - Occupational Exposure Limits	
OEL TWA	28 mg/m ³
OEL TWA	5 ppm
OEL STEL	112 mg/m ³
OEL STEL	20 ppm
OEL chemical category	Potential for cutaneous absorption
Spain - Occupational Exposure Limits	
VLA-ED (OEL TWA) [1]	168 mg/m ³
VLA-ED (OEL TWA) [2]	30 ppm
OEL chemical category	Sensitizer, skin - potential for cutaneous absorption
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA) [1]	140 mg/m ³
Grenseverdi (OEL TWA) [2]	25 ppm
Korttidsverdi (OEL STEL)	175 mg/m ³ (value calculated)
Korttidsverdi (OEL STEL) [ppm]	37,5 ppm (value calculated)
OEL chemical category	Allergenic substance
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA) [1]	40 mg/m ³
MAK (OEL TWA) [2]	7 ppm
KZGW (OEL STEL)	80 mg/m ³
KZGW (OEL STEL) [ppm]	14 ppm

Strawberry #EU22966F

Safety Data Sheet

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

(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
OEL chemical category	Sensitizer
.beta.-Pinene (127-91-3)	
Belgium - Occupational Exposure Limits	
OEL TWA	20 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	150 mg/m ³ (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
OEL TWA	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/m ³ (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	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/m ³
IPRV (OEL TWA) [ppm]	25 ppm
TPRV (OEL STEL)	300 mg/m ³
TPRV (OEL STEL) [ppm]	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) [1]	113 mg/m ³
VLA-ED (OEL TWA) [2]	20 ppm
OEL chemical category	Sensitizer
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	150 mg/m ³
NGV (OEL TWA) [ppm]	25 ppm
KTV (OEL STEL)	300 mg/m ³
KTV (OEL STEL) [ppm]	50 ppm
OEL chemical category	Sensitizer
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA) [1]	140 mg/m ³
Grenseverdi (OEL TWA) [2]	25 ppm
Korttidsverdi (OEL STEL)	175 mg/m ³ (value calculated)
Korttidsverdi (OEL STEL) [ppm]	37,5 ppm (value calculated)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	20 ppm (Turpentine and selected Monoterpenes)
ACGIH chemical category	Not Classifiable as a Human Carcinogen, dermal sensitizer

Strawberry #EU22966F

Safety Data Sheet

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

.alpha.-Pinene (80-56-8)	
Belgium - Occupational Exposure Limits	
OEL TWA	20 ppm
Estonia - Occupational Exposure Limits	
OEL TWA	150 mg/m ³ (Turpentine produced from Nordic conifers has an irritating effect on the skin, monoterpenes, with the exception of 3-Carene, have a lesser effect)
OEL TWA	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/m ³ (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	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/m ³
IPRV (OEL TWA) [ppm]	25 ppm
TPRV (OEL STEL)	300 mg/m ³
TPRV (OEL STEL) [ppm]	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) [1]	113 mg/m ³
VLA-ED (OEL TWA) [2]	20 ppm
OEL chemical category	Sensitizer
Sweden - Occupational Exposure Limits	
NGV (OEL TWA)	150 mg/m ³
NGV (OEL TWA) [ppm]	25 ppm
KTV (OEL STEL)	300 mg/m ³
KTV (OEL STEL) [ppm]	50 ppm
OEL chemical category	Sensitizer
Norway - Occupational Exposure Limits	
Grenseverdi (OEL TWA) [1]	140 mg/m ³
Grenseverdi (OEL TWA) [2]	25 ppm
Korttidsverdi (OEL STEL)	175 mg/m ³ (value calculated)
Korttidsverdi (OEL STEL) [ppm]	37,5 ppm (value calculated)
OEL chemical category	Skin notation
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	20 ppm (Turpentine and selected Monoterpenes)
ACGIH chemical category	Not Classifiable as a Human Carcinogen, dermal sensitizer

8.1.2. Recommended monitoring procedures

No additional information available

Strawberry #EU22966F

Safety Data Sheet

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

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: light yellow. amber. Conforms to standard.
Odour	: characteristic. 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	: 85 °C (closed cup) ASTM D7094
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available

Strawberry #EU22966F

Safety Data Sheet

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

pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: ≈ 0,95
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

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

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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

Aldehyde C-16 (77-83-8)

LD50 oral rat	5470 mg/kg (Source: NLM_CIP)
LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)

