OIL, PEAR POMEGRANATE*

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Issue date: 06/28/2021 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form : Mixture

Product name : OIL, PEAR POMEGRANATE*

CAS-No. : N/A

Product code : 91-1055-91

Product group : Trade product

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

The Lebermuth Company
4004 Technology Drive
46628 South Bend, IN - United States
T 574-259-7000 - F 574-258-7450
info@lebermuth.com - www.lebermuth.com

1.4. Emergency telephone number

Emergency number : CHEMTREC - USA: 800-424-9300 International: +1 703-527-3887 / 1-800-424-9300
CCN 13010

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS CA)

Flammable liquids Category 4	H227 Combustible liquid
Skin corrosion/irritation Category 2	H315 Causes skin irritation
Serious eye damage/eye irritation Category 2A	H319 Causes serious eye irritation
Skin sensitization, Category 1	H317 May cause an allergic skin reaction
Reproductive toxicity Category 2	H361 Suspected of damaging fertility or the unborn child
Aspiration hazard Category 1	H304 May be fatal if swallowed and enters airways

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS CA labeling

Hazard pictograms (GHS CA) :

Signal word (GHS CA) : Danger

Hazard statements (GHS CA) : H227 - Combustible liquid
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H361 - Suspected of damaging fertility or the unborn child

Precautionary statements (GHS CA) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 - Avoid breathing dust/fume/gas/mist/vapors/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.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
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.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P331 - Do NOT induce vomiting.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 - If eye irritation persists: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use media other than water to extinguish.
P403 - Store in a well-ventilated place.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS CA)

No data available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
DIOCTYL ADIPATE	adipic acid bis(2-ethylhexyl)ester / adipic acid di(2-ethylhexyl)ester / adipol 2EH / BEHA (=bis(2-ethylhexyl)adipate) / bis(2-ethylhexyl) adipate / bis(2-ethylhexyl)adipate, selectophore / bis(2-ethylhexyl)hexanedioate / bisoflex DOA / DEHA (=bis(2-ethylhexyl)adipate) / di(2-ethylhexyl)adipate / diisooctyladipate (=bis (2-ethylhexyl) adipate) / DOA (=bis(2-ethylhexyl)adipate) / effemoll DOA / effomoll DOA / ergoplast addo / flexol a26 / flexol plasticizer 10.a / flexol plasticizer a26 / good-rite plasticizer GP233 / harflex 250 / hexanedioic acid di(2-ethylhexyl)ester / hexanedioic acid dioctyl ester / hexanedioic acid, bis(2-ethylhexyl) ester / hexanedioic bis(2-ethylhexyl ester) / kemester 5652 / kodaflex doa / mollan s / monoplex doa / morflex 310 / octyl adipate (=bis (2-ethylhexyl)adipate) / PALATINOL DOA / PX238 / reomol DOA (=bis(2-ethylhexyl)adipate) / rucoflex plasticizer DOA / sicol 250 / staflex DOA / truflex DOA / uniflex DOA / vestinol OA / wickenol 158 / witamol 320	(CAS-No.) 103-23-1	25 – 50	Not classified
ORANGE OIL		(CAS-No.) 8028-48-6	10 – 25	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
LINALOOL	(+/-)-linalool / 1,6-octadien-3-ol, 3,7-dimethyl- / 2,6-dimethyl-2,7-octadiene-6-ol / 2,6-dimethylocta-2,7-dien-6-ol / 3,7-dimethyl-1,6-octadien-3-ol / 3,7-dimethyl-3-hydroxy-1,6-octadiene,dl- / 3,7-dimethylocta-1,6-dien-3-ol / allo-ocimenol / beta-linalool / coriandrol / dl-3,7-dimethyl-3-hydroxy-1,6-octadiene / linalool / linalyl alcohol / Substances with a flash-point above 60 °C and not more than 100 °C / Substances with a flash-point above 60 °C and not more than 100 °C, which do not belong to another class	(CAS-No.) 78-70-6	5 – 10	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1B, H317
Ethyl methylphenylglycidate		(CAS-No.) 77-83-8	1 – 5	Skin Sens. 1B, H317
MENTHOL		(CAS-No.) 2216-51-5	1 – 5	Skin Irrit. 2, H315 Eye Irrit. 2A, H319
ETHYL 2-METHYLBUTYRATE		(CAS-No.) 7452-79-1	1 – 5	Flam. Liq. 3, H226
3,7-Dimethyloct-6-en-3-ol		(CAS-No.) 18479-51-1	1 – 5	Flam. Liq. 4, H227
METHYL DIHYDROAJASMONATE	cyclopentaneacetic acid, 3-oxo-2-pentyl-, methyl ester / methyl (2-pentyl-3-oxocyclopentyl)acetate / methyl 3-oxo-2-pentylcyclopentaneacetate / methyl dihydrojasmonate	(CAS-No.) 24851-98-7	1 – 5	Not classified

