

# Safety data sheet

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BASF Safety data sheet  
Date / Revised: 09.07.2024  
Product: **Tetrahydrolinalool**

Version: 1.0

(30034995/SDS\_GEN\_VN/EN)

Date of print: 17.10.2025

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

**Product name:**  
**Tetrahydrolinalool**

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

Manufacturer/supplier:  
BASF Vietnam Co. Ltd.  
Level 23, Deutsches Haus, 33 Le Duan,  
Sai Gon Ward, Ho Chi Minh City, Vietnam  
Telephone: +84 28 3824 3833  
Telefax number: +84 28 3824 3832  
E-mail address: minh-triet.thieu@basf.com

Emergency information:  
18001703 (Vietnam)  
Telefax number: +84 28 3824 3832  
International emergency number:  
Telephone: +49 180 2273-112

## 2. Hazard identification

Classification of the substance and mixture:  
Eye irritation: Cat.2A  
Skin irritation: Cat.2  
Flammable liquids: Cat.4  
Skin sensitization: Cat.1B  
Hazardous to the aquatic environment - acute: Cat.2

Label elements and precautionary statement:

Pictogram:



Signal Word:  
Warning

## Hazard Statement:

H227	Combustible liquid.
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.
P280	Wear eye protection.
P273	Avoid release to the environment.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
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.
P370 + P378	In case of fire: Use extinguishing powder, foam or CO2 for extinction.

## Precautionary Statements (Storage):

P403	Store in a well-ventilated place.
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## 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-dimethyloctan-3-ol

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CAS Number: 78-69-3

**Hazardous ingredients****3,7-dimethyloctan-3-ol**Content (W/W):  $\geq 75\%$  -  $\leq 100\%$ 

CAS Number: 78-69-3

Flam. Liq.: Cat. 4  
Skin Irrit.: Cat. 2  
Eye Irrit.: Cat. 2A  
Skin Sens.: Cat. 1B  
Aquatic Acute: Cat. 2

**3,7-dimethyloctadien-1,6-ol-3**Content (W/W):  $> 0\%$  -  $< 0.1\%$ 

CAS Number: 78-70-6

Flam. Liq.: Cat. 4  
Acute Tox.: Cat. 5 (oral)  
Skin Irrit.: Cat. 2  
Eye Irrit.: Cat. 2A  
Skin Sens.: Cat. 1B  
Aquatic Acute: Cat. 3

**geraniol**Content (W/W):  $> 0\%$  -  $< 0.1\%$ 

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

**3,7-dimethyl-2,6-octadien-1-al**Content (W/W):  $> 0\%$  -  $< 0.1\%$ 

CAS Number: 5392-40-5

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

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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, dry powder, foam

Unsuitable extinguishing media for safety reasons:

water jet

Specific hazards:

carbon oxides, harmful vapours

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

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:

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.

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Methods for cleaning up or taking up:

For large amounts: Dike spillage. Cover with blanket of foam (alcohol-resistant foam). 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.

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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.

### Protection against fire and explosion:

The product is combustible. Avoid all sources of ignition: heat, sparks, open flame. Take precautionary measures against static discharges. If exposed to fire, keep containers cool by spraying with water. Vapours may form explosive mixture with air.

### Storage

Odour-sensitive: Segregate from products releasing odours.

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place. Protect containers from physical damage. Protect from direct sunlight.

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## 8. Exposure controls and personal protection

### Components with occupational exposure limits

3,7-dimethyl-2,6-octadien-1-al, 5392-40-5;

TWA value 5 ppm (ACGIHTLV), Inhalable fraction and vapor

Skin Designation (ACGIHTLV), Inhalable fraction and vapor

Danger of cutaneous absorption

Skin Designation (ACGIHTLV), Inhalable fraction and vapor

Danger of cutaneous absorption

### 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.

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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. Avoid contact with the skin, eyes and clothing. Wearing of closed work clothing is recommended. 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

Form:	liquid	
Colour:	colourless	
Odour:	flowery, sweetish	
Odour threshold:	< 100 ppm	
pH value:	7	
Freezing point:	-56 °C (1,013 hPa) Literature data.	
Boiling point:	197 °C (1,013.25 hPa)	(measured)
Flash point:	77 °C	(DIN 51758, closed cup)
Evaporation rate:	Value can be approximated from Henry's Law Constant or vapor pressure.	
Flammability (solid/gas):	Combustible liquid.	(derived from flash point)
Lower explosion limit:	1.3 %(V) (74 °C)	(air)
Upper explosion limit:	For liquids not relevant for classification and labelling.	
Ignition temperature:	360 °C	(DIN 51794)
Thermal decomposition:	approx. 470 °C	(DSC (DIN 51007))
Self ignition:	Based on its structural properties the product is not classified as self-igniting.	Test type: Spontaneous self-ignition at room-temperature.

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Self heating ability:	It is not a substance capable of spontaneous heating.	
Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.	
Fire promoting properties:	not fire-propagating	
Vapour pressure:	1 mbar (20 °C) 3 mbar (50 °C)	
Density:	0.826 g/cm <sup>3</sup> (25 °C) Literature data.	
Relative density:	0.826 (25 °C)	
Relative vapour density (air):	> 1 (20 °C) Heavier than air.	(calculated)
Solubility in water:	0.320 g/l (25 °C, 1,013 hPa)	
Solubility (qualitative) solvent(s):	organic solvents soluble	
Partitioning coefficient n-octanol/water (log Pow):	3.3 (20 - 23 °C)	(OECD Guideline 107)
Adsorption/water - soil:	KOC: 56.3; log KOC: 1.75	(calculated)
Surface tension:	26.78 mN/m (25 °C; 100 %(V))	
Viscosity, dynamic:	11.063 mPa.s (25 °C) Literature data.	
Viscosity, kinematic:	17.4 mm <sup>2</sup> /s (23 °C)	
Molar mass:	158.28 g/mol	

## 10. Stability and Reactivity

Conditions to avoid:

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

Thermal decomposition: approx. 470 °C (DSC (DIN 51007))

Substances to avoid:

None known during use and storage if used according to instructions.