2(3H)-Furanone, 5-heptyldihydro- (104-67-6)

LD50 oral rat	18500 mg/kg (Source: NLM_CIP)
LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)

Strawberry #EU22966F

Safety Data Sheet

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

benzyl alcohol (100-51-6)	
LD50 oral rat	1230 mg/kg (Source: NLM_CIP)
LD50 oral	1620 mg/kg bodyweight
LD50 dermal	2500 mg/kg bodyweight
Verdox (88-41-5)	
LD50 oral rat	4600 mg/kg (Source: NLM_CIP)
LD50 oral	4600 mg/kg bodyweight
Dimethylbenzyl carbinyI butyrate(DMBCB) (10094-34-5)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
Ethyl vanillin (121-32-4)	
LD50 oral rat	1590 mg/kg (Source: NLM_CIP)
LD50 oral	3000 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)
Ethyl acetoacetate (141-97-9)	
LD50 oral rat	3980 mg/kg (Source: NLM_CIP)
LD50 dermal rabbit	> 5000 mg/kg (Source: NLM_CIP)
Floropal (5182-36-5)	
LD50 oral	880 mg/kg bodyweight
LD50 dermal rat	> 2000 mg/kg (Source: ECHA_API)
Triplal (Vertocitral) (68039-49-6)	
LD50 oral	3900 mg/kg bodyweight
Allyl heptanoate (142-19-8)	
LD50 oral rat	500 mg/kg (Source: NLM_CIP)
LD50 oral	218 mg/kg bodyweight
LD50 dermal rabbit	810 mg/kg (Source: ECHA_API)
LD50 dermal	810 mg/kg bodyweight
Hexyl salicylate (6259-76-3)	
LD50 oral rat	> 5 g/kg (Source: NLM_CIP)
LD50 dermal rabbit	> 5000 mg/kg (Source: ECHA_API)
Methyl heptine carbonate (111-12-6)	
LD50 oral rat	1530 mg/kg (Source: NLM_CIP)
2-Buten-1-one, 1-(2,6,6-trimethyl-2-cyclohexen-1-yl)-, (E)- (24720-09-0)	
LD50 oral	1670 mg/kg bodyweight
LD50 dermal rat	2150 – 2780 mg/kg (Source: ECHA_API)
LD50 dermal	2900 mg/kg bodyweight
Diphenyl oxide (101-84-8)	
LD50 oral rat	2450 mg/kg (Source: NLM_CIP)
LD50 oral	2830 mg/kg bodyweight

Strawberry #EU22966F

Safety Data Sheet

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

Diphenyl oxide (101-84-8)	
LD50 dermal rabbit	> 7940 mg/kg (Source: NLM_CIP)
LC50 Inhalation - Rat (Dust/Mist)	1,5 mg/l/4h
benzaldehyde (100-52-7)	
LD50 oral rat	1292 mg/kg (Source: JAPAN_GHS)
LD50 dermal rabbit	> 1250 mg/kg (Source: JAPAN_GHS)
Benzyl salicylate (118-58-1)	
LD50 oral rat	2227 mg/kg (Source: NLM_CIP)
LD50 oral	2200 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)
Benzyl acetate (140-11-4)	
LD50 oral rat	2490 mg/kg (Source: JAPAN_GHS)
LD50 oral	2490 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: JAPAN_GHS)
Dimethyl sulfide (75-18-3)	
LD50 oral rat	535 mg/kg (Source: NLM_CIP)
LD50 oral	3500 mg/kg bodyweight
LD50 dermal rabbit	> 5000 mg/kg (Source: JAPAN_GHS)
LC50 Inhalation - Rat [ppm]	40250 ppm/4h
Citrus medica limonum (Lemon) peel oil (8008-56-8)	
LD50 oral rat	2840 mg/kg (Source: NLM_CIP)
Orange oil (8008-57-9)	
LD50 oral rat	4400 mg/kg (Source: NZ_CCID)
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
LD50 oral rat	4400 mg/kg (Source: CHEMVIEW)
LD50 dermal rabbit	> 5 g/kg (Source: CHEMVIEW)
.beta.-Pinene (127-91-3)	
LD50 oral rat	> 5000 mg/kg (Source: EPA_HPVS)
LD50 dermal rabbit	> 5000 mg/kg (Source: CHEMVIEW)
.alpha.-Pinene (80-56-8)	
LD50 oral rat	3700 mg/kg (Source: NLM_CIP)
LD50 oral	500 mg/kg bodyweight
LD50 dermal rat	> 5000 mg/kg (Source: CHEMVIEW)
Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Strawberry #EU22966F

Safety Data Sheet

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

Benzyl acetate (140-11-4)	
IARC group	3 - Not classifiable
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Orange oil (8008-57-9)	
Hydrocarbon	Yes

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.