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
BETA IONONE	3-buten-2-one, 4-(2,6,6-trimethyl-1-cyclohexen-1-yl)- / 4-(2,6,6-trimethyl-1-cyclohexen-1-yl)-3-buten-2-one / 4-(2,6,6-trimethyl-1-cyclohexenyl)-3-buten-2-one / 4-(2,6,6-trimethylcyclohex-1-ene-1-yl)-but-3-ene-2-one / beta-cyclocitrylideneacetone / beta-ionone, synthetic / beta-irisone / FEMA No 2595 / ionone beta / irisone beta	(CAS-No.) 14901-07-6	1 – 5	Not classified
CITRAL		(CAS-No.) 5392-40-5	1 – 5	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1B, H317
Butylated hydroxytoluene		(CAS-No.) 128-37-0	1 – 5	Not classified
HEXYL ACETATE		(CAS-No.) 142-92-7	1 – 5	Flam. Liq. 3, H226
α,α-Dimethylphenethyl butyrate		(CAS-No.) 10094-34-5	1 – 5	Not classified
LEMON OIL		(CAS-No.) 8008-56-8	0.1 – 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Repr. 2, H361 Asp. Tox. 1, H304
TRICYCLODECENYL ACETATE		(CAS-No.) 5413-60-5	0.1 – 1	Not classified
ETHYL BUTYRATE		(CAS-No.) 105-54-4	0.1 – 1	Flam. Liq. 3, H226
AMYL CINNAMIC ALDEHYDE		(CAS-No.) 122-40-7	0.1 – 1	Skin Sens. 1B, H317
PEPPERMINT OIL		(CAS-No.) 8006-90-4	0.1 – 1	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Asp. Tox. 1, H304
GAMMA UNDECALACTONE		(CAS-No.) 104-67-6	0.1 – 1	Not classified
ALLYL HEXANOATE		(CAS-No.) 123-68-2	0.1 – 1	Flam. Liq. 4, H227 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Inhalation:vapor), H331
ALLYL HEPTOATE		(CAS-No.) 142-19-8	0.1 – 1	Flam. Liq. 4, H227 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation:vapor), H331
GAMMA DECALACTONE	(+/-)-4-n-hexylbutyrolactone / (+/-)-4-normal-hexylbutyrolactone / (+/-)-gamma-decalactone / (+/-)-gamma-decanolactone / (R/S)-gamma-decalactone / 2(3H)-furanone, 5-hexyldihydro- / 2-decalactone / 4,5-dihydro-5-hexyl-2(3H)-furanone / 4-hexyl-4-butanolide / 4-hexyl-gamma-butyrolactone / 4-hydroxydecanoic acid lactone / 4-hydroxydecanoic acid-gamma-lactone / 5-hexyldihydro-2(3H)-furanone / 5-hexyltetrahydro-2-furanone / decalactone gamma / decan-4-olide / decanoic acid, 4-hydroxy-, gamma-lactone / decanolactone(=gamma-decanolactone) / decanolide-1,4 / gamma-decalactone / gamma-decalactone,(R/S)- / gamma-decanolactone / gamma-decanolide / gamma-hexylbutyrolactone / gamma-hexyl-gamma-butyrolactone / gamma-n-decalactone / gamma-n-hexyl-gamma-butyrolactone / gamma-normal-decalactone / gamma-normal-hexyl-gamma-butyrolactone / hydroxydecanoic acid-gamma-lactone	(CAS-No.) 706-14-9	0.1 – 1	Not classified

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
4-(p-Hydroxyphenyl)-2-butanone	1-(para-hydroxyphenyl)-3-butanone / 1-(p-hydroxyphenyl)-3-butanone / 2-butanone, 4-(4-hydroxyphenyl)- / 2-butanone, 4-(para-hydroxyphenyl)- / 2-butanone, 4-(p-hydroxyphenyl)- / 4-(para-hydroxyphenyl)-2-butanone / 4-(p-hydroxyphenyl)-2-butanone / FEMA N. 2588 / frambinone / oxyphenalon / para-hydroxybenzyl acetone / p-hydroxybenzyl acetone / raspberry keton / raspberry ketone / rheosmin	(CAS-No.) 5471-51-2	0.1 – 1	Not classified
STYRALLYL ACETATE		(CAS-No.) 93-92-5	0.1 – 1	Not classified
DECANAL		(CAS-No.) 112-31-2	0.1 – 1	Flam. Liq. 4, H227 Eye Irrit. 2A, H319
3a,4,5,6,7,7a-Hexahydro-4,7-methano-1H-indenyl propionate (mixture of isomers)		(CAS-No.) 68912-13-0	0.1 – 1	Not classified
LEMON OIL TERPENES		(CAS-No.) 68917-33-9	0.1 – 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Repr. 2, H361 Asp. Tox. 1, H304
ANISIC ALDEHYDE	4-anisaldehyde / anisaldehyde / anisic aldehyde / aubepine / benzaldehyde, 4-methoxy- / crategine / FEMA no 2670 / obepin / p-anisaldehyde / p-anisic aldehyde / para-anisaldehyde / para-anisic aldehyde / para-formylanisole / para-methoxybenzaldehyde / p-formylanisole / p-methoxybenzaldehyde	(CAS-No.) 123-11-5	0.1 – 1	Not classified
trans-p-Menthan-3-one		(CAS-No.) 89-80-5	0.1 – 1	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Skin Sens. 1B, H317
trans-Anethole	(E)-1-methoxy-4-(1-propenyl)benzene / (E)-4-propenylanisole / (E)-anethole / (E)-para-propenylanisole / (E)-p-propenylanisole / 1-methoxy-4-[1-propenyl]benzene, (E)- / 4-propenylanisole, (E)- / anethol,trans- / ANETHOLE 21/22 DEGREES "D" DSA / anethole, (E)- / anethole, trans- / anisole, para-propenyl-, (E)- / anisole, para-propenyl-, trans- / anisole, p-propenyl-, (E)- / anisole, p-propenyl-, trans- / benzene, 1-methoxy-4-(1-propenyl)-, (E)- / para-propenylanisole, (E)- / para-propenylanisole, trans- / p-propenylanisole, (E)- / p-propenylanisole, trans- / trans-1-methoxy-4-(1-propenyl)benzene / trans-anethole / trans-para-propenylanisole / trans-p-propenylanisole	(CAS-No.) 4180-23-8	0.1 – 1	Flam. Liq. 4, H227 Acute Tox. 3 (Inhalation:vapor), H331 Skin Sens. 1B, H317
MALTOL	2-methyl pyromeconic acid / 2-methyl-3-hydroxy-4-pyrone / 2-methyl-3-oxy-gamma-pyrone / 3-hydroxy-2-methyl-4H-pyran-4-one / 3-hydroxy-2-methyl-4-pyranone / 3-hydroxy-2-methyl-4-pyrone / 3-hydroxy-2-methyl-gamma-pyrone / 4H-pyran-4-one, 3-hydroxy-2-methyl- / carixinic acid / corps praline / larixic acid / larixinic acid / maltol / palatone / talmon / veltol / vetol	(CAS-No.) 118-71-8	0.1 – 1	Acute Tox. 4 (Oral), H302
FENCHYL ALCOHOL		(CAS-No.) 1632-73-1	0.1 – 1	Flam. Liq. 4, H227
DELTA DAMASCONE		(CAS-No.) 57378-68-4	< 0.1	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Skin Sens. 1A, H317
d,l-Isomenthone		(CAS-No.) 491-07-6	< 0.1	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Skin Sens. 1B, H317

