

Safety data sheet

Page: 1/14

BASF safety data sheet. This is a translation of the country-specific safety data sheet into a language other than that required by law. It does not replace the safety data sheet provided in accordance with Regulation No. 29204 (Official Gazette 13/12/2014).

Date / Revised: 08.04.2022 Version: 1.0

Product: Citronellol

(ID no. 30035053/SDS_GEN_TR/EN)

Date of print 10.10.2025

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Citronellol

Chemical name: Citronellol CAS Number: 106-22-9

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Chemical, Chemical for detergents, Cosmetic and oral care chemical, flavoring substance

1.3. Details of the supplier of the safety data sheet

Company: BASF SE 67056 Ludwigshafen GERMANY Contact address:
BASF Tuerk Kimya San. ve Tic. Ltd. Sti.
Barbaros Mah. Begonya Sok.
Nidakule Ataşehir Batı
No:1 D:48, 34746 Ataşehir/İstanbul
Türkiye

Telephone: +90 216 570 3862

E-mail address: zeynep.cakir@basf.com

1.4. Emergency telephone number

Health Poision Control Center: 114 Fire Brigade number: 110 Emergency first aid number: 112 International emergency number:

Telephone: +49 180 2273-112

Date / Revised: 08.04.2022 Version: 1.0

Product: Citronellol

(ID no. 30035053/SDS_GEN_TR/EN)

Date of print 10.10.2025

Telefax number: +90 216 570 3779

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation No. 28848 (Official Gazette, 11/12/2013)

Skin Corr./Irrit. 2 Eye Dam./Irrit. 2 Skin Sens. 1B

For the classifications not written out in full in this section the full text can be found in section 16.

2.2. Label elements

Globally Harmonized System, EU (GHS)

Pictogram:



Signal Word:

Warning

Hazard Statement:

H319 Causes serious eye irritation.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

Precautionary Statements (Prevention):

P280 Wear protective gloves and eye protection or face protection.

P261 Avoid breathing mist or vapour or spray.

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.

Precautionary Statements (Disposal):

P501 Dispose of contents and container to hazardous or special waste

collection point.

2.3. Other hazards

Date / Revised: 08.04.2022 Version: 1.0

Product: Citronellol

(ID no. 30035053/SDS_GEN_TR/EN)

Date of print 10.10.2025

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Chemical nature

Citronellol

CAS Number: 106-22-9 EC-Number: 203-375-0

For the classifications not written out in full in this section, including the hazard classes and the hazard statements, the full text is listed in section 16.

3.2. Mixtures

Not applicable

SECTION 4: First-Aid Measures

4.1. Description of first aid measures

Remove contaminated clothing.

If inhaled:

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

On skin contact:

Wash thoroughly with soap and water

On contact with eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:

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

4.2. Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

4.3. Indication of any immediate medical attention and special treatment needed

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

Date / Revised: 08.04.2022 Version: 1.0

Product: Citronellol

(ID no. 30035053/SDS_GEN_TR/EN)

Date of print 10.10.2025

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media: carbon dioxide, foam, dry powder

5.2. Special hazards arising from the substance or mixture

carbon oxides, harmful vapours

The substances/groups of substances mentioned can be released in case of fire.

5.3. Advice for fire-fighters

Special protective equipment:

Wear a self-contained breathing apparatus.

Further information:

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

SECTION 6: Accidental Release Measures

6.1. 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.

6.2. Environmental precautions

Do not discharge into drains/surface waters/groundwater.

6.3. 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.

6.4. Reference to other sections

Information regarding exposure controls/personal protection and disposal considerations can be found in section 8 and 13.

SECTION 7: Handling and Storage

7.1. 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.

Date / Revised: 08.04.2022 Version: 1.0

Product: Citronellol

(ID no. 30035053/SDS_GEN_TR/EN)

Date of print 10.10.2025

7.2. Conditions for safe storage, including any incompatibilities

Suitable materials for containers: Low density polyethylene (LDPE), glass, High density polyethylene (HDPE), Aluminium, Stove-lacquer RDL 50, Stove-lacquer R 78433

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

7.3. Specific end use(s)

For the relevant identified use(s) listed in Section 1 the advice mentioned in this section 7 is to be observed.

SECTION 8: Exposure Controls/Personal Protection

8.1. Control parameters

Components with occupational exposure limits

No substance specific occupational exposure limits known.