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Corrosion to metals: No corrosive effect on metal.

Hazardous reactions:  
Reacts with acids.

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): 8,270 mg/kg (BASF-Test)

#### Acute inhalation toxicity

rat (by inhalation): 8 h (IRT)  
Inhalation-risk test (IRT): No mortality within 8 hours as shown in animal studies. The inhalation of a highly saturated vapor-air mixture represents no acute hazard.

#### Acute dermal toxicity

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

#### Assessment of acute toxicity

Virtually nontoxic after a single ingestion. Virtually nontoxic after a single skin contact. Inhalation-risk test (IRT): No mortality within 8 hours as shown in animal studies. The inhalation of a highly saturated vapor-air mixture represents no acute hazard.

#### 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. (BASF-Test)

Skin corrosion/irritation human: Irritant. (OECD Guideline 439)

Serious eye damage/irritation rabbit: Irritant. (BASF-Test)

#### Respiratory/Skin sensitization



Assessment of sensitization:  
Caused skin sensitization in animal studies.

Experimental/calculated data:  
Mouse Local Lymph Node Assay (LLNA) mouse: skin sensitizing (OECD Guideline 429)

### **Germ cell mutagenicity**

Assessment of mutagenicity:  
No mutagenic effect was found in various tests with bacteria and mammalian cell culture.

### **Carcinogenicity**

Assessment of carcinogenicity:  
Study does not need to be conducted.

### **Reproductive toxicity**

Assessment of reproduction toxicity:  
The results of animal studies gave no indication of a fertility impairing effect. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### **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. 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.

Remarks: 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:  
Effects on the kidney of male rats were detected after repeated exposure. These effects are specific for the male rat and are known to be of no relevance to humans. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

### **Aspiration hazard**

No data available.

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## **12. Ecological Information**

### **Ecotoxicity**

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) 8.9 mg/l, *Brachydanio rerio* (OECD Guideline 203, semistatic)  
Nominal concentration.

Aquatic invertebrates:

EC50 (48 h) 14.2 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) 22 mg/l (growth rate), *Scenedesmus subspicatus* (DIN 38412 Part 9, static)

Microorganisms/Effect on activated sludge:

EC10 (0.5 h) 450 mg/l, *Pseudomonas putida* (DIN 38412 Part 27 (draft), aquatic)  
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.

Chronic toxicity to aquatic invertebrates:

Study scientifically not justified.

Assessment of terrestrial toxicity:

No data available concerning terrestrial toxicity.  
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:

approx. 60 - 70 % BOD of the ThOD (28 d) (OECD 301F; ISO 9408; 92/69/EWG, C.4-D) (aerobic, activated sludge, domestic) Readily biodegradable (according to OECD criteria).

Assessment of stability in water:

Substance is readily biodegradable, therefore hydrolysis is not expected to be relevant.

## Bioaccumulation potential

Assessment bioaccumulation potential:

Significant accumulation in organisms is not to be expected.  
The product has not been tested. The statement has been derived from the structure of the product.

Bioaccumulation potential:

Bioconcentration factor: 99.87 (calculated)

The product has not been tested. The statement has been derived from the structure of the product.

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## 13. Disposal Considerations

Information on disposal regulations: Must comply with regulations on hazardous waste such as:

- Decree No. 08/2022/ND-CP of the Government: detailing a number of articles of the Law on Environmental Protection.

- Circular No. 02/2022/TT-BTNMT of the Ministry of Natural Resources and Environment: detailing a number of articles of the Law on Environmental Protection.

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
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

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## 15. Regulatory Information

### Other regulations

The SDS is composed based on the Global Harmonization Globally Harmonized System of Classification and Labeling of Chemicals and applicable local chemical regulations as following:

- The Chemical Law 06/2007/QH12 issued on 21/11/2007.
- The decree No. 113/2017/ND-CP specifying and providing guidelines for implementation of certain articles of the law on chemicals.
- The decree No. 82/2022/ND-CP Amendments to some articles of government's decree no.113/2017/ND-CP dated October 09, 2017 specifying and providing guidelines for implementation of certain articles of the law on chemicals.
- Circular 17/2022/TT-BCT Amendments to some articles of circular no. 32/2017/TT-BCT dated December 28, 2017 of the Minister Of Industry And Trade on elaboration and provision of guidelines for implementation of certain articles of the law on chemicals and the government's decree no. 113/2017/ ND-CP dated October 09, 2017 on elaboration and provision of guidelines for implementation of certain articles of the law on chemicals.
- The decree No. 17/2020/ND-CP Amendments to some articles of decrees related to necessary business conditions in fields under the management of the Ministry Of Industry and Trade.
- The decree No. 34/2024/ND-CP dated March 31st 2024 of the Government on the List of dangerous goods, transportation of dangerous goods by road motor vehicles and transportation of dangerous goods on inland waterways
- The Circular 32/2017/TT-BCT specifying and providing guidelines for implementation of certain articles of the law on chemicals and the government's decree no. 113/2017/ND-CP dated October 09, 2017 specifying and providing guidelines for implementation of certain articles of the law on chemicals.
- The decree No. 33/2024/ND-CP dated March 27th 2024 of the Government on implementing the convention on the prohibition of the development, production, stockpiling and use of chemical weapons and on their destruction

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.