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
BETA PINENE	2(10)-pinene / 6,6-dimethyl-2-methylenebicyclo(3.1.1)heptane / beta-pinene / beta-pinene(FCC) / bicyclo[3.1.1]heptane, 6,6-dimethyl-2-methylene- / FEMA No 2903 / nopinen / nopinene / PC 600 / pin-2(10)-ene / pseudopinen / pseudo-pinen / pseudopinene / pseudo-pinene / terebenthene(=beta-pinene)	(CAS-No.) 127-91-3	0.04 – 0.06	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304
Cinnamonitrile		(CAS-No.) 4360-47-8	< 0.1	Acute Tox. 3 (Oral), H301 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Sens. 1B, H317
(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one		(CAS-No.) 24720-09-0	< 0.1	Acute Tox. 4 (Oral), H302 Skin Sens. 1B, H317
CITRONELLOL	(+/-)-3,7-dimethyl-6-octen-1-ol / (+/-)-3,7-dimethyloct-6-en-1-ol / (+/-)-beta-citronellol / (+/-)-citronellol / 2,3-dihydrogeraniol / 2,6-dimethyl-2-octen-8-ol / 3,7-dimethyl-6-octen-1-ol / 3,7-dimethyl-octen-6-ol-1 / 6-octen-1-ol, 3,7-dimethyl- / 6-octen-1-ol, 3,7-dimethyl-, (+/-)- / beta-citronellol / cephrol / citronellol / citronellol 950 / citronellol, DL- / dihydrogeraniol / DL-citronellol / FEMA No 2309 / FEMA No 2980 / rodinol	(CAS-No.) 106-22-9	< 0.1	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1B, H317
2,2,5-Trimethyl-5-pentylcyclopentanone		(CAS-No.) 65443-14-3	0.004 – 0.01	Flam. Liq. 4, H227
2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde		(CAS-No.) 68039-49-6	< 0.1	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Skin Sens. 1B, H317
Dimethylcyclohex-3-ene-1-carbaldehyde (isomer mixture)		(CAS-No.) 68737-61-1	< 0.1	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Skin Sens. 1B, H317
CITRAL		(CAS-No.) 5392-40-5	< 0.1	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1B, H317
ALPHA PINENE	2,6,6-trimethylbicyclo-(3,1,1)-2-heptene / 2,6,6-trimethylbicyclo(3.1.1)-2-hept-2-ene / 2,6,6-trimethylbicyclo(3.1.1)-2-heptene / 2,6,6-trimethylbicyclo(3.1.1)hept-2-ene / 2,6,6-trimethyldicyclo(3.1.1)-2-heptene / 2-pinene / acintene A / alpha-pinene (FCC) / australene / bicyclo[3.1.1]hept-2-ene, 2,6,6-trimethyl- / FEMA No 2902 / pin-2(3)-ene / pinen alpha / pinene (=alpha-pinene) / pinene, pract. (=alpha-pinene)	(CAS-No.) 80-56-8	0.002 – 0.004	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304
Tetrahydro-4-methyl-2-(2-methylpropen-1-yl)pyran	2H-pyran, tetrahydro-4-methyl-2-(2-methyl-1-propenyl)- / 2H-pyran, tetrahydro-4-methyl-2-(2-methylpropenyl)- / pyran, 2-(2-methyl-1-propenyl)-4-methyltetrahydro- / pyran, tetrahydro-2-(2-methyl-1-propenyl)-4-methyl- / pyran, tetrahydro-4-methyl-2-(2-methylpropenyl)- / rosenoxide / rosoxide / tetrahydro-2-(2-methyl-1-propenyl)-4-methylpyran / tetrahydro-4-methyl-2-(2-methylpropen-1-yl)pyran	(CAS-No.) 16409-43-1	0.0004 – 0.002	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Repr. 2, H361
1-(5,5-Dimethyl-1-cyclohexen-1-yl)pent-4-en-1-one		(CAS-No.) 56973-85-4	< 0.1	Skin Sens. 1B, H317
GERANIOL		(CAS-No.) 106-24-1	< 0.1	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317
LIMONENE		(CAS-No.) 138-86-3	< 0.1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304

Full text of hazard classes and H-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.

First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

No additional information available

4.3. Immediate medical attention and special treatment, if necessary

Other medical advice or treatment : Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

5.2. Unsuitable extinguishing media

No additional information available

5.3. Specific hazards arising from the hazardous product

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

5.4. Special protective equipment and precautions for fire-fighters

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

No additional information available

6.2. Methods and materials 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.

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : 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.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Butylated hydroxytoluene (128-37-0)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Butylated hydroxytoluene
ACGIH TWA (mg/m³)	2 mg/m³
Remark (ACGIH)	URT irr
CITRAL (5392-40-5)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Citral
ACGIH TWA (ppm)	5 ppm

Butylated hydroxytoluene (128-37-0)	
Remark (ACGIH)	Body weight eff; URT irr; eye dam; Skin; DSEN; A4 (Not classifiable as a Human Carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories)
BETA PINENE (127-91-3)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (ppm)	20 ppm
ALPHA PINENE (80-56-8)	
USA - ACGIH - Occupational Exposure Limits	
ACGIH TWA (ppm)	20 ppm
CITRAL (5392-40-5)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Citral
ACGIH TWA (ppm)	5 ppm
Remark (ACGIH)	Body weight eff; URT irr; eye dam; Skin; DSEN; A4 (Not classifiable as a Human Carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories)

8.2. Appropriate engineering controls

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

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Appearance : No data available

Color : Mixture contains one or more component(s) which have the following colour(s):
Colourless Colourless to light amber Light yellow White Colourless to light yellow Colourless to white Colourless to yellow

Odor : There may be no odour warning properties, odour is subjective and inadequate to warn of overexposure.
Mixture contains one or more component(s) which have the following odour:
Characteristic odour Strong odour Aromatic odour Mild odour Pine odour Floral odour Fruity odour Sweet odour Pleasant odour Lemon odour

