

## Safety data sheet

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BASF Safety data sheet  
Date / Revised: 27.01.2025  
Product: **Citronellol**

Version: 14.0

(30035053/SDS\_GEN\_SG/EN)

Date of print: 20.10.2025

### 1. Substance/preparation and manufacturer/supplier identification

**Product name:**  
**Citronellol**

Use: Chemical, Chemical for detergents, Cosmetic and oral care chemical, flavoring substance

Manufacturer/supplier:

BASF South East Asia Pte Ltd.  
128 Beach Road #18-01  
Guoco Midtown, 189773, Singapore  
Telephone: +65 8322 4420  
Telefax number: +65 6 334-0330  
E-mail address: benny.zou@basf.com

Emergency information:

Singapore Emergency Toll-Free Number:  
Telephone: 1800-723-1361  
International emergency number:  
Telephone: +49 180 2273-112

### 2. Hazard identification

Classification of the substance and mixture:

Acute toxicity: Cat.5 (oral)  
Acute toxicity: Cat.5 (dermal)

Skin irritation: Cat.2

Eye irritation: Cat.2A

Skin sensitization: Cat.1B

Hazardous to the aquatic environment - acute: Cat.2

Label elements and precautionary statement:

Pictogram:



Signal Word:  
Warning

## Hazard Statement:

H319	Causes serious eye irritation.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H303 + H313	May be harmful if swallowed or in contact with skin.
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.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P312	IF ON SKIN: Call a POISON CENTER or a doctor/physician if you feel unwell.
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 and container to hazardous or special waste collection point.
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Other hazards which do not result in classification:

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

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### 3. Composition/information on ingredients

#### Chemical nature

Substance nature: Substance

3,7-Dimethyl-octen-6-ol-1

CAS Number: 106-22-9

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### **Hazardous ingredients**

#### **3,7-Dimethyl-octen-6-ol-1**

Content (W/W):  $\geq 75\%$  -  $\leq 100\%$

CAS Number: 106-22-9

Acute Tox.: Cat. 5 (oral)  
Acute Tox.: Cat. 5 (dermal)  
Skin Irrit.: Cat. 2  
Eye Irrit.: Cat. 2A  
Skin Sens.: Cat. 1B  
Aquatic Acute: Cat. 2

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

Content (W/W):  $\geq 0.2\%$  -  $< 1\%$

CAS Number: 106-24-1

Acute Tox.: Cat. 5 (oral)  
Skin Corr./Irrit.: Cat. 2  
Eye Dam./Irrit.: Cat. 1  
Aquatic Acute: Cat. 3  
Skin Sens.: Cat. 1

#### **2,6-Octadien-1-ol, 3,7-dimethyl-, (Z)-**

Content (W/W):  $\geq 0.3\%$  -  $< 1\%$

CAS Number: 106-25-2

Acute Tox.: Cat. 5 (oral)  
Skin Irrit.: Cat. 2  
Eye Irrit.: Cat. 2A  
Skin Sens.: Cat. 1B  
Aquatic Acute: Cat. 2

#### **citronellal**

Content (W/W):  $> 0\%$  -  $< 0.3\%$

CAS Number: 106-23-0

Flam. Liq.: Cat. 4  
Acute Tox.: Cat. 5 (oral)  
Acute Tox.: Cat. 5 (dermal)  
Skin Irrit.: Cat. 2  
Eye Irrit.: Cat. 2A  
Skin Sens.: Cat. 1B  
Aquatic Acute: Cat. 2

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## **4. First-Aid Measures**

General advice:

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.

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On ingestion:

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

Note to physician:

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.

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

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## 5. Fire-Fighting Measures

Suitable extinguishing media:

carbon dioxide, foam, dry powder

Specific hazards:

carbon oxides, harmful vapours

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

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.

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## 6. Accidental Release Measures

Personal precautions:

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:

Do not discharge into drains/surface waters/groundwater.

Methods for cleaning up or taking 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.

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## 7. Handling and Storage

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.

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Protection against fire and explosion:

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

#### Storage

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

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## 8. Exposure controls and personal protection

### Components with occupational exposure limits

No substance specific occupational exposure limits known.

