

# Safety data sheet

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BASF Safety data sheet according to UN GHS 4th rev.

Date / Revised: 14.10.2022

Version: 2.0

Product: **Geraniol 60**

(ID no. 30035070/SDS\_GEN\_00/EN)

Date of print 13.10.2025

## 1. Identification

### Product identifier

### Geraniol 60

Chemical name: Reaction mass of 2,6-Octadien-1-ol, 3,7-dimethyl-, (E) and 2,6-Octadien-1-ol, 3,7-dimethyl-, (Z)-

### 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

### Details of the supplier of the safety data sheet

Company:

BASF SE

67056 Ludwigshafen

GERMANY

Operating Division Nutrition and Health

Telephone: +49 621 60-48434

E-mail address: EN-global-safety-data@basf.com

### Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

## 2. Hazards Identification

### Classification of the substance or mixture

According to UN GHS criteria

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

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

## Label elements

### Globally Harmonized System (GHS)

Pictogram:



Signal Word:

Danger

Hazard Statement:

H318	Causes serious eye damage.
H315	Causes skin irritation.
H303	May be harmful if swallowed.
H317	May cause an allergic skin reaction.
H402	Harmful 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.
P310	Immediately call a POISON CENTER or physician.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.
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## Other hazards

### According to UN GHS criteria

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

#### Substances

##### Chemical nature

Isomer blend based on:

Geraniol

CAS Number: 106-24-1

EC-Number: 203-377-1

Nerol

CAS Number: 106-25-2

EC-Number: 203-378-7

##### Hazardous ingredients (GHS)

According to UN GHS criteria

Geraniol

Content (W/W):  $\geq 50\%$  -  $< 75\%$

CAS Number: 106-24-1

EC-Number: 203-377-1

Acute Tox. 5 (oral)

Skin Corr./Irrit. 2

Eye Dam./Irrit. 1

Aquatic Acute 3

Skin Sens. 1

H318, H315, H303, H317, H402

Nerol

Content (W/W):  $\geq 25\%$  -  $< 50\%$

CAS Number: 106-25-2

EC-Number: 203-378-7

Acute Tox. 5 (oral)

Skin Corr./Irrit. 2

Eye Dam./Irrit. 2A

Skin Sens. 1B

Aquatic Acute 2

H319, H315, H303, H317, H401

Citronellol

Content (W/W):  $\geq 1\%$  -  $< 5\%$

CAS Number: 106-22-9

EC-Number: 203-375-0

Acute Tox. 5 (oral)

Acute Tox. 5 (dermal)

Skin Corr./Irrit. 2

Eye Dam./Irrit. 2A

Skin Sens. 1B

Aquatic Acute 2

H319, H315, H317, H303 + H313, H401

Citral

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Content (W/W):  $\geq 0,1\%$  -  $< 1\%$ 

CAS Number: 5392-40-5

EC-Number: 226-394-6

INDEX-Number: 605-019-00-3

Acute Tox. 5 (oral)

Acute Tox. 5 (dermal)

Skin Corr./Irrit. 2

Eye Dam./Irrit. 2A

Skin Sens. 1

Aquatic Acute 2

H319, H315, H317, H303 + H313, H401

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

### Mixtures

Not applicable

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## 4. First-Aid Measures

### Description of first aid measures

Remove contaminated clothing.

If inhaled:

Keep patient calm, remove to fresh air.

On skin contact:

Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

On contact with eyes:

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

On ingestion:

Rinse mouth and then drink 200-300 ml of water.

### 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

### Indication of any immediate medical attention and special treatment needed

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

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## 5. Fire-Fighting Measures

### Extinguishing media

Suitable extinguishing media:

water spray, dry powder, carbon dioxide, foam

Unsuitable extinguishing media for safety reasons:

water jet

**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.

**Advice for fire-fighters**

Special protective equipment:

Wear self-contained breathing apparatus and chemical-protective clothing.

Further information:

Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. 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, 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**

Do not discharge into drains/surface waters/groundwater.

