



OIL, JAPANESE CITRON*

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 12/18/2018

Revision date: 05/21/2020

Supersedes: 12/18/2018

Version: 1.1

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : OIL, JAPANESE CITRON*
CAS-No. : N/A
Product code : 90-3031-82

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

The Lebermuth Company
4004 Technology Drive
South Bend, IN 46628 - 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(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Flammable liquids Category 4	Combustible liquid
Skin corrosion/irritation Category 2	Causes skin irritation
Skin sensitization, Category 1	May cause an allergic skin reaction
Aspiration hazard Category 1	May be fatal if swallowed and enters airways

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



GHS07

GHS08

Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

Combustible liquid
May be fatal if swallowed and enters airways
Causes skin irritation
May cause an allergic skin reaction

Precautionary statements (GHS US) :

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash hands, forearms and face thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If swallowed: Immediately call a poison center or doctor.
If on skin: Wash with plenty of water.
Specific treatment (see supplemental first aid instruction on this label).
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/attention.
If skin irritation or rash occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Wash contaminated clothing before reuse.
In case of fire: Use media other than water to extinguish.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container to hazardous or special waste collection point, in accordance

OIL, JAPANESE CITRON*

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
BENZYL BENZOATE	(CAS-No.) 120-51-4	25 - 50	Acute Tox. 4 (Oral), H302
ORANGE OIL	(CAS-No.) 8028-48-6	5 - 10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
LEMON OIL	(CAS-No.) 8008-56-8	1 - 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
LINALOOL	(CAS-No.) 78-70-6	1 - 5	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
ORANGE OIL	(CAS-No.) 8028-48-6	1 - 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Asp. Tox. 1, H304
GRAPEFRUIT OIL	(CAS-No.) 8016-20-4	1 - 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
LEMON OIL TERPENES	(CAS-No.) 68917-33-9	1 - 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
GERANYL ACETATE	(CAS-No.) 105-87-3	0.1 - 1	Skin Irrit. 2, H315 Skin Sens. 1, H317
LINALYL ACETATE	(CAS-No.) 115-95-7	0.1 - 1	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
GERANIOL	(CAS-No.) 106-24-1	0.1 - 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317

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 general : Call a physician immediately.
- 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 : Do not induce vomiting. 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

Treat symptomatically.

OIL, JAPANESE CITRON*

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

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

5.2. Specific hazards arising from the chemical

Fire hazard : Combustible liquid.

Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

5.3. 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

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

For containment : Collect spillage.

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. Wear personal protective equipment. 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

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

BENZYL BENZOATE (120-51-4)

Not applicable

GERANIOL 90 (106-24-1)

Not applicable

GERANYL ACETATE PRIME (105-87-3)

Not applicable

LINALOOL 90 (78-70-6)

Not applicable

LINALYL ACETATE SPECIAL (115-95-7)

Not applicable

GRAPEFRUIT PINK OIL (8016-20-4)

Not applicable

OIL, JAPANESE CITRON*

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

LEMON ARGENTINA OIL (8008-56-8)

Not applicable

LEMON TERPENES (68917-33-9)

Not applicable

ORANGE SWEET OIL (8028-48-6)

Not applicable

ORANGE 5X DECOLORIZED OIL (8028-48-6)

Not applicable

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

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
	: GOLDEN YELLOW TO AMBER
Odor	: CHARACTERISTIC, MATCHING RETAINER SAMPLE
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 61 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: 0.948 (0.938 - 0.958)
Solubility	: Insoluble.
Log Pow	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available

OIL, JAPANESE CITRON*

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Oxidizing properties : No data available

9.2. Other information

Refractive index : 1.482 (1.472 - 1.492)

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 toxicological effects

Acute toxicity : Not classified

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 dermal rabbit	> 2 ml/kg (Modification of Draize 1959 method, 4 h, Rabbit, Experimental value, Dermal)
ATE US (oral)	1500 mg/kg body weight
ATE US (dermal)	4000 mg/kg body weight

GERANIOL 90 (106-24-1)	
LD50 oral rat	3600 mg/kg body weight (Rat; Experimental value)
LD50 dermal rabbit	> 5000 mg/kg body weight (Rabbit; Experimental value)
ATE US (oral)	3600 mg/kg body weight

GERANYL ACETATE PRIME (105-87-3)	
LD50 oral rat	6300 mg/kg (Rat, Oral)
ATE US (oral)	6300 mg/kg body weight

LINALOOL 90 (78-70-6)	
LD50 oral rat	2790 mg/kg (Rat)
LD50 dermal rat	5610 mg/kg (Rat)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit)
ATE US (oral)	2790 mg/kg body weight
ATE US (dermal)	5610 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)

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

OIL, JAPANESE CITRON*

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Reproductive toxicity : Not classified
STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : May be fatal if swallowed and enters airways.

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 : Toxic to aquatic life with long lasting effects.

