

ORANGE CLOVE

Safety Data Sheet

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

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Version: 1.1

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : ORANGE CLOVE
CAS-No. : N/A

1.2. Recommended use and restrictions on use

No additional information available

1.4. Emergency telephone number

Emergency number : Chemtrec - USA: 800-424-9300

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

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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 Skin Sens. 1, H317 Asp. Tox. 1, H304
CLOVE OIL	(CAS-No.) 84961-50-2	5 - 10	Eye Irrit. 2A, H319 Skin Sens. 1B, H317
EUGENOL	(CAS-No.) 97-53-0	1 - 5	Eye Irrit. 2, H319 Skin Sens. 1, H317
CEDARWOOD OIL	(CAS-No.) 8000-27-9	1 - 5	Asp. Tox. 1, H304
LINALYL ACETATE	(CAS-No.) 115-95-7	1 - 5	Flam. Liq. 4, H227 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, 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
GERANYL ACETATE	(CAS-No.) 105-87-3	0.1 - 1	Skin Irrit. 2, H315 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.

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.

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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

GERANYL ACETATE (105-87-3)

Not applicable

LINALOOL (78-70-6)

Not applicable

LINALYL ACETATE (115-95-7)

Not applicable

CEDARWOOD OIL (8000-27-9)

Not applicable

CLOVE OIL (84961-50-2)

Not applicable

EUGENOL (97-53-0)

Not applicable

ORANGE 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

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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
Color	: YELLOW
Odor	: CHARACTERISTIC, MATCHING RETAINER SAMPLE
Odor threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 73 °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	: 0.917 (0.907 - 0.927)
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
Oxidizing properties	: No data available

9.2. Other information

Refractive index : 1.461 (1.451 - 1.471)

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

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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

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

CLOVE OIL (84961-50-2)	
ATE US (oral)	2650 mg/kg body weight
ATE US (dermal)	2500 mg/kg body weight

EUGENOL (97-53-0)	
LD50 oral rat	> 2000 mg/kg body weight (Equivalent or similar to OECD 423, Rat, Male/female, Experimental value, Oral)
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 US (oral)	2300 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)

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

EUGENOL (97-53-0)	
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 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.

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GERANYL ACETATE (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 (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 (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)
EUGENOL (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)
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

GERANYL ACETATE (105-87-3)	
Persistence and degradability	Readily biodegradable in water.
ThOD	2.6 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
LINALYL ACETATE (115-95-7)	
Persistence and degradability	Readily biodegradable in water.
EUGENOL (97-53-0)	
Persistence and degradability	Readily biodegradable in water.

12.3. Bioaccumulative potential

GERANYL ACETATE (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 ≥ Log Kow ≤ 5).
LINALOOL (78-70-6)	
Log Pow	2.84 - 3.145
Bioaccumulative potential	Bioaccumable.
LINALYL ACETATE (115-95-7)	
Log Pow	3.93 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).
EUGENOL (97-53-0)	
Log Pow	1.83 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 30 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

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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

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

EUGENOL (97-53-0)	
Ecology - soil	No (test)data on mobility of the substance available.

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

GERANYL ACETATE (105-87-3)
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
LINALYL ACETATE (115-95-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
CEDARWOOD OIL (8000-27-9)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
CLOVE OIL (84961-50-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
EUGENOL (97-53-0)
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

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15.2. International regulations

CANADA

GERANYL ACETATE (105-87-3)

Listed on the Canadian DSL (Domestic Substances List)

LINALOOL (78-70-6)

Listed on the Canadian DSL (Domestic Substances List)

LINALYL ACETATE (115-95-7)

Listed on the Canadian DSL (Domestic Substances List)

CEDARWOOD OIL (8000-27-9)

Listed on the Canadian DSL (Domestic Substances List)

CLOVE OIL (84961-50-2)

Listed on the Canadian DSL (Domestic Substances List)

EUGENOL (97-53-0)

Listed on the Canadian DSL (Domestic Substances List)

ORANGE 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.

SECTION 16: Other information

Revision date : 06/29/2018

Full text of H-phrases:

H226	Flammable liquid and vapour
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

SDS US (GHS HazCom 2012)

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