Odor threshold : No data available

pH : No data available

Relative evaporation rate (butyl acetate=1)	:	No data available
Relative evaporation rate (ether=1)	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	62 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Not applicable
Vapor pressure	:	No data available
Vapor pressure at 50 °C	:	No data available
Relative density	:	0.905 (0.895 – 0.915)
Solubility	:	Insoluble.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Explosion limits	:	No data available

9.2. Other information

Refractive index	:	1.458 (1.448 – 1.468)

SECTION 10: Stability and reactivity

Reactivity	:	The product is non-reactive under normal conditions of use, storage and transport.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	No dangerous reactions known under normal conditions of use.
Conditions to avoid	:	None under recommended storage and handling conditions (see section 7).
Incompatible materials	:	No additional information available
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.
Hardening time:	:	No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

ALLYL HEPTOATE (142-19-8)	
LD50 oral	218 mg/kg body weight
LD50 dermal	810 mg/kg body weight
LC50 Inhalation - Rat (Vapours)	3 mg/l/4h
ATE CA (oral)	218 mg/kg body weight
ATE CA (Dermal)	810 mg/kg body weight
ATE CA (vapors)	3 mg/l/4h

DELTA DAMASCONE (57378-68-4)	
LD50 oral	1400 mg/kg body weight
ATE CA (oral)	1400 mg/kg body weight

METHYL DIHYDROAJASMONATE (24851-98-7)	
LD50 oral rat	> 5000 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Dermal)

TRICYCLODECENYL ACETATE (5413-60-5)	
LD50 oral	3050 mg/kg body weight
ATE CA (oral)	3050 mg/kg body weight

d,l-Isomenthone (491-07-6)	
LD50 oral	2500 mg/kg body weight
ATE CA (oral)	2500 mg/kg body weight

trans-p-Menthan-3-one (89-80-5)	
LD50 oral	500 mg/kg body weight
ATE CA (oral)	500 mg/kg body weight

DIOCTYL ADIPATE (103-23-1)	
LD50 oral rat	> 20000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral)
LC50 Inhalation - Rat	> 5.7 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol))

(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one (24720-09-0)	
LD50 oral	1670 mg/kg body weight
LD50 dermal	2900 mg/kg body weight
ATE CA (oral)	1670 mg/kg body weight
ATE CA (Dermal)	2900 mg/kg body weight

ORANGE OIL (8028-48-6)	
LD50 oral rat	> 5000 mg/kg body weight (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit	> 5000 mg/kg body weight (Rabbit; Experimental value; Equivalent or similar to OECD 402)

CITRAL (5392-40-5)	
LD50 dermal	2250 mg/kg body weight
ATE CA (Dermal)	2250 mg/kg body weight

2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde (68039-49-6)	
LD50 oral	3900 mg/kg body weight
ATE CA (oral)	3900 mg/kg body weight

BETA PINENE (127-91-3)	
LD50 oral rat	4700 mg/kg (Rat, Oral)
ATE CA (oral)	4700 mg/kg body weight

CITRONELLOL (106-22-9)	
LD50 oral rat	3450 mg/kg (Rat, Inconclusive, insufficient data, Oral)
LD50 oral	3450 mg/kg body weight
LD50 dermal rabbit	2650 mg/kg (Rabbit, Inconclusive, insufficient data, Dermal)
LD50 dermal	2650 mg/kg body weight
ATE CA (oral)	3450 mg/kg body weight
ATE CA (Dermal)	2650 mg/kg body weight

ALPHA PINENE (80-56-8)	
LD50 oral rat	> 500 mg/kg body weight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Experimental value, Oral, 01 day(s))
LD50 oral	500 mg/kg body weight
LD50 dermal rat	> 2000 mg/kg body weight (OECD 402: Acute Dermal Toxicity, 24 h, Rat, Male / female, Experimental value, Skin, 14 day(s))
ATE CA (oral)	500 mg/kg body weight

GERANIOL (106-24-1)	
LD50 oral	3600 mg/kg body weight
ATE CA (oral)	3600 mg/kg body weight

Tetrahydro-4-methyl-2-(2-methylpropen-1-yl)pyran (16409-43-1)	
LD50 oral	4300 mg/kg body weight
ATE CA (oral)	4300 mg/kg body weight

Dimethylcyclohex-3-ene-1-carbaldehyde (isomer mixture) (68737-61-1)	
LD50 oral	3600 mg/kg body weight
LD50 dermal	5000 mg/kg body weight
ATE CA (oral)	3600 mg/kg body weight
ATE CA (Dermal)	5000 mg/kg body weight

Cinnamonitrile (4360-47-8)	
LD50 oral	100 mg/kg body weight
LD50 dermal	1100 mg/kg body weight
LC50 Inhalation - Rat (Dust/Mist)	1.5 mg/l/4h
ATE CA (oral)	100 mg/kg body weight
ATE CA (Dermal)	1100 mg/kg body weight
ATE CA (Gases (except aerosol dispensers and lighters))	4500 ppmV/4h
ATE CA (vapors)	11 mg/l/4h
ATE CA (dust,mist)	1.5 mg/l/4h

trans-Anethole (4180-23-8)	
LD50 oral rat	1420 – 3000 mg/kg body weight (Rat, Male / female, Experimental value, Oral)
LD50 oral	3000 mg/kg body weight
LD50 dermal rabbit	> 4900 mg/kg body weight (Equivalent or similar to EU Method B.3, 24 h, Rabbit, Male / female, Experimental value, Dermal, 14 day(s))
LC50 Inhalation - Rat	≥ 5.1 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Inhalation (aerosol))
ATE CA (oral)	1420 mg/kg body weight
ATE CA (vapors)	3 mg/l/4h

MALTOL (118-71-8)	
LD50 oral rat	1440 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male, Experimental value, Oral)
LD50 oral	1440 mg/kg body weight
ATE CA (oral)	1440 mg/kg body weight