Aldehyde C-16 (77-83-8)	
LC50 - Fish [1]	4,2 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static] Source: ECHA)
2(3H)-Furanone, 5-heptyldihydro- (104-67-6)	
LC50 - Fish [1]	569 mg/l 96 h
EC50 - Crustacea [1]	5,85 mg/l 48 h
EC50 - Other aquatic organisms [1]	5,94 mg/l 72 h
benzyl alcohol (100-51-6)	
LC50 - Fish [1]	460 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA)
LC50 - Fish [2]	10 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static] Source: EPA)
EC50 - Crustacea [1]	23 mg/l (Exposure time: 48 h - Species: water flea)
Ethyl vanillin (121-32-4)	
LC50 - Fish [1]	81,4 – 94,3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
Ethyl acetoacetate (141-97-9)	
LC50 - Fish [1]	298 mg/l (Exposure time: 96 h - Species: Pimephales promelas Source: IUCLID)
LC50 - Fish [2]	290 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss Source: IUCLID)
EC50 - Crustacea [1]	646 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h - Algae [1]	> 500 mg/l (Species: Desmodesmus subspicatus)
benzaldehyde (100-52-7)	
LC50 - Fish [1]	10,6 – 11,8 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through] Source: EPA)

Strawberry #EU22966F

Safety Data Sheet

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

benzaldehyde (100-52-7)	
LC50 - Fish [2]	12,69 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static] Source: IUCLID)
Benzyl salicylate (118-58-1)	
LC50 - Fish [1]	1,03 mg/l (Exposure time: 96 h - Species: Danio rerio [semi-static] Source: ECHA)
Dimethyl sulfide (75-18-3)	
LC50 - Fish [1]	213 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [semi-static] Source: ECHA)
EC50 - Crustacea [1]	23 mg/l (Exposure time: 48 h - Species: Daphnia pulex)
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
LC50 - Fish [1]	0,619 – 0,796 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
LC50 - Fish [2]	35 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss Source: EPA)
.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	
No additional information available	
12.3. Bioaccumulative potential	
Aldehyde C-16 (77-83-8)	
Partition coefficient n-octanol/water (Log Pow)	2,4 (at 25 °C (cis isomer)
2(3H)-Furanone, 5-heptyldihydro- (104-67-6)	
Partition coefficient n-octanol/water (Log Pow)	3,6 (at 25 °C)
benzyl alcohol (100-51-6)	
Partition coefficient n-octanol/water (Log Pow)	1,05
Dimethylbenzyl carbiny butyrate(DMBCB) (10094-34-5)	
Partition coefficient n-octanol/water (Log Pow)	4,7 (at 25 °C)
Ethyl vanillin (121-32-4)	
Partition coefficient n-octanol/water (Log Pow)	1,61 (at 25 °C)
Ethyl acetoacetate (141-97-9)	
Partition coefficient n-octanol/water (Log Pow)	0,8 (at 20 °C)
Floropal (5182-36-5)	
Partition coefficient n-octanol/water (Log Pow)	2,94 – 3,09 (at 22.8 °C)
isopentyl acetate (123-92-2)	
Partition coefficient n-octanol/water (Log Pow)	2,7 (at 35 °C)
Allyl heptanoate (142-19-8)	
Partition coefficient n-octanol/water (Log Pow)	3,97 (at 20 °C (at pH 5.3)

