



OIL, FRUIT SLICES*

Safety Data Sheet

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

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SECTION 1: Identification

1.1. Product identifier

Product form : Mixture
Product name : OIL, FRUIT SLICES*
CAS-No. : N/A
Product code : 90-2198-12
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 3 H226 Flammable liquid and vapour
Skin corrosion/irritation Category 2 H315 Causes skin irritation
Skin sensitization, Category 1 H317 May cause an allergic skin reaction
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) : H226 - Flammable liquid and vapour
H304 - May be fatal if swallowed and enters airways
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction

Precautionary statements (GHS CA) : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take action to prevent static discharges.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
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.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use media other than water to extinguish.

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P403+P235 - Store in a well-ventilated place. Keep cool

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)
ORANGE OIL		(CAS-No.) 8028-48-6	>= 50	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
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	10 - 25	Not classified
TANGERINE OIL	CITRUS RETICULATA PEEL OIL	(CAS-No.) 8016-85-1	5 - 10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
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	5 - 10	Not classified
Ethyl methylphenylglycidate		(CAS-No.) 77-83-8	1 - 5	Skin Sens. 1B, H317
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
BENZYL BENZOATE	benylate / benzoate / benzoic acid, benzyl ester / benzoic acid, phenylmethyl ester / benzyl alcohol, benzoic ester / benzyl benzenecarboxylate / benzyl benzoate / benzyl benzoate USP 600040 / benzyl phenylformate / benzylets / FEMA number 2138	(CAS-No.) 120-51-4	1 - 5	Acute Tox. 4 (Oral), H302

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Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS CA)
STYRALLYL ACETATE		(CAS-No.) 93-92-5	1 - 5	Not classified
DECANAL		(CAS-No.) 112-31-2	1 - 5	Flam. Liq. 4, H227 Eye Irrit. 2A, H319
ALLYL HEPTOATE		(CAS-No.) 142-19-8	1 - 5	Flam. Liq. 4, H227 Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311
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	1 - 5	Acute Tox. 4 (Oral), H302
OCTANAL		(CAS-No.) 124-13-0	0.1 - 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2A, H319
ETHYL 2-METHYLBUTYRATE		(CAS-No.) 7452-79-1	0.1 - 1	Flam. Liq. 3, H226
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-cimemenol / 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	0.1 - 1	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1B, H317
ETHYL MALTOL	2-ethyl pyromeconic acid / 2-ethyl-3-hydroxy-4H-pyran-4-one / 3-hydroxy-2-ethyl-4-pyrone / 4H-pyran-4-one, 2-ethyl-3-hydroxy- / ethyl maltol / veltol plus	(CAS-No.) 4940-11-8	0.1 - 1	Acute Tox. 4 (Oral), H302
CITRONELLOL	(+/-)-3,7-dimethyl-6-octen-1-ol / (+/-)-3,7-dimethyloct-6-en-1-ol / (+/-)-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 / cephol / citronellol / citronello 950 / citronellol, dl- / dihydrogeraniol / dl-citronello / FEMA No 2309 / FEMA No 2980 / rhodinol / rodinol	(CAS-No.) 106-22-9	0.1 - 1	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1B, H317
ALPHA IONONE		(CAS-No.) 127-41-3	0.1 - 1	Not classified
(E)-1-(2,6,6-Trimethyl-2-cyclohexen-1-yl)-2-buten-1-one		(CAS-No.) 24720-09-0	0.1 - 1	Acute Tox. 4 (Oral), H302 Skin Sens. 1B, H317
EUGENOL	1,3,4-eugenol / 1-hydroxy-2-methoxy-4-allylbenzene / 1-hydroxy-2-methoxy-4-prop-2-enylbenzene / 2-methoxy-1-hydroxy-4-allylbenzene / 2-methoxy-4-(2-propenyl)phenol / 2-methoxy-4-allylphenol / 2-methoxy-4-prop-2-enylphenol / 4-allyl-1-hydroxy-2-methoxy-benzene / 4-allyl-2-methoxyphenol / 4-allylcatechol-2-methyl ether / 4-allylguaiacol / 4-allylguaiacol / 4-hydroxy-3-methoxyallylbenzene / 5-allylguaiacol / allylguaiacol / caryophyllilic acid / eugenic acid / eugenol / eugenol,pure / FA 100 / FEMA No.2467 / MISA No.749.00 / p-allylguaiacol / para-allylguaiacol / para-eugenol / p-eugenol / phenol, 2-methoxy-4-(2-propenyl)- / phenol, 4-allyl-2-methoxy- / synthetic eugenol	(CAS-No.) 97-53-0	0.1 - 1	Eye Irrit. 2A, H319 Skin Sens. 1B, H317

Full text of hazard classes and H-statements : see section 16

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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	: Rinse skin with water/shower. Remove/Take off immediately all 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	: Do not induce vomiting. Call a physician immediately.
First-aid measures general	: Call a physician immediately.

