

### SECTION 1: Identification

#### 1.1. Identification

Product form	: Substance
Substance name	: EUGENOL, NATURAL
CAS-No.	: 97-53-0
Product code	: TP1184
Formula	: C10H12O2
Synonyms	: 1,3,4-eugenol / 1-hydroxy-2-methoxy-4-ally benzene / 1-hydroxy-2-methoxy-4-prop-2-enylbenzene / 2-methoxy-1-hydroxy-4-allylbenzene / 2-methoxy-4-(2-propenyl)phenol / 2-methoxy-4-allylphenol / 2-methoxy-4-prop-2-enylphenol / 4-allyl-1-hydroxy-2-methoxy-benzene / 4-allyl-2-methoxyphenol / 4-allylcatechol-2-methyl ether / 4-allylguaiacol / 4-allylguaiacol / 4-hydroxy-3-methoxyallylbenzene / 5-allylguaiacol / allylguaiacol / caryophyllic acid / eugenic acid / eugenol / eugenol,pure / FA 100 / FEMA No.2467 / MISA No.749.00 / p-allylguaiacol / para-allylguaiacol / para-eugenol / p-eugenol / phenol, 2-methoxy-4-(2-propenyl)- / phenol, 4-allyl-2-methoxy- / synthetic eugenol
BIG no	: 25807

#### 1.2. Recommended use and restrictions on use

Use of the substance/mixture	: Odorant Odorant: component
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#### 1.3. Supplier

EXTRACT CONSULTANTS, LLC.  
TERPENES - FLAVORS - BASES  
PO BOX 11433, DENVER, CO 80211  
www.extractconsultants.com  
INFORMATION: 1-888-541-9089

#### 1.4. Emergency telephone number

Emergency number	: CHEMTREC - USA: 800-424-9300 International: +1 703-527-3887 / 1-800-424-9300 CCN 13010
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### SECTION 2: Hazard(s) identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Serious eye damage/eye irritation Category 2	Causes serious eye irritation
Skin sensitization, Category 1	May cause an allergic skin reaction

#### 2.2. GHS Label elements, including precautionary statements

##### GHS-US labeling

Hazard pictograms (GHS-US)



GHS07

Signal word (GHS-US)	: Warning
Hazard statements (GHS-US)	: May cause an allergic skin reaction Causes serious eye irritation
Precautionary statements (GHS-US)	: Avoid breathing dust/fume/gas/mist/vapors/spray. Wash hands, forearms and face thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace Wear protective gloves/protective clothing/eye protection/face protection. If on skin: Wash with plenty of water If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Specific treatment (see supplemental first aid instruction on this label) If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention.

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Wash contaminated clothing before reuse.  
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

### 2.3. Other hazards which do not result in classification

No additional information available

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

Name	Product identifier	%	GHS-US classification
EUGENOL (Main constituent)	(CAS-No.) 97-53-0	100	Eye Irrit. 2, H319 Skin Sens. 1, H317

Full text of hazard classes and H-statements : see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First-aid measures

### 4.1. Description of first aid measures

- First-aid measures general : Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

### 4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after inhalation : No effects known.
- Symptoms/effects after skin contact : May cause an allergic skin reaction.
- Symptoms/effects after eye contact : Eye irritation.
- Symptoms/effects after ingestion : Vomiting. Nausea. Abdominal pain. Gastrointestinal complaints.
- Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Swelling of the skin. Itching. Skin rash/inflammation.

### 4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

## SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
- Unsuitable extinguishing media : Water (quick-acting extinguisher, reel); risk of puddle expansion. Water; risk of puddle expansion.

### 5.2. Specific hazards arising from the chemical

- Fire hazard : DIRECT FIRE HAZARD: Combustible. INDIRECT FIRE HAZARD: Temperature above flashpoint: higher fire/explosion hazard.
- Reactivity : The product is non-reactive under normal conditions of use, storage and transport.

### 5.3. Special protective equipment and precautions for fire-fighters

- Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: seal off low-lying areas. Exposure to fire/heat: have neighbourhood close doors and windows.
- Firefighting instructions : Cool tanks/drums with water spray/remove them into safety.
- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

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### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

Protective equipment : Gloves. Safety glasses. Protective clothing.  
Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray.

##### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

For containment : Contain released product, pump into suitable containers. Plug the leak, cut off the supply.  
Methods for cleaning up : Take up liquid spill into absorbent material.  
Other information : Dispose of materials or solid residues at an authorized site.

#### 6.4. Reference to other sections

For further information refer to section 13.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapors/spray. Wear personal protective equipment.  
Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.  
Storage temperature : 20 °C  
Heat-ignition : KEEP SUBSTANCE AWAY FROM: heat sources.  
Storage area : Store in a dry area. Store at room temperature. Keep out of direct sunlight. Ventilation at floor level. Meet the legal requirements.  
Special rules on packaging : SPECIAL REQUIREMENTS: hermetical. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.  
Packaging materials : SUITABLE MATERIAL: glass. aluminium. MATERIAL TO AVOID: iron.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.  
Environmental exposure controls : Avoid release to the environment.