BETA IONONE (14901-07-6)	
LD50 oral rat	4590 mg/kg (Rat, Experimental value, Oral)
LD50 dermal	2000 – 7000 mg/kg body weight (Mouse, Weight of evidence, Skin)
ATE CA (oral)	4590 mg/kg body weight
ATE CA (Dermal)	2000 mg/kg body weight

FENCHYL ALCOHOL (1632-73-1)	
LD50 oral	2500 mg/kg body weight
ATE CA (oral)	2500 mg/kg body weight

AMYL CINNAMIC ALDEHYDE (122-40-7)	
LD50 oral	3730 mg/kg body weight
ATE CA (oral)	3730 mg/kg body weight

LINALOOL (78-70-6)	
LD50 oral rat	2790 mg/kg (Rat)
LD50 oral	2790 mg/kg body weight
LD50 dermal rat	5610 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
ATE CA (oral)	2790 mg/kg body weight
ATE CA (Dermal)	5610 mg/kg body weight

MENTHOL (2216-51-5)	
LD50 oral	2600 mg/kg body weight
ATE CA (oral)	2600 mg/kg body weight

ANISIC ALDEHYDE (123-11-5)	
LD50 oral rat	3210 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 oral	3210 mg/kg body weight
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Experimental value, Dermal, 14 day(s))
ATE CA (oral)	3210 mg/kg body weight

ALLYL HEXANOATE (123-68-2)	
LD50 oral	300 mg/kg body weight
LD50 dermal	300 mg/kg body weight
LC50 Inhalation - Rat (Vapours)	3 mg/l/4h
ATE CA (oral)	300 mg/kg body weight
ATE CA (Dermal)	300 mg/kg body weight
ATE CA (Gases (except aerosol dispensers and lighters))	700 ppmV/4h
ATE CA (vapors)	3 mg/l/4h
ATE CA (dust,mist)	0.5 mg/l/4h

CITRAL (5392-40-5)	
LD50 dermal	2250 mg/kg body weight
ATE CA (Dermal)	2250 mg/kg body weight

Skin corrosion/irritation : Causes skin irritation.

Serious eye damage/irritation : Causes serious eye irritation.

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

Germ cell mutagenicity : Not classified

Carcinogenicity	:	Not classified
Reproductive toxicity	:	Suspected of damaging fertility or the unborn child.
STOT-single exposure	:	Not classified
STOT-repeated exposure	:	Not classified
Aspiration hazard	:	May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	:	The product is not considered harmful to aquatic organisms or 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

METHYL DIHYDROAJASMONATE (24851-98-7)	
Partition coefficient n-octanol/water (Log Pow)	3 (Estimated value)

DIOCTYL ADIPATE (103-23-1)	
LC50 fish 1	54 – 150 mg/l (96 h, Salmo gairdneri, Static system)
EC50 Daphnia 1	> 500 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 72h algae 1	> 500 mg/l (DIN 38412-9, Scenedesmus subspicatus, Static system, Fresh water, Experimental value, Biomass)
BCF fish 1	27 (Other, 28 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Experimental value)
BCF fish 2	3.162 (Calculated value)
Partition coefficient n-octanol/water (Log Pow)	8.1 (Calculated)
Partition coefficient n-octanol/water (Log Koc)	4.687 (log Koc, SRC PCKOCWIN v1.66, Calculated value)

ORANGE OIL (8028-48-6)	
LC50 fish 1	702 µg/l (LC50; Equivalent or similar to OECD 203; 96 h; Pimephales promelas; Flow-through system; Fresh water; Read-across)
EC50 Daphnia 1	0.67 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
BCF other aquatic organisms 1	32 – 395 (BCF; BCFWIN)
Partition coefficient n-octanol/water (Log Pow)	2.78 – 4.88 (QSAR; KOWWIN)

BETA PINENE (127-91-3)	
LC50 fish 1	0.557 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Cyprinus carpio, Semi-static system, Fresh water, Weight of evidence, GLP)
EC50 Daphnia 1	1.248 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Weight of evidence, GLP)
ErC50 (algae)	0.826 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Weight of evidence, GLP)
BCF other aquatic organisms 1	1125 (BCFBAF v3.00, Fresh water, QSAR, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.425 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	3.01 – 3.82 (log Koc, Calculated value)

CITRONELLOL (106-22-9)	
LC50 fish 1	14.66 mg/l (DIN 38412-15, 96 h, Leuciscus idus, Static system, Fresh water, Experimental value)
EC50 Daphnia 1	17.48 mg/l (48 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 72h algae 1	2.4 mg/l (Static system, Fresh water, Experimental value)
BCF fish 1	82.59 l/kg (BCFBAF v3.00, Estimated value)
Partition coefficient n-octanol/water (Log Pow)	3.41 (Practical experience/observation, EU Method A.8: Partition Coefficient, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	1.85 (log Koc, EPIWIN 2.00, Estimated value)

ALPHA PINENE (80-56-8)	
LC50 fish 1	0.303 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value, GLP)
EC50 Daphnia 1	0.475 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Semi-static system, Fresh water, Experimental value, Locomotor effect)
BCF other aquatic organisms 1	1233.1 – 1248 l/kg (BCFBAF v3.01, Read-across, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.487 (Experimental value, Equivalent or similar to OECD 107, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	3.009 – 3.853 (log Koc, SRC PCKOCWIN v2.0, Calculated value)

Tetrahydro-4-methyl-2-(2-methylpropen-1-yl)pyran (16409-43-1)	
LC50 fish 1	77.6 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value)
EC50 Daphnia 1	33.2 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
ErC50 (algae)	79.7 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value)
BCF fish 1	107 l/kg (Estimated value)
Partition coefficient n-octanol/water (Log Pow)	3.3 (Practical experience/observation, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 23 °C)
Partition coefficient n-octanol/water (Log Koc)	2.81 (log Koc, Estimated value)

trans-Anethole (4180-23-8)	
LC50 fish 1	7 mg/l (EU Method C.1, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value, GLP)
EC50 Daphnia 1	4.25 mg/l (ASTM E729-88, 48 h, Daphnia magna, Flow-through system, Experimental value)
BCF fish 1	79.92 l/kg (Pisces, QSAR, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	3.388 (QSAR, KOWWIN, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	2.717 – 2.856 (log Koc, SRC PCKOCWIN v2.0, Calculated value)