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

Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after ingestion	: Risk of lung edema.

4.3. Immediate medical attention and special treatment, if necessary

Other medical advice or treatment	: Treat symptomatically.
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SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

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

No additional information available

5.3. Specific hazards arising from the hazardous product

Fire hazard	: Flammable liquid and vapour.
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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.
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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. Notify authorities if product enters sewers or public waters.
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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapors may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures	: Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Ground/bond container and receiving equipment.
Storage conditions	: Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

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

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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

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 White Colourless to yellow Colourless to light amber Colourless to light yellow On exposure to air: brown
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: Floral odour Sweet odour Fruity odour Aromatic odour Mild odour Lemon odour Characteristic odour Strong odour Irritating/pungent odour Phenol odour Pleasant 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	: 56 °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	: 0.889 (0.879 - 0.899)
Solubility	: Insoluble.
Log Pow	: No data available
Explosion limits	: No data available

9.2. Other information

Refractive index	: 1.47 (1.460 - 1.480)
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	: Flammable liquid and vapour.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No dangerous reactions known under normal conditions of use.
Conditions to avoid	: Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.
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 toxicological effects

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

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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
VELTOL PLUS (4940-11-8)	
LD50 oral rat	1150 mg/kg (Rat, Oral)
LD50 oral	1200 mg/kg body weight
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Dermal)
ATE CA (oral)	1150 mg/kg body weight
ALLYL HEPTOATE PURE (142-19-8)	
LD50 oral	218 mg/kg body weight
LD50 dermal	810 mg/kg body weight
ATE CA (oral)	218 mg/kg body weight
ATE CA (Dermal)	810 mg/kg body weight
DAMASCONE ALPHA (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
OXYPHENYLON (5471-51-2)	
LD50 oral rat	1320 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Dermal)
ATE CA (oral)	1320 mg/kg body weight
IONONE BETA (14901-07-6)	
LD50 oral rat	4590 mg/kg (Rat, Oral)
ATE CA (oral)	4590 mg/kg body weight
DIOCTYL ADIPATE (DOA) (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 (mg/l)	> 5.7 mg/l air (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male/female, Experimental value, Inhalation (aerosol))
LINALOOL 90 (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
HEDIONE (24851-98-7)	
LD50 oral rat	> 5000 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Dermal)
EUGENOL, NATURAL (97-53-0)	
LD50 oral rat	> 2000 mg/kg body weight (Equivalent or similar to OECD 423, Rat, Male/female, Experimental value, Oral)
LD50 oral	2500 mg/kg body weight
LC50 inhalation rat (mg/l)	> 2.6 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male/female, Experimental value, Inhalation (aerosol))
ATE CA (oral)	2500 mg/kg body weight
ORANGE SWEET 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)
BENZYL BENZOATE (120-51-4)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 401: Acute Oral Toxicity, Rat, Male/female, Experimental value, Oral, 14 day(s))
LD50 oral	1500 mg/kg body weight

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BENZYL BENZOATE (120-51-4)	
LD50 dermal rabbit	> 2 ml/kg (Modification of Draize 1959 method, 4 h, Rabbit, Experimental value, Dermal)
LD50 dermal	4000 mg/kg body weight
ATE CA (oral)	1500 mg/kg body weight
ATE CA (Dermal)	4000 mg/kg body weight

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified

STOT-single exposure	: Not classified
	: Not classified

STOT-repeated exposure

Aspiration hazard	: May be fatal if swallowed and enters airways.
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Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after ingestion	: Risk of lung edema.