### 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.

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## 9. Physical and Chemical Properties

Form:	oily
Colour:	colourless
Odour:	mild, of essential oil
Odour threshold:	not determined

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pH value:	approx. 7	
Melting point:	< -20 °C	
Boiling point:	223.8 °C (1,013 hPa)	(measured)
Flash point:	107 °C	(DIN 51758, closed cup)
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	
Flammability (solid/gas):	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)
Thermal decomposition:	No decomposition if correctly stored and handled.	
Self ignition:	Based on its structural properties the product is not classified as self-igniting.	
SADT:	No data available.	
Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.	
Fire promoting properties:	Based on its structural properties the product is not classified as oxidizing.	
Vapour pressure:	0.086 hPa (20 °C) dynamic	(measured)
Density:	0.8549 g/cm <sup>3</sup> (20 °C) 0.83 g/cm <sup>3</sup> (55 °C)	(pycnometer)
Relative density:	0.8549 (20 °C)	(pycnometer)
Relative vapour density (air):	> 1 (20 °C) Heavier than air.	(calculated)
Solubility in water:	307 mg/l (25 °C)	

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Partitioning coefficient n-octanol/water (log Pow):	3.41	(Directive 92/69/EEC, A.8)
	(25 °C)	
Adsorption/water - soil:	KOC: 70.79; log KOC: 1.85	(calculated)
Surface tension:	Based on chemical structure, surface activity is not to be expected.	
Viscosity, dynamic:	11.1 mPa.s	(OECD Guideline 114)
	(20 °C)	
	5.33 mPa.s	(OECD Guideline 114)
	(40 °C)	
Viscosity, kinematic:	13 mm <sup>2</sup> /s	(OECD Guideline 114)
	(20 °C)	
	6.34 mm <sup>2</sup> /s	(OECD Guideline 114)
	(40 °C)	
Molar mass:	156.27 g/mol	

#### Particle characteristics

Particle size distribution: No data available. -

Specific Surface Area:

No data available.

Particle Shape:

No data available.

Dustiness:

No data available.

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## 10. Stability and Reactivity

Conditions to avoid:

Avoid contact with air. See SDS section 7 - Handling and storage.

Thermal decomposition: No decomposition if correctly stored and handled.

Substances to avoid:

acids, bases

Corrosion to metals: No corrosive effect on metal.

Hazardous reactions:

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

Hazardous decomposition products:

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

Chemical stability:

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

Reactivity:

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

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## 11. Toxicological Information

### Routes of exposure

#### Acute oral toxicity

Experimental/calculated data:  
LD50rat (oral): 3,450 mg/kg

#### Acute inhalation toxicity

(by inhalation): No data available.

#### Acute dermal toxicity

LD50 rabbit (dermal): 2,650 mg/kg

#### Assessment of acute toxicity

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

#### 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.

#### 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.

Experimental/calculated data:

No data available.

## 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)

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.

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## 12. Ecological Information

### Ecotoxicity

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:  
Study scientifically not justified.

Chronic toxicity to aquatic invertebrates:  
Study scientifically not justified.

Assessment of terrestrial toxicity:  
No data available.  
Study scientifically not justified.

### **Mobility**

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.

### **Persistence and degradability**

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.

### **Bioaccumulation 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.

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## **13. Disposal Considerations**

Observe national and local legal requirements.

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## **14. Transport Information**

### **Domestic transport:**

	Not classified as a dangerous good under transport regulations
UN number or ID number	Not applicable
UN proper shipping name:	Not applicable

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Transport hazard class(es): Not applicable  
Packing group: Not applicable  
Environmental hazards: Not applicable  
Special precautions for user: None known

### 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  
Environmental hazards: Not applicable  
Marine pollutant: no  
Special precautions for user: None known

### Air transport

#### IATA/ICAO

Not classified as a dangerous good under transport regulations  
UN number or ID number: Not applicable  
Proper shipping name: Not applicable  
Transport hazard class(es): Not applicable  
Packing group: Not applicable  
Environmental hazards: Not applicable  
Special precautions for user: None known

### Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

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## 15. Regulatory Information

### Other regulations

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

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## 16. Other Information

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

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Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.