MALTOL (118-71-8)	
LC50 fish 1	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Experimental value)
EC50 Daphnia 1	27 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
ErC50 (algae)	7.2 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
Partition coefficient n-octanol/water (Log Pow)	2.3 (Experimental value, Equivalent or similar to OECD 117, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	0.668 (log Koc, SRC PCKOCWIN v2.0, Calculated value)

BETA IONONE (14901-07-6)	
LC50 fish 1	2.572 mg/l (96 h, Oryzias latipes, Fresh water, Calculated value)
EC50 Daphnia 1	1.641 mg/l (48 h, Daphnia magna, Fresh water, Calculated value)
ErC50 (algae)	3.223 mg/l (72 h, Pseudokirchneriella subcapitata, Fresh water, Calculated value)
BCF fish 1	159 l/kg (Pisces, Estimated value)
Partition coefficient n-octanol/water (Log Pow)	1.903 (Practical experience/observation, 27 °C)

LINALOOL (78-70-6)	
LC50 fish 2	27.8 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Salmo gairdneri)
EC50 Daphnia 1	59 mg/l (EC50; OECD 202: Daphnia sp. Acute Immobilisation Test; 48 h; Daphnia magna)
EC50 other aquatic organisms 1	≥ 100 mg/l (3 h; Activated sludge)
Partition coefficient n-octanol/water (Log Pow)	2.84 – 3.145
Threshold limit algae 1	88.3 mg/l (EC50; 96 h)

ANISIC ALDEHYDE (123-11-5)	
LC50 fish 1	148.32 mg/l (DIN 38412-15, 96 h, Leuciscus idus, Static system, Fresh water, Experimental value, Lethal)

ANISIC ALDEHYDE (123-11-5)	
EC50 Daphnia 1	82.8 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Lethal)
ErC50 (algae)	61 mg/l (DIN 38412-9, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)
Partition coefficient n-octanol/water (Log Pow)	1.56 (Practical experience/observation, Equivalent or similar to OECD 107, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	1 (log Koc, SRC PCKOCWIN v2.0, Experimental value)

12.2. Persistence and degradability

METHYL DIHYDROAJASMONATE (24851-98-7)	
Persistence and degradability	Readily biodegradable in water.

DIOCTYL ADIPATE (103-23-1)	
Persistence and degradability	Readily biodegradable in water.

BETA PINENE (127-91-3)	
Persistence and degradability	Readily biodegradable in water.

CITRONELLOL (106-22-9)	
Persistence and degradability	Readily biodegradable in water.
Chemical oxygen demand (COD)	2.05 g O_2/g substance
ThOD	2.961 g O_2/g substance

ALPHA PINENE (80-56-8)	
Persistence and degradability	Readily biodegradable in water.

Tetrahydro-4-methyl-2-(2-methylpropen-1-yl)pyran (16409-43-1)	
Persistence and degradability	Readily biodegradable in water.
ThOD	2.9 g O_2/g substance

GAMMA DECALACTONE (706-14-9)	
Persistence and degradability	Biodegradability in water: no data available.

4-(p-Hydroxyphenyl)-2-butanone (5471-51-2)	
Persistence and degradability	Biodegradability in water: no data available.

trans-Anethole (4180-23-8)	
Persistence and degradability	Readily biodegradable in water.

MALTOL (118-71-8)	
Persistence and degradability	Readily biodegradable in water.
ThOD	1.52 g O_2/g substance

BETA IONONE (14901-07-6)	
Persistence and degradability	Readily biodegradable in water.
ThOD	2.91 g O_2/g substance

LINALOOL (78-70-6)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	1.531 g O_2/g substance
Chemical oxygen demand (COD)	2.808 g O_2/g substance

ANISIC ALDEHYDE (123-11-5)	
Persistence and degradability	Readily biodegradable in water.

12.3. Bioaccumulative potential

METHYL DIHYDROAJASMONATE (24851-98-7)	
Partition coefficient n-octanol/water (Log Pow)	3 (Estimated value)

DIOCTYL ADIPATE (103-23-1)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
BCF fish 1	27 (Other, 28 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Experimental value)
BCF fish 2	3.162 (Calculated value)
Partition coefficient n-octanol/water (Log Pow)	8.1 (Calculated)
Partition coefficient n-octanol/water (Log Koc)	4.687 (log Koc, SRC PCKOCWIN v1.66, Calculated value)

ORANGE OIL (8028-48-6)	
BCF other aquatic organisms 1	32 – 395 (BCF; BCFWIN)
Partition coefficient n-octanol/water (Log Pow)	2.78 – 4.88 (QSAR; KOWWIN)

BETA PINENE (127-91-3)	
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

BETA PINENE (127-91-3)	
BCF other aquatic organisms 1	1125 (BCFBAF v3.00, Fresh water, QSAR, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.425 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	3.01 – 3.82 (log Koc, Calculated value)

CITRONELLOL (106-22-9)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
BCF fish 1	82.59 l/kg (BCFBAF v3.00, Estimated value)
Partition coefficient n-octanol/water (Log Pow)	3.41 (Practical experience/observation, EU Method A.8: Partition Coefficient, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	1.85 (log Koc, EPIWIN 2.00, Estimated value)

ALPHA PINENE (80-56-8)	
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).
BCF other aquatic organisms 1	1233.1 – 1248 l/kg (BCFBAF v3.01, Read-across, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	4.487 (Experimental value, Equivalent or similar to OECD 107, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	3.009 – 3.853 (log Koc, SRC PCKOCWIN v2.0, Calculated value)

Tetrahydro-4-methyl-2-(2-methylpropen-1-yl)pyran (16409-43-1)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
BCF fish 1	107 l/kg (Estimated value)
Partition coefficient n-octanol/water (Log Pow)	3.3 (Practical experience/observation, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 23 °C)
Partition coefficient n-octanol/water (Log Koc)	2.81 (log Koc, Estimated value)

GAMMA DECALACTONE (706-14-9)	
Bioaccumulative potential	No bioaccumulation data available.