#### 8.3. Individual protection measures/Personal protective equipment

##### Hand protection:

Gloves

##### Eye protection:

Safety glasses

##### Skin and body protection:

Protective clothing

##### Respiratory protection:

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High gas/vapour concentration: gas mask with filter type A

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: Liquid.
Color	: COLORLESS TO PALE YELLOW LIQUID
Odor	: ODOR OF CLOVES AND A PUNGENT SPICY TASTE
Odor threshold	: No data available
pH	: No data available
Melting point	: -10 °C
Freezing point	: No data available
Boiling point	: 248 °C (755 mm Hg, EU Method A.2: Boiling point)
Flash point	: 100 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: < 0.1 hPa (25 °C, EU Method A.4: Vapour Pressure)
Relative vapor density at 20 °C	: 5.6
Relative density	: 1.064 (1.057 - 1.070)
Specific gravity / density	: 1065 kg/m <sup>3</sup>
Molecular mass	: 164.2 g/mol
Solubility	: Insoluble. Water: 1154 mg/l Ethanol: > 10 g/100ml
Log Pow	: 1.83 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 30 °C)
Auto-ignition temperature	: 380 °C (985 hPa, EU Method A.15: Auto-ignition Temperature (liquids and gases))
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 8.39 mPa.s (25 °C)
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

#### 9.2. Other information

Specific conductivity	: < 1700000 pS/m (25 °C)
VOC content	: 0 %
Refractive index	: 1.541 (1.538 - 1.544)
Other properties	: Gas/vapour heavier than air at 20°C. Slightly volatile.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

#### 10.2. Chemical stability

Discolours on exposure to air.

#### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

#### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

#### 10.5. Incompatible materials

No additional information available

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### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

EUGENOL (97-53-0)	
LD50 oral rat	> 2000 mg/kg body weight (Equivalent or similar to OECD 423, Rat, Male/female, Experimental value, Oral)
LC50 inhalation rat (mg/l)	> 2.6 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male/female, Experimental value, Inhalation (aerosol))
ATE US (oral)	2300 mg/kg body weight

Skin corrosion/irritation : Not classified  
Serious eye damage/irritation : Causes serious eye irritation.  
Respiratory or skin sensitization : May cause an allergic skin reaction.  
Germ cell mutagenicity : Not classified  
Carcinogenicity : Not classified

EUGENOL (97-53-0)	
IARC group	3 - Not classifiable

Reproductive toxicity : Not classified  
Specific target organ toxicity – single exposure : Not classified  
Specific target organ toxicity – repeated exposure : Not classified  
Aspiration hazard : Not classified  
Potential Adverse human health effects and symptoms : Practically non-toxic if swallowed (LD50 oral, rat > 2000 mg/kg). Slightly harmful by inhalation. Causes serious eye irritation.  
Symptoms/effects after inhalation : No effects known.  
Symptoms/effects after skin contact : May cause an allergic skin reaction.  
Symptoms/effects after eye contact : Eye irritation.  
Symptoms/effects after ingestion : Vomiting. Nausea. Abdominal pain. Gastrointestinal complaints.  
Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Swelling of the skin. Itching. Skin rash/inflammation.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.  
Ecology - air : Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 517/2014). Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).  
Ecology - water : Toxic to crustacea. Harmful to fishes. Harmful to algae.

EUGENOL (97-53-0)	
LC50 fish 1	13 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Semi-static system, Fresh water, Experimental value, GLP)
EC50 Daphnia 1	1.13 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
ErC50 (algae)	24 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)

### 12.2. Persistence and degradability

EUGENOL (97-53-0)	
Persistence and degradability	Readily biodegradable in water.

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### 12.3. Bioaccumulative potential

EUGENOL (97-53-0)	
Log Pow	1.83 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 30 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

### 12.4. Mobility in soil

EUGENOL (97-53-0)	
Ecology - soil	No (test)data on mobility of the substance available.

### 12.5. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Do not discharge into drains or the environment. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Remove to an authorized incinerator equipped with an afterburner and a flue gas scrubber with energy recovery.
Additional information	: Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

## SECTION 14: Transport information

### Department of Transportation (DOT)

In accordance with DOT  
Not regulated

### Transportation of Dangerous Goods

Not applicable

### Transport by sea

Not applicable

### Air transport

Not applicable

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

EUGENOL (97-53-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

EUGENOL (97-53-0)
Listed on the Canadian DSL (Domestic Substances List)

#### EU-Regulations

No additional information available

#### National regulations

No additional information available

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### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

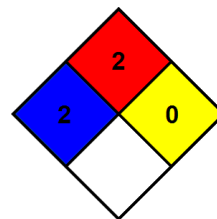
### SECTION 16: Other information

Revision date : 02/15/2019

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 2 - Materials that must be moderately heated or exposed to relatively high ambient temperatures before ignition can occur.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



SDS US (GHS HazCom 2012) - Extract Consultants

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*