

## SAFETY DATA SHEET

Preparation Date: 03/05/2015

Revision Date: 06/25/2018

Revision Number: G2

### 1. IDENTIFICATION

**Product identifier**

**Product code:** EU110  
**Product Name:** EUGENOL, USP

**Other means of identification**

**Synonyms:**

4-Allylguaiacol  
 4-Allyl-2-methoxyphenol  
 4-Allylcatechol-2-methyl ether  
 p-Allylguaiacol  
 4-Allylguaiacol  
 4-Allyl-1-hydroxy-2-methoxybenzene  
 4-Allyl-2-methoxyphenol  
 Caryophyllic acid  
 Eugenol  
 p-Eugenol  
 1,3,4-Eugenol  
 Hydroxy-1-methoxy-2-allyl-4-benzene  
 1-Hydroxy-2-methoxy-4-allylbenzene  
 4-Hydroxy-3-methoxyallylbenzene  
 1-Hydroxy-2-methoxy-4-prop-2-enylbenzene  
 2-Methoxy-4-allylphenol  
 2-Methoxy-1-hydroxy-4-allylbenzene  
 2-Methoxy-4-prop-2-enylphenol  
 2-Methoxy-4-(2-propenyl)phenol  
 2-Metoksy-4-allilofenol (Polish)  
 Phenol, 4-ally-2-methoxy  
 Phenol, 2-methoxy-4-(2-propenyl)-  
 97-53-0  
 SJ4375000  
 Not available

**CAS #:**

**RTECS #**

**CI#:**

**Recommended use of the chemical and restrictions on use**

**Recommended use:** Insecticide.  
**Uses advised against** No information available

**Supplier:**

Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000

**Order Online At:**

**Emergency telephone number**

**Contact Person:**

**Contact Person:**

<https://www.spectrumchemical.com>  
 Chemtrec 1-800-424-9300  
 Martin LaBenz (West Coast)  
 Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

**Classification**

**Product code:** EU110

**Product name:** EUGENOL, USP

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Serious eye damage/eye irritation	Category 2A
Skin sensitization	Category 1B

#### **Label elements**

##### **Warning**

##### **Hazard statements**

Harmful if swallowed

Causes serious eye irritation

May cause an allergic skin reaction



##### **Hazards not otherwise classified (HNOC)**

Not Applicable

##### **Other hazards**

Not available

##### **Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing must not be allowed out of the workplace

Wear protective gloves/protective clothing/eye protection/face protection

##### **Precautionary Statements - Response**

IF IN EYES: 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.

IF ON SKIN: Wash with plenty of water

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

##### **Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

### **3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Components</b>	<b>CAS-No.</b>	<b>Weight %</b>
Eugenol	97-53-0	100

### **4. FIRST AID MEASURES**

#### **First aid measures**

**Product code:** EU110

**Product name:** EUGENOL, USP

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**General Advice:** National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222.

**Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothing and shoes. Get medical attention. If skin irritation persists, call a physician.

**Eye Contact:** Flush eyes with water for 15 minutes. Get medical attention.

**Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Causes serious eye irritation  
Moderately irritating to the eyes  
Eye contact may result in redness or pain  
May cause an allergic skin reaction  
May cause nausea and vomiting  
gastroenteritis  
May cause central nervous system effects  
Somnolence  
Ataxia

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

**Notes to Physician:** Treat symptomatically.

**Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

**5. FIRE-FIGHTING MEASURES**

**Extinguishing Media**

**Suitable Extinguishing Media:** Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray mist or foam.

**Unsuitable Extinguishing Media:** Do not use a solid (straight) water stream as it may scatter and spread fire.

**Specific hazards arising from the chemical**

**Hazardous Combustion Products:** Carbon Monoxide, Carbon Dioxide.

**Specific hazards:** May be combustible at high temperatures. May be ignited by heat, sparks or flames. Container explosion may occur under fire conditions or when heated. When heated to decomposition it emits acrid smoke and irritating fumes.

**Special Protective Actions for Firefighters**

**Specific Methods:** Water mist may be used to cool closed containers. For larger fires, use water spray or fog. Cool containers with flooding quantities of water until well after fire is out. Dike fire-control water for later disposal; do not scatter the material.