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)
GERANIOL 90 (106-24-1)	
LC50 fish 1	> 9.8 mg/l (LC50; 96 h)
GERANYL ACETATE PRIME (105-87-3)	
LC50 fish 1	68.12 mg/l (DIN 38412: German standard methods for the examination of water, waste water and sludge, 96 h, Leuciscus idus, Static system, Fresh water, Read-across)
EC50 Daphnia 1	14.1 mg/l (EU Method C.2, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
LINALOOL 90 (78-70-6)	
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)
LC50 fish 2	27.8 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Salmo gairdneri)
Threshold limit algae 1	88.3 mg/l (EC50; 96 h)
LINALYL ACETATE SPECIAL (115-95-7)	
LC50 fish 1	11 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Cyprinus carpio)
EC50 Daphnia 1	15 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna)
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)

12.2. Persistence and degradability

BENZYL BENZOATE (120-51-4)	
Persistence and degradability	Readily biodegradable in water.
GERANIOL 90 (106-24-1)	
Persistence and degradability	Readily biodegradable in water.
ThOD	2.9 g O ₂ /g substance
GERANYL ACETATE PRIME (105-87-3)	
Persistence and degradability	Readily biodegradable in water.
ThOD	2.6 g O ₂ /g substance
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

OIL, JAPANESE CITRON*

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

LINALYL ACETATE SPECIAL (115-95-7)	
Persistence and degradability	Readily biodegradable in water.

12.3. Bioaccumulative potential

BENZYL BENZOATE (120-51-4)	
BCF fish 1	2.286 (BCFBAF v3.00, Pisces, QSAR)
Log Pow	3.97 (Experimental value, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

GERANIOL 90 (106-24-1)	
Bioaccumulative potential	No bioaccumulation data available.

GERANYL ACETATE PRIME (105-87-3)	
BCF other aquatic organisms 1	1500 (Estimated value)
Log Pow	4.04 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method)
Bioaccumulative potential	Potential for bioaccumulation ($4 \geq \text{Log Kow} \leq 5$).

LINALOOL 90 (78-70-6)	
Log Pow	2.84 - 3.145
Bioaccumulative potential	Bioaccumable.

LINALYL ACETATE SPECIAL (115-95-7)	
Log Pow	3.93 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

ORANGE SWEET OIL (8028-48-6)	
BCF other aquatic organisms 1	32 - 395 (BCF; BCFWIN)
Log Pow	2.78 - 4.88 (QSAR; KOWWIN)

12.4. Mobility in soil

BENZYL BENZOATE (120-51-4)	
Surface tension	0.027 N/m (210 °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)
Ecology - soil	Low potential for mobility in soil.

GERANYL ACETATE PRIME (105-87-3)	
Log Koc	3.06 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Low potential for mobility in soil.

LINALYL ACETATE SPECIAL (115-95-7)	
Ecology - soil	Adsorbs into the soil.

12.5. Other adverse effects

No additional information available

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

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Not applicable

OIL, JAPANESE CITRON*

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

BENZYL BENZOATE (120-51-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
GERANIOL 90 (106-24-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
GERANYL ACETATE PRIME (105-87-3)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
LINALOOL 90 (78-70-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
LINALYL ACETATE SPECIAL (115-95-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
GRAPEFRUIT PINK OIL (8016-20-4)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
LEMON ARGENTINA OIL (8008-56-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
LEMON TERPENES (68917-33-9)
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
ORANGE 5X DECOLORIZED OIL (8028-48-6)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

BENZYL BENZOATE (120-51-4)
Listed on the Canadian DSL (Domestic Substances List)
GERANIOL 90 (106-24-1)
Listed on the Canadian DSL (Domestic Substances List)
GERANYL ACETATE PRIME (105-87-3)
Listed on the Canadian DSL (Domestic Substances List)
LINALOOL 90 (78-70-6)
Listed on the Canadian DSL (Domestic Substances List)
LINALYL ACETATE SPECIAL (115-95-7)
Listed on the Canadian DSL (Domestic Substances List)
GRAPEFRUIT PINK OIL (8016-20-4)
Listed on the Canadian DSL (Domestic Substances List)
LEMON ARGENTINA OIL (8008-56-8)
Listed on the Canadian DSL (Domestic Substances List)
LEMON TERPENES (68917-33-9)
Listed on the Canadian DSL (Domestic Substances List)

OIL, JAPANESE CITRON*

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

ORANGE SWEET OIL (8028-48-6)

Listed on the Canadian DSL (Domestic Substances List)

ORANGE 5X DECOLORIZED OIL (8028-48-6)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

No additional information available

15.3. US State regulations



WARNING:

This product can expose you to myrcene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

This product can expose you to d-pulegone, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

Revision date : 05/21/2020

Full text of H-phrases:

H226	Flammable liquid and vapour
H227	Combustible liquid
H302	Harmful if swallowed
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

SDS US (GHS HazCom 2012) - Lebermuth

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.