4-(p-Hydroxyphenyl)-2-butanone (5471-51-2)	
Bioaccumulative potential	No bioaccumulation data available.

trans-Anethole (4180-23-8)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
BCF fish 1	79.92 l/kg (Pisces, QSAR, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	3.388 (QSAR, KOWWIN, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	2.717 – 2.856 (log Koc, SRC PCKOCWIN v2.0, Calculated value)

MALTOL (118-71-8)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Partition coefficient n-octanol/water (Log Pow)	2.3 (Experimental value, Equivalent or similar to OECD 117, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	0.668 (log Koc, SRC PCKOCWIN v2.0, Calculated value)

BETA IONONE (14901-07-6)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
BCF fish 1	159 l/kg (Pisces, Estimated value)
Partition coefficient n-octanol/water (Log Pow)	1.903 (Practical experience/observation, 27 °C)

LINALOOL (78-70-6)	
Bioaccumulative potential	Bioaccumable.
Partition coefficient n-octanol/water (Log Pow)	2.84 – 3.145

ANISIC ALDEHYDE (123-11-5)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Partition coefficient n-octanol/water (Log Pow)	1.56 (Practical experience/observation, Equivalent or similar to OECD 107, 25 °C)
Partition coefficient n-octanol/water (Log Koc)	1 (log Koc, SRC PCKOCWIN v2.0, Experimental value)

12.4. Mobility in soil

METHYL DIHYDROAJASMONATE (24851-98-7)	
Partition coefficient n-octanol/water (Log Pow)	3 (Estimated value)

DIOCTYL ADIPATE (103-23-1)	
Ecology - soil	Low potential for mobility in soil.
Partition coefficient n-octanol/water (Log Koc)	4.687 (log Koc, SRC PCKOCWIN v1.66, Calculated value)
Partition coefficient n-octanol/water (Log Pow)	8.1 (Calculated)

ORANGE OIL (8028-48-6)	
Partition coefficient n-octanol/water (Log Pow)	2.78 – 4.88 (QSAR; KOWWIN)

BETA PINENE (127-91-3)	
Ecology - soil	Low potential for mobility in soil.
Partition coefficient n-octanol/water (Log Koc)	3.01 – 3.82 (log Koc, Calculated value)

BETA PINENE (127-91-3)	
Partition coefficient n-octanol/water (Log Pow)	4.425 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C)

CITRONELLOL (106-22-9)	
Ecology - soil	Highly mobile in soil.
Partition coefficient n-octanol/water (Log Koc)	1.85 (log Koc, EPIWIN 2.00, Estimated value)
Partition coefficient n-octanol/water (Log Pow)	3.41 (Practical experience/observation, EU Method A.8: Partition Coefficient, 25 °C)

ALPHA PINENE (80-56-8)	
Ecology - soil	Low potential for mobility in soil. May be harmful to plant growth, blooming and fruit formation.
Partition coefficient n-octanol/water (Log Koc)	3.009 – 3.853 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Partition coefficient n-octanol/water (Log Pow)	4.487 (Experimental value, Equivalent or similar to OECD 107, 25 °C)

Tetrahydro-4-methyl-2-(2-methylpropen-1-yl)pyran (16409-43-1)	
Ecology - soil	Low potential for adsorption in soil.
Partition coefficient n-octanol/water (Log Koc)	2.81 (log Koc, Estimated value)
Partition coefficient n-octanol/water (Log Pow)	3.3 (Practical experience/observation, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 23 °C)

trans-Anethole (4180-23-8)	
Surface tension	35 mN/m (25 °C)
Ecology - soil	Low potential for adsorption in soil.
Partition coefficient n-octanol/water (Log Koc)	2.717 – 2.856 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Partition coefficient n-octanol/water (Log Pow)	3.388 (QSAR, KOWWIN, 25 °C)

MALTOL (118-71-8)	
Ecology - soil	Highly mobile in soil.
Partition coefficient n-octanol/water (Log Koc)	0.668 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Partition coefficient n-octanol/water (Log Pow)	2.3 (Experimental value, Equivalent or similar to OECD 117, 25 °C)

BETA IONONE (14901-07-6)	
Ecology - soil	No (test)data on mobility of the substance available.
Partition coefficient n-octanol/water (Log Pow)	1.903 (Practical experience/observation, 27 °C)

LINALOOL (78-70-6)	
Partition coefficient n-octanol/water (Log Pow)	2.84 – 3.145

ANISIC ALDEHYDE (123-11-5)	
Surface tension	No data available in the literature
Ecology - soil	Highly mobile in soil.
Partition coefficient n-octanol/water (Log Koc)	1 (log Koc, SRC PCKOCWIN v2.0, Experimental value)
Partition coefficient n-octanol/water (Log Pow)	1.56 (Practical experience/observation, Equivalent or similar to OECD 107, 25 °C)

12.5. Other adverse effects

Ozone : Not classified

SECTION 13: Disposal considerations

13.1. Disposal methods

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

SECTION 14: Transport information

14.1. Basic shipping description

In accordance with TDG

Transportation of Dangerous Goods

Not regulated for transport

14.2. Transport information/DOT

Department of Transport

Not regulated for transport

14.3. Air and sea transport

IMDG

Not regulated for transport

IATA

Not regulated for transport

SECTION 15: Regulatory information

15.1. National regulations

PEPPERMINT OIL (8006-90-4)
Listed on the Canadian DSL (Domestic Substances List)

ALLYL HEPTOATE (142-19-8)
Listed on the Canadian DSL (Domestic Substances List)

DELTA DAMASCONE (57378-68-4)
Listed on the Canadian DSL (Domestic Substances List)

METHYL DIHYDROAJASMONATE (24851-98-7)
Listed on the Canadian DSL (Domestic Substances List)

Ethyl methylphenylglycidate (77-83-8)
Listed on the Canadian DSL (Domestic Substances List)

TRICYCLODECENYL ACETATE (5413-60-5)
Listed on the Canadian DSL (Domestic Substances List)

d,l-Isomenthone (491-07-6)
Listed on the Canadian DSL (Domestic Substances List)

trans-p-Menthan-3-one (89-80-5)
Listed on the Canadian DSL (Domestic Substances List)