PNEC

freshwater: 0,0024 mg/l

marine water: 0,00024 mg/l

intermittent release: 0,024 mg/l

STP: 580 mg/l

sediment (freshwater): 0,0256 mg/kg

sediment (marine water): 0,00256 mg/kg

soil: 0,00371 mg/kg

DNEL

worker:

Long-term exposure- systemic effects, Inhalation: 161,6 mg/m3

worker

Long-term exposure- systemic effects, dermal: 327,4 mg/kg

worker:

Short-term exposure - local effects, dermal: 2,95 mg/cm2

consumer:

Long-term exposure- systemic effects, Inhalation: 47,8 mg/m3

consumer:

Long-term exposure- systemic effects, dermal: 196,4 mg/kg

Date / Revised: 08.04.2022 Version: 1.0

Product: Citronellol

(ID no. 30035053/SDS_GEN_TR/EN)

Date of print 10.10.2025

consumer:

Long-term exposure- systemic effects, oral: 13,8 mg/kg

consumer:

Short-term exposure - local effects, dermal: 2,95 mg/cm2

worker

Long- and short-term exposure - local effects, Inhalation: 10 mg/m3

consumer:

Long- and short-term exposure - local effects, Inhalation: 10 mg/m3

8.2. Exposure controls

Personal protective equipment

Respiratory protection:

Suitable respiratory protection for higher concentrations or long-term effect: Gas filter for gases/vapours of organic compounds (boiling point >65 °C, e. g. EN 14387 Type A)

Hand protection:

Suitable chemical resistant safety gloves (EN ISO 374-1) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1): E.g. nitrile rubber (0.4 mm), chloroprene rubber (0.5 mm), butyl rubber (0.7 mm) etc. Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing. Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:

Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection

Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

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.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Form: oily Colour: colourless

Odour: mild, of essential oil

Date / Revised: 08.04.2022 Version: 1.0

Product: Citronellol

(ID no. 30035053/SDS_GEN_TR/EN)

(DIN 51758, closed cup)

(pyknometer)

Date of print 10.10.2025

Odour threshold:

not determined

pH value: approx. 7
Melting point: < -20 °C
Boiling point: 223,8 °C

223,8 °C (measured) (1.013 hPa)

Flash point: 107 °C

Evaporation rate:

Value can be approximated from Henry's Law Constant or vapor

pressure.

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.

Ignition temperature: 240 °C (DIN 51794) Vapour pressure: 0,086 hPa (measured)

(20 °C) dynamic

Density: 0,8549 g/cm3

(20 °C) 0,83 g/cm³ (55 °C)

Relative density: 0,8549 (pyknometer)

(20 °C)

Relative vapour density (air):> 1

Heavier than air.

Solubility in water:

307 mg/l (25 °C)

Partitioning coefficient n-octanol/water (log Kow): 3,41 (Directive 92/69/EEC, A.8)

(25 °C)

Self ignition: Based on its structural properties the

product is not classified as self-

igniting.

Thermal decomposition: No decomposition if correctly stored and handled. Viscosity, dynamic: 11,1 mPa.s (OECD 114)

(20 °C)

5,33 mPa.s (OECD 114)

(40 °C)

Viscosity, kinematic: 13 mm2/s (OECD 114)

(20 °C)

6,34 mm2/s (OECD 114)

(40 °C)

Explosion hazard: Based on the chemical structure

there is no indication of explosive

properties.

Date / Revised: 08.04.2022 Version: 1.0

Product: Citronellol

(ID no. 30035053/SDS_GEN_TR/EN)

Date of print 10.10.2025

Fire promoting properties: Based on its structural properties

the product is not classified as

oxidizing.

9.2. Other information

Self heating ability: It is not a substance capable of

spontaneous heating.

pKA:

The substance does not dissociate.

Adsorption/water - soil: KOC: 70,79; log KOC: 1,85 (calculated)

Surface tension:

Based on chemical structure, surface

activity is not to be expected.

Grain size distribution: The substance / product is marketed or used in a non solid or

granular form.

Molar mass: 156,27 g/mol

SECTION 10: Stability and Reactivity

10.1. Reactivity

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

Corrosion to metals: No corrosive effect on metal.

Formation of Remarks: Forms no flammable gases in the

flammable gases: presence of water.

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

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

10.4. Conditions to avoid

Avoid all sources of ignition: heat, sparks, open flame. Avoid contact with air. See SDS section 7 - Handling and storage.

10.5. Incompatible materials

Substances to avoid: acids, bases

10.6. Hazardous decomposition products

Hazardous decomposition products:

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

Date / Revised: 08.04.2022 Version: 1.0

Product: Citronellol

(ID no. 30035053/SDS_GEN_TR/EN)

Date of print 10.10.2025

SECTION 11: Toxicological Information

11.1. Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:

Of low toxicity after single ingestion. Of low toxicity after short-term skin contact.

Experimental/calculated data: LD50 rat (oral): 3.450 mg/kg

LD50 rabbit (dermal): 2.650 mg/kg

Irritation

Assessment of irritating effects:

Skin contact causes irritation. Eye contact causes irritation.

Experimental/calculated data:

Skin corrosion/irritation rabbit: Irritant. (OECD Guideline 404)

Serious eye damage/irritation rabbit: Irritant. (Draize test)

Respiratory/Skin sensitization

Assessment of sensitization:

Sensitization after skin contact possible.