Strawberry #EU22966F

Safety Data Sheet

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

Hexyl salicylate (6259-76-3)	
Partition coefficient n-octanol/water (Log Pow)	5,5 (at 30 °C (at pH 7)
Methyl heptine carbonate (111-12-6)	
Partition coefficient n-octanol/water (Log Pow)	3 (at 20 °C (at pH 7)
2-Buten-1-one, 1-(2,6,6-trimethyl-2-cyclohexen-1-yl)-, (E)- (24720-09-0)	
BCF - Fish [1]	(>8.4 - <20)
Partition coefficient n-octanol/water (Log Pow)	3,66 (at 25 °C (at pH 5.82)
Diphenyl oxide (101-84-8)	
BCF - Fish [1]	(470 dimensionless)
Partition coefficient n-octanol/water (Log Pow)	4,21 (at 25 °C)
benzaldehyde (100-52-7)	
BCF - Fish [1]	(no significant bioaccumulation)
Partition coefficient n-octanol/water (Log Pow)	1,4 (at 25 °C)
Benzyl salicylate (118-58-1)	
Partition coefficient n-octanol/water (Log Pow)	4
Benzyl acetate (140-11-4)	
Partition coefficient n-octanol/water (Log Pow)	1,96 (at 25 °C (at pH 7)
(R)-p-mentha-1,8-diene; d-limonene (5989-27-5)	
Partition coefficient n-octanol/water (Log Pow)	4,38 (at 37 °C (at pH 7.2)
.alpha.-Pinene (80-56-8)	
Partition coefficient n-octanol/water (Log Pow)	4,1

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

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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

Strawberry #EU22966F

Safety Data Sheet

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

HP Code

: HP3 - "Flammable:"
– flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and ≤ 75 °C;
– flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air;
– flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction;
– flammable gaseous waste: gaseous waste which is flammable in air at 20 °C and a standard pressure of 101.3 kPa;
– water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities;
– other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste.
HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

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

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
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

Strawberry #EU22966F

Safety Data Sheet

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

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)

Reference code	Applicable on	Entry title or description
3(a)	isopentyl acetate ; Dimethyl sulfide ; Citrus medica limonum (Lemon) peel oil ; Orange oil	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)	Strawberry #EU22966F ; Aldehyde C-16 ; benzyl alcohol ; Dimethylbenzyl carbiny butyrate(DMBCB) ; Floropal ; Triplal (Vertocitral) ; Allyl heptanoate ; Hexyl salicylate ; Methyl heptine carbonate ; 2-Buten-1-one, 1-(2,6,6-trimethyl-2-cyclohexen-1-yl)-, (E)- ; benzaldehyde ; Benzyl salicylate ; Dimethyl sulfide ; Citrus medica limonum (Lemon) peel oil ; Orange oil	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)	Strawberry #EU22966F ; Aldehyde C-16 ; 2(3H)-Furanone, 5-heptyldihydro- ; Verdox ; Dimethylbenzyl carbiny butyrate(DMBCB) ; Floropal ; Triplal (Vertocitral) ; Allyl heptanoate ; Hexyl salicylate ; Methyl heptine carbonate ; 2-Buten-1-one, 1-(2,6,6-trimethyl-2-cyclohexen-1-yl)-, (E)- ; Benzyl salicylate ; Benzyl acetate ; Citrus medica limonum (Lemon) peel oil ; Orange oil	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
40.	isopentyl acetate ; Dimethyl sulfide ; Citrus medica limonum (Lemon) peel oil ; Orange oil	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.

REACH Annex XIV (Authorisation List)

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

REACH Candidate List (SVHC)

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

PIC Regulation (Prior Informed Consent)

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

Strawberry #EU22966F

Safety Data Sheet

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

POP Regulation (Persistent Organic Pollutants)

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

Ozone Regulation (1005/2009)

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

Explosives Precursors Regulation (2019/1148)

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

Drug Precursors Regulation (273/2004)

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

15.1.2. National regulations

France

Occupational diseases	
Code	Description
RG 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

Employment restrictions	: Observe restrictions according Act on the Protection of Working Mothers (MuSchG). Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG).
Water hazard class (WGK)	: WGK 2, Significantly hazardous to water (Classification according to AwSV, Annex 1).
Hazardous Incident Ordinance (12. BImSchV)	: Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Netherlands

ABM category	: A(2) - toxic for aquatic organisms, may have longterm hazardous effects in aquatic environment
SZW-lijst van kankerverwekkende stoffen	: Triplal (Vertocitral),Lemon oil ,Orange oil are listed
SZW-lijst van mutagene stoffen	: Triplal (Vertocitral),Lemon oil ,Orange oil 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

Class for fire hazard	: Class III-1
Store unit	: 50 liter
Classification remarks	: Flammable according to the Danish Ministry of Justice; 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

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Full text of H- and EUH-statements:

Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3

Strawberry #EU22966F

Safety Data Sheet

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

Full text of H- and EUH-statements:	
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
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
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
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.
H311	Toxic in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
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.
Repr. 2	Reproductive toxicity, Category 2
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

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.