

Safety Data Sheet

Citronellol

Revision date : 2025/08/12
Version: 6.0

Page: 1/11
(30035053/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Citronellol

Recommended use of the chemical and restriction on use

Recommended use*: Chemical, Chemical for detergents, Cosmetic and oral care chemical, flavoring substance

Unsuitable for use: Not intended for sale to or use by the general public.

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:

BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

24 Hour Emergency Response Information

CHEMTREC: 1-800-424-9300

BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Synonyms: citronellol

2. Hazards Identification

According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Eye Irrit.	2A	Eye irritation
Skin Sens.	1	Skin sensitization
Aquatic Acute	2	Hazardous to the aquatic environment - acute
Skin Irrit.	2	Skin irritation

Safety Data Sheet

Citronellol

Revision date: 2025/08/12
Version: 6.0

Page: 2/11
(30035053/SDS_GEN_US/EN)

Label elements

Pictogram:



Signal Word:
Warning

Hazard Statement:

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H401	Toxic to aquatic life.

Precautionary Statements (Prevention):

P280	Wear protective gloves and eye protection or face protection.
P261	Avoid breathing mist or vapour or spray.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.
P264	Wash contaminated body parts thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical attention.
P332 + P313	If skin irritation occurs: Get medical attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P337 + P313	If eye irritation persists: Get medical attention.

Precautionary Statements (Disposal):

P501	Dispose of contents/container in accordance with local regulations.
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Hazards not otherwise classified

No data available.

3. Composition / Information on Ingredients

According to Regulation 2024 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

6-Octen-1-ol, 3,7-dimethyl

CAS Number: 106-22-9

Content (W/W): 80.0 - 100.0%

Synonym: 3,7-Dimethyl-6-octen-1-ol; Citronellol

2,6-Octadien-1-ol, 3,7-dimethyl-, (E)-

CAS Number: 106-24-1

Content (W/W): 0.1 - 1.5%

Synonym: (E)-3,7-Dimethyl-2,6-octadien-1-ol

Safety Data Sheet

Citronellol

Revision date: 2025/08/12
Version: 6.0

Page: 3/11
(30035053/SDS_GEN_US/EN)

The actual concentration is withheld as a trade secret.

4. First-Aid Measures

Description of first aid measures

General advice:

Remove contaminated clothing immediately and clean before re-use or dispose it if necessary. Keep patient calm, remove to fresh air.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

If on skin:

Remove contaminated clothing. Wash skin with soap and water, rinse abundantly. Seek medical attention.

If in eyes:

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. If irritation develops, seek medical attention.

If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: Overexposure may cause: Eye irritation, skin irritation, erythema, allergic contact dermatitis, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
carbon dioxide, foam, dry powder

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon oxides, harmful vapours
The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting:
Wear a self-contained breathing apparatus.

Safety Data Sheet

Citronellol

Revision date: 2025/08/12
Version: 6.0

Page: 4/11
(30035053/SDS_GEN_US/EN)

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.
Cool endangered containers with water-spray.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Information regarding personal protective measures, see section 8.
Ensure adequate ventilation. Do not breathe vapour/spray. Avoid contact with the skin, eyes and clothing.

Environmental precautions

May be harmful to the aquatic environment. Prevent entry into drains and surface waters.

Methods and material for containment and cleaning up

For small amounts: Contain with absorbent material (e.g. sand, silica gel, acid binder, general purpose binder, sawdust).

For large amounts: Dike spillage. Pump off product.

Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Wear suitable protective clothing and eye/face protection. Avoid contact with the skin, eyes and clothing. Keep container tightly sealed. This product may cause irritations; wash your hands after every contact.

Protection against fire and explosion:

Take precautionary measures against static discharges. Avoid all sources of ignition: heat, sparks, open flame.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place. Protect from air.

8. Exposure Controls/Personal Protection

No substance specific occupational exposure limits known.

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) respirator as necessary. Wear respiratory protection if ventilation is inadequate.

Hand protection:

Wear chemical resistant protective gloves.

