



OIL, VAN ORNG LIME CIN II AN*

Safety Data Sheet

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

Date of issue: 01/18/2019

Revision date: 01/18/2019

Supersedes: 01/18/2019

Version: 1.1

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : OIL, VAN ORNG LIME CIN II AN*
CAS-No. : N/A
Product code : 91-1040-84

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: 703-527-3887

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
Serious eye damage/eye irritation Category 2	Causes serious eye 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
Causes serious eye irritation

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/vapors/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
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
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.
If eye irritation persists: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
Wash contaminated clothing before reuse.

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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 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
ORANGE OIL	(CAS-No.) 8028-48-6	10 - 25	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317 Asp. Tox. 1, H304
BLOOD 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
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
ORANGE TERPENES	(CAS-No.) 68647-72-3	1 - 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1B, H317 Asp. Tox. 1, H304
LIME OIL	(CAS-No.) 8008-26-2	1 - 5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304
CITRAL	(CAS-No.) 5392-40-5	0.1 - 1	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
CINNAMALDEHYDE	(CAS-No.) 104-55-2	0.1 - 1	Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1A, H317
LINALOOL	(CAS-No.) 78-70-6	0.1 - 1	Flam. Liq. 4, H227 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 cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion : 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 eye contact : Eye irritation.
Symptoms/effects after ingestion : Risk of lung edema.

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4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

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. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

6.1.2. For emergency responders

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

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

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. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/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 in a well-ventilated place. Keep cool. Store locked up.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

CITRAL (5392-40-5)		
ACGIH	ACGIH TWA (ppm)	5 ppm
ACGIH	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)
CINNAMALDEHYDE (104-55-2)		
Not applicable		

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LINALOOL (78-70-6)
Not applicable
ORANGE TERPENES (68647-72-3)
Not applicable
ORANGE OIL (8028-48-6)
Not applicable
BLOOD ORANGE OIL (8028-48-6)
Not applicable
ORANGE OIL (8028-48-6)
Not applicable
LIME OIL (8008-26-2)
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
Color : AMBER TO ORANGE
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 : 80 °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 : 0.889 (0.879 - 0.899)
Solubility : Insoluble.
Log Pow : No data available
Auto-ignition temperature : No data available
Decomposition temperature : No data available

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Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

Refractive index	: 1.475 (1.465 - 1.485)
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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

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

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

CITRAL (5392-40-5)	
ATE US (dermal)	2250 mg/kg body weight
CINNAMALDEHYDE (104-55-2)	
LD50 oral rat	2220 mg/kg (Rat, Oral)
LD50 dermal rabbit	1260 ml/kg (24 h, Rabbit, Male/female, Experimental value, Dermal)
ATE US (oral)	2220 mg/kg body weight
ATE US (dermal)	1100 mg/kg body weight
LINALOOL (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 TERPENES (68647-72-3)	
LD50 oral rat	> 2000 mg/kg body weight (OECD 423: Acute Oral Toxicity – Acute Toxic Class Method, Rat, Female, Read-across, Oral)
LD50 dermal rabbit	> 5000 mg/kg body weight (Equivalent or similar to OECD 402, Rabbit, Weight of evidence, Dermal)
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)

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

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Carcinogenicity : Not classified

ORANGE TERPENES (68647-72-3)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified

Specific target organ toxicity – single exposure : Not classified

Specific target organ toxicity – 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 eye contact : Eye irritation.

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.

CINNAMALDEHYDE (104-55-2)	
LC50 fish 1	105.76 mg/l (96 h, Pimephales promelas, Flow-through system, Fresh water, QSAR, Estimated value)
EC50 Daphnia 1	119.56 mg/l (48 h, Daphnia magna, Static system, Fresh water, QSAR, Estimated value)

LINALOOL (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)

ORANGE TERPENES (68647-72-3)	
LC50 fish 1	720 µg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Pimephales promelas, Flow-through system, Fresh water, Experimental value, Lethal)
EC50 Daphnia 1	0.36 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)

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)

12.2. Persistence and degradability

CINNAMALDEHYDE (104-55-2)	
Persistence and degradability	Readily biodegradable in water.

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

ORANGE TERPENES (68647-72-3)	
Persistence and degradability	Readily biodegradable in water.
ThOD	3.29 g O ₂ /g substance

12.3. Bioaccumulative potential

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CINNAMALDEHYDE (104-55-2)	
Log Pow	1.84 (Calculated)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
LINALOOL (78-70-6)	
Log Pow	2.84 - 3.145
Bioaccumulative potential	Bioaccumable.
ORANGE TERPENES (68647-72-3)	
BCF fish 1	864.8 - 1022 (Pisces, QSAR, Fresh weight)
Log Pow	4.38 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 37 °C)
Bioaccumulative potential	Potential for bioaccumulation ($4 \geq \text{Log Kow} \leq 5$).
ORANGE 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

CINNAMALDEHYDE (104-55-2)	
Surface tension	45.3 mN/m (20 °C, Experimental value)
Log Koc	1.57 (log Koc, Other, Calculated value)
Ecology - soil	Highly mobile in soil.
ORANGE TERPENES (68647-72-3)	
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

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

CITRAL (5392-40-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
CINNAMALDEHYDE (104-55-2)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
LINALOOL (78-70-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

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ORANGE TERPENES (68647-72-3)
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
BLOOD ORANGE OIL (8028-48-6)
Not 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
LIME OIL (8008-26-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

CITRAL (5392-40-5)
Listed on the Canadian DSL (Domestic Substances List)
CINNAMALDEHYDE (104-55-2)
Listed on the Canadian DSL (Domestic Substances List)
LINALOOL (78-70-6)
Listed on the Canadian DSL (Domestic Substances List)
ORANGE TERPENES (68647-72-3)
Listed on the Canadian DSL (Domestic Substances List)
ORANGE OIL (8028-48-6)
Listed on the Canadian DSL (Domestic Substances List)
BLOOD ORANGE OIL (8028-48-6)
Listed on the Canadian DSL (Domestic Substances List)
ORANGE OIL (8028-48-6)
Listed on the Canadian DSL (Domestic Substances List)
LIME OIL (8008-26-2)
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.

SECTION 16: Other information

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Full text of H-phrases:

H226	Flammable liquid and vapour
H227	Combustible liquid
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
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