**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.

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**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 the effects of light.

**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.

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## 8. Exposure Controls/Personal Protection

### Control parameters

#### Components with occupational exposure limits

5392-40-5: Citral

### Exposure controls

#### Personal protective equipment

Respiratory protection:

Respiratory protection in case of vapour/aerosol release. Particle filter with medium efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P2 or FFP2)

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:

Tightly fitting safety goggles (cage goggles) (e.g. EN 166) and face shield.

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 the skin, eyes and clothing. 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

### Information on basic physical and chemical properties

Form:	liquid
Colour:	colourless
Odour:	flowery
Odour threshold:	< 100 ppm
pH value:	not applicable

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Melting temperature:	< -15 °C (1.013 hPa) The statements are based on the properties of the individual components.	
Boiling point:	225 - 230 °C (1.008 - 1.013 hPa) The statements are based on the properties of the individual components.	
Flash point:	107 - 108 °C The product has not been tested. The statement has been derived from the properties of the individual components.	(Directive 92/69/EEC, A.9)
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:	246 - 250 °C The product has not been tested. The statement has been derived from the properties of the individual components.	(Directive 92/69/EEC, A.15)
Vapour pressure:	0,000076 - 0,01 hPa (20 °C) The product has not been tested. The statement has been derived from the properties of the individual components.	
Density:	0,87 - 0,89 g/cm3 (20 °C) The statements are based on the properties of the individual components.	
Relative density:	0,87 - 0,89 (20 °C) Literature data.	
Relative vapour density (air):	> 1 (20 °C) Heavier than air.	(calculated)
Solubility in water:	The statements are based on the properties of the individual components. 100 - 769 mg/l (20 °C)	

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Solubility (qualitative) solvent(s):	organic solvents soluble	
Partitioning coefficient n-octanol/water (log Kow):	2,7 (20 °C)	(OECD Guideline 117)
Information based on the main component/s.		
Self ignition:	Based on its structural properties the product is not classified as self-igniting.	Test type: Spontaneous self-ignition at room-temperature.
Thermal decomposition:	approx. 280 °C (DSC (DIN 51007))	
Viscosity, dynamic:	6,75 - 8,21 mPa.s (20 °C)	
Viscosity, kinematic:	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.	

**Other information**

Self heating ability:	not applicable, the product is a liquid	
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.	

**10. Stability and Reactivity****Reactivity**

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

Corrosion to metals:	Corrosive effects to metal are not anticipated.	
Formation of flammable gases:	Remarks:	Forms no flammable gases in the presence of water.

**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**

See SDS section 7 - Handling and storage.



## Incompatible materials

Substances to avoid:  
strong oxidizing agents, acids, bases

## Hazardous decomposition products

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

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# 11. Toxicological Information

## Information on toxicological effects

### Acute toxicity

Assessment of acute toxicity:  
Of low toxicity after single ingestion. Virtually nontoxic after a single skin contact.

Experimental/calculated data:  
LD50 rat (oral): 3.600 mg/kg  
The product has not been tested. The statement has been derived from the properties of the individual components.

LD50 rabbit (dermal): > 5.000 mg/kg  
The product has not been tested. The statement has been derived from the properties of the individual components.

### Irritation

Assessment of irritating effects:  
Skin contact causes irritation. May cause severe damage to the eyes.

Experimental/calculated data:  
Skin corrosion/irritation rabbit: Irritant. (OECD Guideline 404)  
The product has not been tested. The statement has been derived from the properties of the individual components.

Serious eye damage/irritation rabbit: irreversible damage (OECD Guideline 405)  
The product has not been tested. The statement has been derived from the properties of the individual components.

### Respiratory/Skin sensitization

Assessment of sensitization:  
Sensitization after skin contact possible.

Experimental/calculated data:  
mouse: skin sensitizing (OECD Guideline 429)  
The product has not been tested. The statement has been derived from the properties of the individual components.