Safety Data Sheet

Citronellol

Revision date: 2025/08/12
Version: 6.0

Page: 5/11
(30035053/SDS_GEN_US/EN)

Eye protection:

Wear face shield or tightly fitting safety goggles (chemical goggles) if splashing hazard exists.

Body protection:

Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:

Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is required additionally to the stated personal protection equipment. Avoid contact with skin and eyes. No eating, drinking, smoking or tobacco use at the place of work. Hands and/or face should be washed before breaks and at the end of the shift. Store work clothing separately.

9. Physical and Chemical Properties

Physical state:	liquid	
Form:	oily	
Odour:	mild, of essential oil	
Odour threshold:	not determined	
Colour:	colourless	
pH value:	approx. 7	
Melting point:	< -20 °C	
Freezing point:	No data available.	
Boiling point:	223.8 °C (1,013 hPa)	(measured)
Flash point:	107 °C	(DIN 51758, closed cup)
Flammability:	hardly combustible	(derived from flash point)
Lower explosion limit:	For liquids not relevant for classification and labelling. The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Autoignition:	240 °C	(DIN 51794)
Vapour pressure:	0.086 hPa (20 °C) dynamic	(measured)
Density:	0.8549 g/cm ³ (20 °C) 0.83 g/cm ³ (55 °C)	(pycnometer)
Relative density:	0.8549 (20 °C)	(pycnometer)
Relative vapour density:	> 1 (20 °C) Heavier than air.	(calculated)
Partitioning coefficient n-octanol/water (log Pow):	3.41 (25 °C)	(Directive 92/69/EEC, A.8)
Refractive index:	1.454 - 1.462 (20 °C)	
Self-ignition temperature:	Based on its structural properties the product is not classified as self-igniting.	
Thermal decomposition:	No decomposition if correctly stored and handled.	

Safety Data Sheet

Citronellol

Revision date: 2025/08/12
Version: 6.0

Page: 6/11
(30035053/SDS_GEN_US/EN)

Viscosity, dynamic:	11.1 mPa.s (20 °C)	(OECD Guideline 114)
	5.33 mPa.s (40 °C)	(OECD Guideline 114)
Viscosity, kinematic:	13 mm2/s (20 °C)	(OECD Guideline 114)
	6.34 mm2/s (40 °C)	(OECD Guideline 114)
Solubility in water:	307 mg/l (25 °C)	
Molecular weight:	156.27 g/mol	
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	

Particle characteristics

No applicable information available.

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:

No corrosive effect on metal.

Oxidizing properties:

Based on its structural properties the product is not classified as oxidizing.

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

No hazardous reactions if stored and handled as prescribed/indicated.

Conditions to avoid

Avoid contact with air. Avoid electro-static discharge. Avoid all sources of ignition: heat, sparks, open flame.

Incompatible materials

acids, bases

Hazardous decomposition products

Decomposition products:

Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:

No decomposition if correctly stored and handled.

Safety Data Sheet

Citronellol

Revision date: 2025/08/12
Version: 6.0

Page: 7/11
(30035053/SDS_GEN_US/EN)

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity

Assessment of acute toxicity: Of low toxicity after single ingestion. Of low toxicity after short-term skin contact.

Oral

Type of value: LD50

Species: rat

Value: 3,450 mg/kg

Inhalation

No data available.

Dermal

Type of value: LD50

Species: rabbit

Value: 2,650 mg/kg

Assessment other acute effects

Assessment of STOT single:

Based on available data, the classification criteria are not met.

Irritation / corrosion

Assessment of irritating effects: Skin contact causes irritation. Eye contact causes irritation.

Skin

Species: rabbit

Result: Irritant.

Method: OECD Guideline 404

Eye

Species: rabbit

Result: Irritant.

Sensitization

Assessment of sensitization: Sensitization after skin contact possible.

Mouse Local Lymph Node Assay (LLNA)

Species: mouse

Result: skin sensitizing

Method: OECD Guideline 429

Aspiration Hazard

No aspiration hazard expected.