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

CITRONELLOL (106-22-9)	
LC50 fish 1	10 - 22 mg/l (96 h, <i>Leuciscus idus</i>)
EC50 Daphnia 1	17 mg/l (48 h, <i>Daphnia magna</i>)
EC50 72h algae [mg/l] 1	2.4 mg/l (Algae)
Log Pow	3.41 - 3.91

IONONE BETA (14901-07-6)	
LC50 fish 1	5.1 mg/l (96 h, <i>Pimephales promelas</i>)
Log Pow	4.1

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

LINALOOL 90 (78-70-6)	
LC50 fish 2	27.8 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; <i>Salmo gairdneri</i>)
EC50 Daphnia 1	59 mg/l (EC50; OECD 202: <i>Daphnia</i> sp. Acute Immobilisation Test; 48 h; <i>Daphnia magna</i>)
EC50 other aquatic organisms 1	>= 100 mg/l (3 h; Activated sludge)
Log Pow	2.84 - 3.145

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LINALOOL 90 (78-70-6)	
Threshold limit algae 1	88.3 mg/l (EC50; 96 h)
HEDIONE (24851-98-7)	
Log Pow	3 (Estimated value)
EUGENOL, NATURAL (97-53-0)	
LC50 fish 1	13 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value, GLP)
EC50 Daphnia 1	1.13 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
ErC50 (algae)	24 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)
Log Pow	1.83 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 30 °C)
ORANGE SWEET 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)
Log Pow	2.78 - 4.88 (QSAR; KOWWIN)
BENZYL BENZOATE (120-51-4)	
LC50 fish 1	2.32 mg/l (EU Method C.1, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value, GLP)
EC50 Daphnia 1	3.09 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
EC50 72h algae [mg/l] 1	0.475 mg/l (OECD 201: Alga, Growth Inhibition Test, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Growth rate)
BCF fish 1	2.286 (BCFBAF v3.00, Pisces, QSAR)
Log Pow	3.97 (Experimental value, 25 °C)
Log Koc	3.8 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)

12.2. Persistence and degradability

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
VELTOL PLUS (4940-11-8)	
Persistence and degradability	Biodegradability in water: no data available.
OXYPHENYLON (5471-51-2)	
Persistence and degradability	Biodegradability in water: no data available.
IONONE BETA (14901-07-6)	
Persistence and degradability	Readily biodegradable in water.
ThOD	2.91 g O ₂ /g substance
DIOCTYL ADIPATE (DOA) (103-23-1)	
Persistence and degradability	Readily biodegradable in water.
LINALOOL 90 (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
HEDIONE (24851-98-7)	
Persistence and degradability	Readily biodegradable in water.
EUGENOL, NATURAL (97-53-0)	
Persistence and degradability	Readily biodegradable in water.
BENZYL BENZOATE (120-51-4)	
Persistence and degradability	Readily biodegradable in water.

12.3. Bioaccumulative potential

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CITRONELLOL (106-22-9)	
Log Pow	3.41 - 3.91
VELTOL PLUS (4940-11-8)	
Bioaccumulative potential	No bioaccumulation data available.
OXYPHENYLON (5471-51-2)	
Bioaccumulative potential	No bioaccumulation data available.
IONONE BETA (14901-07-6)	
Log Pow	4.1
DIOCTYL ADIPATE (DOA) (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)
Log Pow	8.1 (Calculated)
Log Koc	4.687 (log Koc, SRC PCKOCWIN v1.66, Calculated value)
LINALOOL 90 (78-70-6)	
Bioaccumulative potential	Bioaccumable.
Log Pow	2.84 - 3.145
HEDIONE (24851-98-7)	
Log Pow	3 (Estimated value)
EUGENOL, NATURAL (97-53-0)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
Log Pow	1.83 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 30 °C)
ORANGE SWEET OIL (8028-48-6)	
BCF other aquatic organisms 1	32 - 395 (BCF; BCFWIN)
Log Pow	2.78 - 4.88 (QSAR; KOWWIN)
BENZYL BENZOATE (120-51-4)	
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
BCF fish 1	2.286 (BCFBAF v3.00, Pisces, QSAR)
Log Pow	3.97 (Experimental value, 25 °C)
Log Koc	3.8 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
12.4. Mobility in soil	
CITRONELLOL (106-22-9)	
Log Pow	3.41 - 3.91
IONONE BETA (14901-07-6)	
Log Pow	4.1
DIOCTYL ADIPATE (DOA) (103-23-1)	
Ecology - soil	Low potential for mobility in soil.
Log Koc	4.687 (log Koc, SRC PCKOCWIN v1.66, Calculated value)
Log Pow	8.1 (Calculated)
LINALOOL 90 (78-70-6)	
Log Pow	2.84 - 3.145
HEDIONE (24851-98-7)	
Log Pow	3 (Estimated value)
EUGENOL, NATURAL (97-53-0)	
Ecology - soil	No (test)data on mobility of the substance available.
Log Pow	1.83 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 30 °C)
ORANGE SWEET OIL (8028-48-6)	
Log Pow	2.78 - 4.88 (QSAR; KOWWIN)
BENZYL BENZOATE (120-51-4)	
Surface tension	0.027 N/m (210 °C)
Ecology - soil	Low potential for mobility in soil.

