

Section 1. Product and Company Information

GHS Product Name: (±)-Citronellol

Product Code: TER-14-1000

CAS: [106-22-9]

Molecular Formula: C₁₀H₂₀O

3,7-Dimethyl-6-octen-1-ol; DL-Citronellol; 2,6-Dimethyl-2-octen-8-ol; 2,3-Dihydrogeraniol;
Dihydrogeraniol

Company: MarkHerb

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Section 2. Hazards Identification

2.1 GHS classification

PHYSICAL HAZARDS

Flammable liquids (Category 4), H227

HEALTH HAZARDS

Skin Irritation (Category 2), H315

Eye Irritation (Category 2A), H319

Skin Sensitisation (Category 1), H317

Acute Oral Toxicity (Category 5)

Acute Dermal Toxicity (Category 5)

ENVIRONMENTAL HAZARDS

Hazardous to the aquatic environment - acute hazard (Category 2), H401

Hazardous to the aquatic environment - long-term hazard (Category 2)

2.2 GHS label elements, including precautionary statements

Pictograms or hazard symbols



Signal word Warning

Hazard statements

H227 Combustible liquid

H303	May be harmful if swallowed
H313	May be harmful in contact with skin
H315	Causes skin irritation
H317	May causes an allergic skin reaction
H319	Causes serious eye irritation
H401	Toxic to aquatic life

Precautionary statements

Prevent

P210	Keep away from heat/sparks/open flames/hot surfaces. -No smoking
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment
P280	Wear protective gloves/eye protection/face protection.

Response

P301 + P312	IF SWALLOWED: Call POISON CENTER/doctor if you feel unwell. Rinse mouth.
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.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

Storage

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

P501	Dispose of contents/ container to an approved waste disposal plant
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Section 3. Information on Basic Physical and Chemical Properties

Physical States:	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid
Melting Point:	77-83°C
Boiling Point:	225°C (437°F)
Flash Pt:	99°C - closed cup
Evaporation Rate:	No data
Flammability (solid, gas):	No data available.
Explosive Limits:	LEL: No data. UEL: No data
Vapor Pressure (vs. Air or mm Hg):	0.0±0.9 mmHg at 25°C
Vapor Density (vs. Air = 1):	5.4
Specific Gravity (Water = 1):	0.854
Solubility in Water:	Slightly soluble
Solubility Notes:	Chloroform (Sparingly); Methanol (Slightly)
Autoignition Pt:	No data
Percent Volatile:	No data
Partition coefficient:	log Pow: 3.41 (n-octanol/water)
pH:	No data

Section 4. First aid measures

Description of first aid measures

If inhaled

If breathed in, move person into fresh air and keep at rest. If not breathing, give artificial respiration.

In case of skin contact

Remove contaminated clothes. Wash off with soap and plenty of water for at least 15 minutes.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes.

If swallowed

DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see **section 2.2**).

Indication of any immediate medical attention and special treatment needed

No data available

Section 5. Fire Fighting Measures

Suitable extinguishing

Media: Dry chemical, alcohol-resistant foam, water spray, sand, earth, carbon dioxide. Cool closed containers exposed to fire with water spray. Do not use a solid water stream as it may scatter and spread fire.

Precautions for firefighters: Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Remove movable containers if safe to do so.

Special protective:

equipment for firefighters: When extinguishing fire, be sure to wear personal protective equipment.

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Environmental precautions

Do not let product enter drains.

General Information:

Use proper personal protective equipment as indicated in **Section 8**.

Spills/Leaks:

Clean up spills immediately, observing precautions in the Protective Equipment section. Sweep up, then place into a suitable container for disposal. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete.

Section 7. Handling and Storage

Precautions for safe handling:

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid contact with eyes, skin, and clothing. Avoid ingestion and inhalation. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

Storage:

Store in a well closed container. Protected from air and light, refrigerate or freeze (2-8°C)

Specific end uses

Use in a laboratory fume hood where possible. Refer to employer is COSHH risk assessment.

Section 8. Exposure Controls / Personal Protection

Engineering controls:

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels.

Control parameters: Not set up

Personal protective equipment:

Respiratory protection: Dust respirator. Follow local and national regulations.

Hand protection: Protective gloves.

Eye protection: Wear safety glasses and chemical goggles if splashing is possible.

Skin and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure.

Section 9. Stability and Reactivity

Reactivity

Stable under recommended transport or storage conditions.

Chemical Stability

Stable under normal temperatures and pressures.

Conditions to Avoid

Incompatible materials, strong oxidants, heat, light.

Incompatibilities with Other Materials

Strong oxidising/reducing agents, strong acids/alkalis.

Hazardous Decomposition Products

Nitrogen oxides, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, nitrogen.

Hazardous Polymerization

Has not been reported.

Section 10. Toxicological Information

Acute Toxicity:

LD50 Oral - Rat - 3450 mg/kg

LD50 Dermal - Rabbit - 2650 mg/kg

Skin corrosion/irritation:

Skin - Human

Result: Skin irritation - 48 h

Skin - Rabbit - 100 mg/24 h SEV

Serious eye damage/irritation:	Eye - Rabbit Result: Eye irritation
Germ cell mutagenicity:	No data
Carcinogenicity:	IARC = No data NTP = No data
Reproductive toxicity:	No data

Section 11. Ecological Information

Toxicity:

Toxicity to fish: LC50 - Leuciscus idus (Golden orfe) - 10.0-22.0 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates: EC50 - Daphnia (water flea) - 17.0 mg/l - 48 h

Toxicity to algae: EC50 - Algae - 2.4 mg/l - 72 h

Toxicity to bacteria: EC50 – Pseudomonas putida: >10000 mg/l - 0.5 h

Persistence and degradability:

Biodegradability > 60% - Readily biodegradable

Chemical Oxygen Demand (COD) 2,050 mg/g

Theoretical Oxygen Demand (ThOD) 2,961 mg/g

Bioaccumulative potential: No data

Mobility in soil: No data

Results of PBT & vPvB assessment: No data

Other adverse effects: Toxic to aquatic life

Section 12. Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Product is not to be disposed of in sanitary sewers, storm sewers, or landfills.

Section 13. Transport Information

Hazards Class

Not a hazardous material for transportation

UN number

ADR/RID: 3082

IMDG: 3082

IATA: 3082

UN proper shipping name

ADR/RID

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronellol)

IMDG

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Citronellol)

IATA

Environmentally hazardous substance, liquid, n.o.s. (Citronellol)

Transport hazard class(es)

ADR/RID: 9

IMDG: 9

IATA: 9

Section 14. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

no data

Chemical Safety Assessment

no data

Section 15. Additional Information

This MSDS above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.

-----End of safety data sheet-----