Experimental/calculated data:

Mouse Local Lymph Node Assay (LLNA) mouse: skin sensitizing (OECD Guideline 429)

Germ cell mutagenicity

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.

Date / Revised: 08.04.2022 Version: 1.0

Product: Citronellol

(ID no. 30035053/SDS_GEN_TR/EN)

Date of print 10.10.2025

Developmental toxicity

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.

Specific target organ toxicity (single exposure)

Assessment of STOT single:

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

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

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.

Aspiration hazard

No aspiration hazard expected.

SECTION 12: Ecological Information

12.1. 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.

Microorganisms/Effect on activated sludge:

EC10 (30 min) 580 mg/l, Pseudomonas putida (DIN 38412 Part 27 (draft), aquatic)

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

Chronic toxicity to fish:

Date / Revised: 08.04.2022 Version: 1.0

Product: Citronellol

(ID no. 30035053/SDS_GEN_TR/EN)

Date of print 10.10.2025

Study scientifically not justified.

Chronic toxicity to aquatic invertebrates: Study scientifically not justified.

Assessment of terrestrial toxicity: Study scientifically not justified.

12.2. 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/EEC, 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.

12.3. Bioaccumulative potential

Assessment bioaccumulation potential:

Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is possible.

12.4. Mobility in soil

Assessment transport between environmental compartments:

Volatility: The substance will slowly evaporate into the atmosphere from the water surface. Adsorption in soil: Adsorption to solid soil phase is not expected.

12.5. Results of PBT and vPvB assessment

The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self classification

12.6. Other adverse effects

The substance is not listed in Regulation (EC) 1005/2009 on substances that deplete the ozone layer.

SECTION 13: Disposal Considerations

13.1. Waste treatment methods

Observe national and local legal requirements.

Date / Revised: 08.04.2022 Version: 1.0

Product: Citronellol

(ID no. 30035053/SDS_GEN_TR/EN)

Date of print 10.10.2025

SECTION 14: Transport Information

Land transport

ADR

Not classified as a dangerous good under transport regulations

UN number or ID number:
UN proper shipping name:
Transport hazard class(es):
Packing group:
Environmental hazards:
Special precautions for

Not applicable
Not applicable
Not applicable
Not applicable
Not applicable
Not applicable

user

RID

Not classified as a dangerous good under transport regulations

UN number or ID number:
UN proper shipping name:
Transport hazard class(es):
Packing group:
Environmental hazards:
Special precautions for

Not applicable
Not applicable
Not applicable
Not applicable
Not applicable

user

Inland waterway transport

ADN

Not classified as a dangerous good under transport regulations

UN number or ID number:
UN proper shipping name:
Transport hazard class(es):
Packing group:
Environmental hazards:
Special precautions for

Not applicable
Not applicable
Not applicable
Not applicable
Not applicable
Not applicable

user:

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

UN number or ID number: Not applicable UN proper shipping name: Not applicable Transport hazard class(es): Not applicable Packing group: Not applicable

Date / Revised: 08.04.2022 Version: 1.0

Product: Citronellol

(ID no. 30035053/SDS_GEN_TR/EN)

Date of print 10.10.2025

Environmental hazards: Special precautions for

Not applicable None known

user

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

UN number or ID number: Not applicable UN proper shipping name: Not applicable Not applicable Transport hazard class(es): Packing group: Not applicable Environmental hazards: Not applicable None known Special precautions for

user

14.1. UN number or ID number

See corresponding entries for "UN number or ID number" for the respective regulations in the tables above.

14.2. UN proper shipping name

See corresponding entries for "UN proper shipping name" for the respective regulations in the tables above.

14.3. Transport hazard class(es)

See corresponding entries for "Transport hazard class(es)" for the respective regulations in the tables above.

14.4. Packing group

See corresponding entries for "Packing group" for the respective regulations in the tables above.

14.5. Environmental hazards

See corresponding entries for "Environmental hazards" for the respective regulations in the tables above.

14.6. Special precautions for user

See corresponding entries for "Special precautions for user" for the respective regulations in the tables above.

14.7. Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

SECTION 15: Regulatory Information

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

Date / Revised: 08.04.2022 Version: 1.0

Product: Citronellol

(ID no. 30035053/SDS_GEN_TR/EN)

Date of print 10.10.2025

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

SECTION 16: Other Information

Assessment of the hazard classes according to UN GHS criteria (most recent version)

Acute Tox. 5 (oral) Acute Tox. 5 (dermal) Skin Corr./Irrit. 2 Aquatic Acute 2 Eye Dam./Irrit. 2A Skin Sens. 1B

Any other intended applications should be discussed with the manufacturer. Corresponding occupational protection measurements must be followed.

Full text of the classifications, including the hazard classes and the hazard statements, if mentioned

in section 2 or 3:

Skin Corr./Irrit. Skin corrosion/irritation

Eye Dam./Irrit. Serious eye damage/eye irritation

Skin Sens. Skin sensitization

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