Chronic Toxicity/Effects

Safety Data Sheet

Citronellol

Revision date: 2025/08/12
Version: 6.0

Page: 8/11
(30035053/SDS_GEN_US/EN)

Repeated dose toxicity

Assessment of repeated dose toxicity: The information available on the product provides no indication of toxicity on target organs after repeated exposure. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Genetic toxicity

Assessment of mutagenicity: Results from a number of mutagenicity studies with microorganisms, mammalian cell culture and mammals are available. Taking into account all of the information, there is no indication that the substance is mutagenic. The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Carcinogenicity

Assessment of carcinogenicity: Did not show carcinogenic effects in animal experiments. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Reproductive toxicity

Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect. The results were determined in a Screening test (OECD 421/422). The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Teratogenicity

Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies. The results were determined in a Screening test (OECD 421/422). The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

12. Ecological Information

Toxicity

Aquatic toxicity

Assessment of aquatic toxicity:

Acutely toxic for aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Toxicity to fish

LC50 (96 h) 14.66 mg/l, *Leuciscus idus* (DIN 38412 Part 15, static)

The details of the toxic effect relate to the nominal concentration.

Aquatic invertebrates

EC50 (48 h) 17.48 mg/l, *Daphnia magna* (Directive 79/831/EEC, static)

The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

Aquatic plants

EC50 (72 h) 2.4 mg/l (growth rate), *Scenedesmus subspicatus* (DIN 38412 Part 9, static)

The details of the toxic effect relate to the nominal concentration. The product has low solubility in the test medium. An aqueous solution prepared with solubilizers has been tested.

Chronic toxicity to fish

Study scientifically not justified.

Safety Data Sheet

Citronellol

Revision date: 2025/08/12
Version: 6.0

Page: 9/11
(30035053/SDS_GEN_US/EN)

Chronic toxicity to aquatic invertebrates
Study scientifically not justified.

Assessment of terrestrial toxicity
Study scientifically not justified.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms
DIN 38412 Part 27 (draft) aquatic
bacterium/EC10 (30 min): 580 mg/l
The details of the toxic effect relate to the nominal concentration.

Persistence and degradability

Assessment biodegradation and elimination (H₂O)
Readily biodegradable (according to OECD criteria).

Elimination information

80 - 90 % BOD of the ThOD (28 d) (OECD 301F; ISO 9408; 92/69/EWG, C.4-D) (aerobic, activated sludge, domestic)

Assessment of stability in water
Substance is readily biodegradable, therefore hydrolysis is not expected to be relevant.

Information on Stability in Water (Hydrolysis)
Study scientifically not justified.

Bioaccumulative potential

Assessment bioaccumulation potential
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Bioaccumulation potential
Bioconcentration factor: (calculated)
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments
The substance will slowly evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is not expected.

13. Disposal considerations

Waste disposal of substance:
Observe national and local legal requirements.

Container disposal:
Dispose of in accordance with national, state and local regulations.

Safety Data Sheet

Citronellol

Revision date: 2025/08/12
Version: 6.0

Page: 10/11
(30035053/SDS_GEN_US/EN)

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released / listed

Chemical TSCA, US

All substances are TSCA listed and active.

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

CERCLA RQ

100 LBS

CAS Number

50-00-0

Chemical name

Formaldehyde

State regulations

State RTK

PA

CAS Number

50-00-0

Chemical name

Formaldehyde

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

WARNING: This product can expose you to chemicals including FORMALDEHYDE (GAS), which is known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov.

NFPA Hazard codes:

Health: 2 Fire: 1 Reactivity: 0 Special:

HMIS III rating

Health: 2 Flammability: 1 Physical hazard: 0

Safety Data Sheet

Citronellol

Revision date: 2025/08/12
Version: 6.0

Page: 11/11
(30035053/SDS_GEN_US/EN)

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2025/08/12

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

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Date / Revised: 2025/08/12
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Version: 6.0
Previous version: 5.0

END OF DATA SHEET