**Special Protective Equipment for Firefighters:**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions:** Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Remove all sources of ignition.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

### Methods and material for containment and cleaning up

**Methods for containment** Stop leak if you can do it without risk. Absorb spill with inert material (e.g. vermiculite, dry sand or earth). In case of large spill, dike if needed. Dike far ahead of liquid spill for later disposal.

**Methods for cleaning up** Use appropriate tools to put the spilled material in a suitable chemical waste disposal container. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Remove all sources of ignition. Keep away from incompatible materials.

**Safe Handling Advice**

Wear personal protective equipment. Use only in well-ventilated areas. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not breathe vapors or spray mist. Do not ingest. When using do not smoke. Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

**Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials. Sensitive to light. Store in light-resistant containers.

**Incompatible Materials:**

Oxidizing agents

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### National occupational exposure limits

**United States**

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WEEL
Eugenol	97-53-0	None	None	None	None

**Canada**

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Eugenol	97-53-0	None	None	None	None

### Australia and Mexico

Components	CAS-No.	Australia	Mexico
Eugenol	97-53-0	None	None

### Appropriate engineering controls

#### Engineering measures to reduce exposure:

Ensure adequate ventilation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors and mist below their respective threshold limit value.

### Individual protection measures, such as personal protective equipment

#### Personal Protective Equipment

**Eye protection:** Goggles

**Skin and body protection:** Chemical resistant apron  
Gloves  
Long sleeved clothing

**Respiratory protection:** Respiratory protection is not necessary for normal handling. Good room ventilation or use of local exhaust (fume hood) is sufficient. Use a vapor respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentrations of mist or vapor, inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

**Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Physical state:

Liquid

#### Appearance:

No information available.

#### Color:

Colorless. Yellow.

#### Odor:

Clove-like.

#### Taste

No information available.

#### Formula:

C<sub>10</sub>H<sub>12</sub>O<sub>2</sub>

#### Molecular/Formula weight:

164.20

#### Flammability:

No information available

#### Flashpoint (°C/°F):

104°C/219.2°F

#### Flash Point Tested according to:

Open cup

#### Autoignition Temperature (°C/°F):

No information available

#### Lower Explosion Limit (%):

No information available

#### Upper Explosion Limit (%):

No information available

#### Melting point/range(°C/°F):

-7.5°C/18.5°F

#### Decomposition temperature(°C/°F):

No information available

#### Boiling point/range(°C/°F):

253.2°C/487.8°F

#### Bulk density:

No information available

#### Density (g/cm<sup>3</sup>):

No information available

#### Specific gravity:

1.055

#### pH:

No information available

#### Vapor pressure @ 20°C (kPa):

0.03 mmHg

**Evaporation rate:**  
No information available

**Vapor density:**  
No information available

**VOC content (g/L):**  
No information available

**Odor threshold (ppm):**  
No information available

**Partition coefficient  
(n-octanol/water):**  
No information available

**Viscosity:**  
No information available

**Miscibility:**  
No information available

**Solubility:**  
Insoluble in cold water

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with oxidizing agents

### Chemical stability

**Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Ignition sources. Incompatible materials. Exposure to light.

**Incompatible Materials:** Oxidizing agents

**Hazardous decomposition products:** Carbon oxides.

### Other Information

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Eyes. Ingestion. Inhalation.

### Acute Toxicity

### Component Information

Eugenol

CAS-No. 97-53-0

**LD50/oral/rat =** 1930 mg/kg Oral LD50 Rat

**LD50/oral/mouse =** 3000 mg/kg

**LD50/dermal/rabbit =** No information available

**LD50/dermal/rat =** No information available

**LC50/inhalation/rat =** No information available

**LC50/inhalation/mouse =** No information available

**Other LD50 or LC50 information =** No information available

### Product Information

**LD50/oral/rat =**

**Product code:** EU110

**Product name:** EUGENOL, USP

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VALUE- Acute Tox Oral = 1930 mg/kg

LD50/oral/mouse =

Value - Acute Tox Oral = 3000 mg/kg

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

### Symptoms

**Skin Contact:** May cause skin irritation. May cause allergic skin reaction.

**Eye Contact:** Causes serious eye irritation.

**Inhalation** May cause irritation of respiratory tract.

**Ingestion** Harmful if swallowed. May cause gastroenteritis. Ingestion may cause nausea, vomiting. May affect behavior/central nervous system (somnolence, ataxia). May affect respiration (dyspnea - difficulty breathing and shortness of breath).