DIOCTYL ADIPATE (103-23-1)
Listed on the Canadian DSL (Domestic Substances List)

(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one (24720-09-0)
Listed on the Canadian DSL (Domestic Substances List)

ORANGE OIL (8028-48-6)
Listed on the Canadian DSL (Domestic Substances List)

Butylated hydroxytoluene (128-37-0)
Listed on the Canadian DSL (Domestic Substances List)

CITRAL (5392-40-5)
Listed on the Canadian DSL (Domestic Substances List)

2,4-Dimethyl-3-cyclohexen-1-carboxaldehyde (68039-49-6)
Listed on the Canadian DSL (Domestic Substances List)

2,2,5-Trimethyl-5-pentylcyclopentanone (65443-14-3)
Listed on the Canadian DSL (Domestic Substances List)

BETA PINENE (127-91-3)
Listed on the Canadian DSL (Domestic Substances List)

CITRONELLOL (106-22-9)
Listed on the Canadian DSL (Domestic Substances List)

ALPHA PINENE (80-56-8)
Listed on the Canadian DSL (Domestic Substances List)

LIMONENE (138-86-3)
Listed on the Canadian DSL (Domestic Substances List)

1-(5,5-Dimethyl-1-cyclohexen-1-yl)pent-4-en-1-one (56973-85-4)
Listed on the Canadian DSL (Domestic Substances List)

GERANIOL (106-24-1)
Listed on the Canadian DSL (Domestic Substances List)

Tetrahydro-4-methyl-2-(2-methylpropen-1-yl)pyran (16409-43-1)
Listed on the Canadian DSL (Domestic Substances List)

Dimethylcyclohex-3-ene-1-carbaldehyde (isomer mixture) (68737-61-1)
Listed on the Canadian DSL (Domestic Substances List)

GAMMA DECALACTONE (706-14-9)
Listed on the Canadian DSL (Domestic Substances List)

4-(p-Hydroxyphenyl)-2-butanone (5471-51-2)
Listed on the Canadian DSL (Domestic Substances List)

Cinnamonitrile (4360-47-8)
Listed on the Canadian DSL (Domestic Substances List)

STYRALLYL ACETATE (93-92-5)
Listed on the Canadian DSL (Domestic Substances List)

trans-Anethole (4180-23-8)
Listed on the Canadian DSL (Domestic Substances List)

ETHYL BUTYRATE (105-54-4)
Listed on the Canadian DSL (Domestic Substances List)

DECANAL (112-31-2)
Listed on the Canadian DSL (Domestic Substances List)

HEXYL ACETATE (142-92-7)
Listed on the Canadian DSL (Domestic Substances List)

MALTOL (118-71-8)
Listed on the Canadian DSL (Domestic Substances List)

BETA IONONE (14901-07-6)
Listed on the Canadian DSL (Domestic Substances List)

FENCHYL ALCOHOL (1632-73-1)
Listed on the Canadian DSL (Domestic Substances List)

AMYL CINNAMIC ALDEHYDE (122-40-7)
Listed on the Canadian DSL (Domestic Substances List)

α,α-Dimethylphenethyl butyrate (10094-34-5)
Listed on the Canadian DSL (Domestic Substances List)

GAMMA UNDECALACTONE (104-67-6)
Listed on the Canadian DSL (Domestic Substances List)

3a,4,5,6,7,7a-Hexahydro-4,7-methano-1H-indenyl propionate (mixture of isomers) (68912-13-0)
Listed on the Canadian DSL (Domestic Substances List)

LINALOOL (78-70-6)
Listed on the Canadian DSL (Domestic Substances List)

MENTHOL (2216-51-5)
Listed on the Canadian DSL (Domestic Substances List)

ANISIC ALDEHYDE (123-11-5)
Listed on the Canadian DSL (Domestic Substances List)

ETHYL 2-METHYLBUTYRATE (7452-79-1)
Listed on the Canadian DSL (Domestic Substances List)

ALLYL HEXANOATE (123-68-2)
Listed on the Canadian DSL (Domestic Substances List)

3,7-Dimethyloct-6-en-3-ol (18479-51-1)
Listed on the Canadian DSL (Domestic Substances List)

CITRAL (5392-40-5)
Listed on the Canadian DSL (Domestic Substances List)

LEMON OIL (8008-56-8)
Listed on the Canadian DSL (Domestic Substances List)

LEMON OIL TERPENES (68917-33-9)
Listed on the Canadian DSL (Domestic Substances List)

15.2. International regulations

PEPPERMINT OIL (8006-90-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

ALLYL HEPTOATE (142-19-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

DELTA DAMASCONE (57378-68-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

METHYL DIHYDROAJASMONATE (24851-98-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Ethyl methylphenylglycidate (77-83-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
TRICYCLODECENYL ACETATE (5413-60-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
d,l-Isomenthone (491-07-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
trans-p-Menthan-3-one (89-80-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
DIOCTYL ADIPATE (103-23-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one (24720-09-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
ORANGE OIL (8028-48-6)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory
Butylated hydroxytoluene (128-37-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
CITRAL (5392-40-5)
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BETA PINENE (127-91-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
CITRONELLOL (106-22-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
ALPHA PINENE (80-56-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
LIMONENE (138-86-3)
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Listed on the United States TSCA (Toxic Substances Control Act) inventory
ETHYL BUTYRATE (105-54-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

DECANAL (112-31-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

HEXYL ACETATE (142-92-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

MALTOL (118-71-8)
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AMYL CINNAMIC ALDEHYDE (122-40-7)
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3,7-Dimethyloct-6-en-3-ol (18479-51-1)
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LEMON OIL (8008-56-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

LEMON OIL TERPENES (68917-33-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

SECTION 16: Other information

SDS Major/Minor : None
Issue date : 06/28/2021

Full text of H-phrases:

H226	Flammable liquid and vapor
H227	Combustible liquid
H301	Toxic if swallowed
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H311	Toxic in contact with skin
H312	Harmful in contact with skin
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H331	Toxic if inhaled
H332	Harmful if inhaled
H361	Suspected of damaging fertility or the unborn child

SDS Canada (GHS)

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.