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BENZYL BENZOATE (120-51-4)	
Log Koc	3.8 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Log Pow	3.97 (Experimental value, 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.
Additional information : Flammable vapors may accumulate in the container.

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

UN-No. (IMDG) : 1266
Proper Shipping Name (IMDG) : PERFUMERY PRODUCTS
Transport document description (IMDG) : UN 1266 PERFUMERY PRODUCTS, 3, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS
Class (IMDG) : 3 - Flammable liquids
Packing group (IMDG) : III - substances presenting low danger

IATA

UN-No. (IATA) : 1266
Proper Shipping Name (IATA) : Perfumery products
Transport document description (IATA) : UN 1266 Perfumery products, 3, III, ENVIRONMENTALLY HAZARDOUS
Class (IATA) : 3 - Flammable Liquids
Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. National regulations

CITRONELLOL (106-22-9)
Listed on the Canadian DSL (Domestic Substances List)
VELTOL PLUS (4940-11-8)
Listed on the Canadian DSL (Domestic Substances List)
ALDEHYDE C-08 (124-13-0)
Listed on the Canadian DSL (Domestic Substances List)
ALDEHYDE C-10 (112-31-2)
Listed on the Canadian DSL (Domestic Substances List)
ALDEHYDE C-16 (77-83-8)
Listed on the Canadian DSL (Domestic Substances List)
ALLYL HEPTOATE PURE (142-19-8)
Listed on the Canadian DSL (Domestic Substances List)
DAMASCONE ALPHA (24720-09-0)
Listed on the Canadian DSL (Domestic Substances List)

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IONONE ALPHA (127-41-3)

Listed on the Canadian DSL (Domestic Substances List)

OXYPHENYLON (5471-51-2)

Listed on the Canadian DSL (Domestic Substances List)

IONONE BETA (14901-07-6)

Listed on the Canadian DSL (Domestic Substances List)

TANGERINE (8016-85-1)

Listed on the Canadian DSL (Domestic Substances List)

DIOCTYL ADIPATE (DOA) (103-23-1)

Listed on the Canadian DSL (Domestic Substances List)

ETHYL-2-METHYL BUTYRATE (7452-79-1)

Listed on the Canadian DSL (Domestic Substances List)

GARDENOL (STYRALLYL ACETATE) (93-92-5)

Listed on the Canadian DSL (Domestic Substances List)

LINALOOL 90 (78-70-6)

Listed on the Canadian DSL (Domestic Substances List)

HEDIONE (24851-98-7)

Listed on the Canadian DSL (Domestic Substances List)

EUGENOL, NATURAL (97-53-0)

Listed on the Canadian DSL (Domestic Substances List)

ORANGE SWEET OIL (8028-48-6)

Listed on the Canadian DSL (Domestic Substances List)

BENZYL BENZOATE (120-51-4)

Listed on the Canadian DSL (Domestic Substances List)

15.2. International regulations

CITRONELLOL (106-22-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

VELTOL PLUS (4940-11-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

ALDEHYDE C-08 (124-13-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

ALDEHYDE C-10 (112-31-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

ALDEHYDE C-16 (77-83-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

ALLYL HEPTOATE PURE (142-19-8)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

DAMASCONE ALPHA (24720-09-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

IONONE ALPHA (127-41-3)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

OXYPHENYLON (5471-51-2)

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IONONE BETA (14901-07-6)

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TANGERINE (8016-85-1)

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DIOCTYL ADIPATE (DOA) (103-23-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

ETHYL-2-METHYL BUTYRATE (7452-79-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

GARDENOL (STYRALLYL ACETATE) (93-92-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

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LINALOOL 90 (78-70-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

HEDIONE (24851-98-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

EUGENOL, NATURAL (97-53-0)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

ORANGE SWEET OIL (8028-48-6)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

BENZYL BENZOATE (120-51-4)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

SECTION 16: Other information

SDS Major/Minor : None
Issue date : 08/17/2018
Revision date : 08/19/2019
Supersedes : 08/17/2018

Full text of H-phrases:

H226	Flammable liquid and vapour
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
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation

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.