**Aspiration hazard** No information available.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Chronic Toxicity** Skin: Sensitizer. May cause allergic skin reaction (allergic contact dermatitis).

**Sensitization:** May cause sensitization by skin contact.

**Mutagenic Effects:** DNA damage - hamster ovary  
DNA damage - rat liver  
Mutations in microorganisms  
Experiments with bacteria and/or yeast have shown mutagenic effects  
Sister Chromatid Exchange (hamster embryo)  
Sister Chromatid Exchange - Hamster ovary  
Cytogenic analysis - hamster ovary  
Cytogenic Analysis: human lymphocyte

**Carcinogenic effects:** Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Eugenol	97-53-0	Supplement 7 [1987] Monograph 36 [1985]	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

**Reproductive toxicity** No data is available  
**Reproductive Effects:** No information available  
**Developmental Effects:** No information available  
**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Target Organs:** No information available.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** No data available.  
**Persistence and degradability:** No information available  
**Bioaccumulative potential:** No information available.  
**Mobility:** No information available.

**13. DISPOSAL CONSIDERATIONS**

**Disposal Methods**

**Waste from residues / unused products:**  
Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**  
Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Eugenol	97-53-0	None	None	None	None

**14. TRANSPORT INFORMATION**

**DOT**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Class** No information available  
**Packing group:** No information available  
**Emergency Response Guide Number** No information available  
**Marine Pollutant** No data available  
**DOT RQ (lbs):** No information available

**Special Provisions** No Information available  
**Symbol(s):** No information available  
**Description:** No information available

**TDG (Canada)**  
**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Marine Pollutant Description:** No Information available  
 No information available

**ADR**  
**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Packing Group:** No information available  
**Subsidiary Risk:** No information available

**IMO / IMDG**  
**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Marine Pollutant** No information available

**RID**  
**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available

**ICAO**  
**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available

**IATA**  
**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**ERG Code:** No information available  
**Special Provisions** No information available

**15. REGULATORY INFORMATION**

**International Inventories**

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Eugenol</i>	97-53-0	Present ACTIV E	Present KE-23385	Present	Present (3)-637	Present	Present	Present 202-589-1

## U.S. Regulations

### Eugenol

California Directors List of Hazardous Substances: Present

FDA - Food Additives Generally Recognized as Safe (GRAS): 21 CFR 184.1257

FDA - 21 CFR - Total Food Additives 177.2800, 184.1257

### California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

#### Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

#### Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Eugenol	97-53-0	Not Listed	Not Listed	Not Listed	Not Listed

## CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Eugenol	97-53-0	None	None	None	None	None

## U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Eugenol	97-53-0	Not Applicable	Not Applicable

## Canada

### WHMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information:

The WHMIS 2015 classification of this product has not been validated or reviewed yet.

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

### WHMIS 1988 Hazard Class

D2B Toxic materials

### Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

## Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Eugenol	97-53-0	Present	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Eugenol	97-53-0	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject

		to Mandatory Reporting
Eugenol	97-53-0	Not listed

## EU Classification

### EU GHS - SV - CLP 1272/2008

Components	CAS-No.	EU GHS - SV - CLP (1272/2008)
Eugenol	97-53-0	No information

### EU - CLP (1272/2008)

#### R-phrase(s)

R22 - Harmful if swallowed.  
R36 - Irritating to eyes.  
R38 - Irritating to skin.  
R43 - May cause sensitization by skin contact.

#### S -phrase(s)

S24 - Avoid contact with skin.  
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Eugenol	97-53-0		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

#### Indication of danger:

Xn - Harmful.  
Xi - Irritant.

## 16. OTHER INFORMATION

**Preparation Date:** 03/05/2015  
**Revision Date:** 06/25/2018  
**Prepared by:** Sonia Owen

#### Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**