

Safety data sheet

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BASF Safety data sheet according to Regulation (EC) No. 1907/2006 as amended from time to time.

Date / Revised: 15.06.2015

Version: 8.1

Product: **Geraniol 60**

(ID no. 30035070/SDS_GEN_EU/EN)

Date of print 18.09.2015

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

1.1. 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)-

REACH registration number: 01-2119560621-44-0000

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

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

For the detailed identified uses of the product see appendix of the safety data sheet.

1.3. 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

1.4. Emergency telephone number

International emergency number:

Telephone: +49 180 2273-112

SECTION 2: Hazards Identification

2.1. Classification of the substance or mixture

According to Regulation (EC) No 1272/2008 [CLP]

Skin Corr./Irrit. 2

Eye Dam./Irrit. 1

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

According to Regulation (EC) No 1272/2008 [CLP]

Pictogram:



Signal Word:

Danger

Hazard Statement:

H318 Causes serious eye damage.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

Precautionary Statements (Prevention):

P280 Wear protective gloves and eye/face protection.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P272 Contaminated work clothing should not be allowed out of the workplace.

P264 Wash with plenty of water and soap 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 doctor/physician.

P303 + P352 IF ON SKIN (or hair): Wash with plenty of soap and water.

P332 + P313 If skin irritation occurs: Get medical advice/attention.

P362 + P364 Take off contaminated clothing and wash before reuse.

Precautionary Statements (Disposal):

P501 Dispose of contents/container to hazardous or special waste collection point.

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According to Regulation (EC) No 1272/2008 [CLP]

Hazard determining component(s) for labelling: GERANIOL

2.3. Other hazards

According to Regulation (EC) No 1272/2008 [CLP]

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.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

Chemical nature

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

Hazardous ingredients (GHS)

according to Regulation (EC) No. 1272/2008

Geraniol

Content (W/W): $\geq 59\%$ - $< 61\%$	Skin Corr./Irrit. 2
CAS Number: 106-24-1	Eye Dam./Irrit. 1
EC-Number: 203-377-1	Skin Sens. 1B
	H318, H315, H317

Nerol

Content (W/W): $\geq 32\%$ - $< 38\%$	Skin Corr./Irrit. 2
CAS Number: 106-25-2	Eye Dam./Irrit. 2
EC-Number: 203-378-7	Skin Sens. 1B
	H319, H315, H317

Citronellol

Content (W/W): $\geq 2\%$ - $< 3\%$	Skin Corr./Irrit. 2
CAS Number: 106-22-9	Eye Dam./Irrit. 2
EC-Number: 203-375-0	Skin Sens. 1B
	H319, H315, H317

citral

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Content (W/W): $\geq 0.1\%$ - $< 0.5\%$ Skin Corr./Irrit. 2
CAS Number: 5392-40-5 Eye Dam./Irrit. 2
EC-Number: 226-394-6 Skin Sens. 1
INDEX-Number: 605-019-00-3 H319, H315, H317

Differing classification according to current knowledge and the criteria given in Annex I of Regulation (EC) No. 1272/2008

Skin Corr./Irrit. 2
Eye Dam./Irrit. 2
Skin Sens. 1B
H319, H315, H317

For the classifications not written out in full in this section, including the indication of danger, the hazard symbols, the R phrases, 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.

On skin contact:

Wash off thoroughly with ample water. Consult a doctor if skin irritation persists.

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.

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

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

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

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

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing media

Suitable extinguishing media:

water spray, dry powder, carbon dioxide, foam

5.2. Special hazards arising from the substance or mixture

Burning produces harmful and toxic fumes.

5.3. Advice for fire-fighters

Special protective equipment:

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

Further information:

Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6: Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with the skin, eyes and clothing. Take off immediately all contaminated clothing.

Ensure adequate ventilation.

6.2. Environmental precautions

Do not discharge into drains/surface waters/groundwater.

6.3. Methods and material for containment and cleaning up

For large amounts: Dike spillage. Pump off product.

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

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.