### 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:

In long-term animal studies in which the substance was given by gavage in high doses, a carcinogenic effect was not observed. 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:

Repeated dermal uptake of the substance did not cause damage to the reproductive organs. The results were determined in a Screening test (OECD 421/422).

#### Developmental toxicity

##### Assessment of teratogenicity:

In animal studies the substance did not cause malformations.

#### Specific target organ toxicity (single exposure)

##### Assessment of STOT single:

Based on the available information there is no specific target organ toxicity to be expected after a single exposure.

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

##### Assessment of repeated dose toxicity:

No substance-specific organotoxicity was observed after repeated administration to animals. After repeated exposure the prominent effect is local irritation. The product has not been tested. The statement has been derived from the properties of the individual components.

#### Aspiration hazard

No aspiration hazard expected.

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## 12. Ecological Information

### Toxicity

#### Assessment of aquatic toxicity:

Depending on local conditions and existing concentrations, disturbances in the biodegradation process of activated sludge are possible. Acutely harmful for aquatic organisms.

#### Toxicity to fish:

LC50 (96 h) approx. 22 mg/l, *Brachydanio rerio* (OECD 203; ISO 7346; 84/449/EEC, C.1, static)

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The details of the toxic effect relate to the nominal concentration. The product has not been tested.  
The statement has been derived from the properties of the individual components.

LC50 (96 h) 3,2 mg/l, *Pimephales promelas* (EPA 72-1, Flow through.)

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

Aquatic invertebrates:

EC50 (48 h) 10,8 mg/l, *Daphnia magna* (OECD Guideline 202, part 1, static)

The statement of the toxic effect relates to the analytically determined concentration.

Aquatic plants:

EC50 (72 h) 13,1 mg/l (growth rate), *Desmodesmus subspicatus* (OECD Guideline 201, static)

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

Microorganisms/Effect on activated sludge:

EC50 (30 min) 70 mg/l, activated sludge, domestic (DIN EN ISO 8192-OECD 209-88/302/EEC, P. C, aerobic)

The details of the toxic effect relate to the nominal concentration. The product has not been tested.

The statement has been derived from the properties of the individual components.

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.

## **Persistence and degradability**

Assessment biodegradation and elimination (H<sub>2</sub>O):

Readily biodegradable (according to OECD criteria).

Elimination information:

90 - 100 % DOC reduction (3 d) (OECD 301 A (new version)) (aerobic, activated sludge, domestic)

The product has not been tested. The statement has been derived from the properties of the individual components.

Assessment of stability in water:

According to structural properties, hydrolysis is not expected/probable.

## **Bioaccumulative potential**

Assessment bioaccumulation potential:

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:

Volatility: The substance will slowly evaporate into the atmosphere from the water surface.

Adsorption in soil: Adsorption to solid soil phase is not expected.

## **Results of PBT and vPvB assessment**

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According to Annex XIII of Regulation (EC) No.1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH): The product does not fulfill the criteria for PBT (Persistent/bioaccumulative/toxic) and vPvB (very persistent/very bioaccumulative). Self classification

### Other adverse effects

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

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## 13. Disposal Considerations

### Waste treatment methods

Observe national and local legal requirements.

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## 14. Transport Information

### Land transport

ADR

	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
Special precautions for user	None known

RID

	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
Special precautions for user	None known

### Inland waterway transport

ADN

	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

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Special precautions for user:          None known

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
Environmental hazards:	Not applicable
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
UN 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**

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

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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Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Acute Tox.	Acute toxicity
Skin Corr./Irrit.	Skin corrosion/irritation
Eye Dam./Irrit.	Serious eye damage/eye irritation
Skin Sens.	Skin sensitization
Aquatic Acute	Hazardous to the aquatic environment - acute
H318	Causes serious eye damage.
H315	Causes skin irritation.
H303	May be harmful if swallowed.
H317	May cause an allergic skin reaction.
H402	Harmful to aquatic life.
H319	Causes serious eye irritation.
H401	Toxic to aquatic life.
H303 + H313	May be harmful if swallowed or in contact with skin

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.

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