Protection against fire and explosion:

Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

7.2. Conditions for safe storage, including any incompatibilities

Suitable materials for containers: Stainless steel 1.4301 (V2), Stainless steel 1.4401, Stove-lacquer RDL 50, glass, High density polyethylene (HDPE), Low density polyethylene (LDPE), tinned carbon steel (Tinplate), aluminum

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

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

5392-40-5: citral

PNEC

freshwater: 0.0108 mg/l

marine water: 0.00108 mg/l

intermittent release: 0.108 mg/l

sediment (freshwater): 0.115 mg/kg

sediment (marine water): 0.0115 mg/kg

soil: 0.0167 mg/kg

STP: 0.7 mg/l

DNEL

worker:

Long-term exposure- systemic effects, Inhalation: 29.4 mg/m³

worker:

Long-term exposure- systemic effects, dermal: 8.3 mg/kg

worker:

Long-term exposure - local effects, dermal: 11800 µg/cm³

consumer:

Long-term exposure- systemic effects, oral: 2.5 mg/kg

consumer:

Long-term exposure- systemic effects, Inhalation: 8.7 mg/m³

consumer:

Long-term exposure- systemic effects, dermal: 5 mg/kg

consumer:

Long-term exposure - local effects, dermal: 11800 µg/cm³

8.2. 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 374) also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374): 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.

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. Hands and/or face should be washed before breaks and at the end of the shift.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

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

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:	not determined	
Flammability:	not flammable	
Lower explosion limit:	not determined	
Upper explosion limit:	not determined	
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/cm ³ (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):	not determined	
Solubility in water:	The statements are based on the properties of the individual components. 100 - 769 mg/l (20 °C)	
Solubility (qualitative) solvent(s):	organic solvents soluble	

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Partitioning coefficient n-octanol/water (log Kow):	2.7 (20 °C)	(OECD Guideline 117)
	Information based on the main components.	
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:	No decomposition if stored and handled as prescribed/indicated.	
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 indicating of explosive properties.	
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.	

SECTION 10: Stability and Reactivity

10.1. Reactivity

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

10.5. Incompatible materials

Substances to avoid:

strong oxidizing agents, acids, bases

10.6. Hazardous decomposition products

Hazardous decomposition products:

No hazardous decomposition products known.

SECTION 11: Toxicological Information**11.1. Information on toxicological effects**Acute toxicity

Assessment of acute toxicity:

Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact.

Experimental/calculated data:

LD50 rat (oral): 3,600 mg/kg

LD50 rabbit (dermal): > 5,000 mg/kg

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)

Serious eye damage/irritation rabbit: irreversible damage (OECD Guideline 405)

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.

Carcinogenicity

Assessment of carcinogenicity:

In long-term animal studies in which the substance was given in high doses by feed, 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:

The results of animal studies gave no indication of a fertility impairing effect.

Developmental toxicity

Assessment of teratogenicity:

Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals.

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:

No substance-specific organotoxicity was observed after repeated administration to animals.

Aspiration hazard

No aspiration hazard expected.

SECTION 12: Ecological Information

12.1. 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) 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:

Study scientifically not justified.

12.2. Persistence and degradability**Assessment biodegradation and elimination (H₂O):**

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.

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

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

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.

Contaminated packaging:

Packs that cannot be cleaned should be disposed of in the same manner as the contents.

SECTION 14: Transport Information

Land transport

ADR

	Not classified as a dangerous good under transport regulations
UN 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:	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:	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
Transport in inland waterway vessel:	Not evaluated

Sea transport**IMDG**

	Not classified as a dangerous good under transport regulations
UN 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:	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

14.1. UN number

See corresponding entries for "UN 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. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Regulation:	Not evaluated
Shipment approved:	Not evaluated
Pollution name:	Not evaluated
Pollution category:	Not evaluated
Ship Type:	Not evaluated

SECTION 15: Regulatory Information

15.1. 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.

SECTION 16: Other Information

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

Skin Corr./Irrit. 2
Eye Dam./Irrit. 1
Acute Tox. 5 (oral)
Aquatic Acute 3
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 indication of danger, the hazard symbols, the R phrases, 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

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Skin Sens.	Skin sensitization
H318	Causes serious eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.

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. The data do not describe the product's properties (product specification). Neither should any agreed property nor the suitability of the product for any specific purpose be deduced from the data contained in the safety data sheet. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.

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