EUGENOL
CAS No 97-53-0

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

1.1 Product identifiers
Product name : Eugenol
CAS-No. : 97-53-0

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses : Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet
Company : Central Drug House (P) Ltd
7/28 Vardaan House
Ansari Road Daryaganj
New Delhi -110002
INDIA

Telephone : +91 11 49404040
Email : care@cdhfinechemical.com

1.4 Emergency telephone number
Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008
Eye irritation (Category 2), H319
Skin sensitisation (Category 1), H317

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word : Warning
Hazard statement(s)
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
Precautionary statement(s)
P280 Wear protective gloves.
**P305 + P351 + P338** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Supplemental Hazard Statements**

**2.3 Other hazards - none**

**SECTION 3: Composition/information on ingredients**

**3.1 Substances**

**Synonyms**
- 2-Methoxy-4-(2-propenyl)phenol
- 4-Allyl-2-methoxyphenol
- 4-Allylguaiaicol

**Formula**
- $C_{10}H_{12}O_2$

**Molecular weight**
- 164.21 g/mol

**CAS-No.**
- 97-53-0

**EC-No.**
- 202-589-1

**Hazardous ingredients according to Regulation (EC) No 1272/2008**

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eugenol</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>97-53-0</td>
<td>Eye Irrit. 2; Skin Sens. 1; $\leq 100%$</td>
</tr>
<tr>
<td>EC-No.</td>
<td>202-589-1</td>
<td>H319, H317</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements mentioned in this Section, see Section 16.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**
Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed**
No data available

**SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

**Suitable extinguishing media**
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
5.2 Special hazards arising from the substance or mixture
Carbon oxides

5.3 Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information
No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. For personal protection see section 8.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections
For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
Store under inert gas. Air sensitive.
Storage class (TRGS 510): Combustible liquids not in Storage Class 3

7.3 Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls
Appropriate engineering controls
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection
Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
**Body Protection**
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineer protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Appearance</td>
<td>Form: clear, liquid</td>
</tr>
<tr>
<td></td>
<td>Colour: light yellow</td>
</tr>
<tr>
<td>b) Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>c) Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>d) pH</td>
<td>No data available</td>
</tr>
<tr>
<td>e) Melting point/freezing point</td>
<td>Melting point: -12 - -10 °C - lit.</td>
</tr>
<tr>
<td>f) Initial boiling point and boiling range</td>
<td>254 °C - lit.</td>
</tr>
<tr>
<td>g) Flash point</td>
<td>112 °C - closed cup</td>
</tr>
<tr>
<td>h) Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>i) Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>j) Upper/lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>k) Vapour pressure</td>
<td>&lt; 0.1 mmHg at 25 °C</td>
</tr>
<tr>
<td>l) Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>m) Relative density</td>
<td>1.064-1.066 g/cm3 at 20 °C</td>
</tr>
<tr>
<td>n) Water solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>o) Partition coefficient: n-octanol/water</td>
<td>log Pow: 2.7</td>
</tr>
<tr>
<td>p) Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>q) Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>r) Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>s) Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>t) Oxidizing properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

### 9.2 Other safety information
No data available
SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
No data available

10.4 Conditions to avoid
Air

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
LD50 Oral - Rat - > 2,000 mg/kg(Eugenol)
(OECD Test Guideline 423)

Skin corrosion/irritation
Skin - Rabbit(Eugenol)
Result: No skin irritation
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit(Eugenol)
Result: Irritating to eyes.
(OECD Test Guideline 405)

Respiratory or skin sensitisation
in vivo assay - Mouse(Eugenol)
May cause allergic skin reaction.
(OECD Test Guideline 429)

Germ cell mutagenicity
Rat(Eugenol)
Liver
DNA damage
Mouse(Eugenol)
lymphocyte
Mutation in mammalian somatic cells.
Hamster(Eugenol)
Embryo
Unscheduled DNA synthesis
Hamster(Eugenol)
Embryo
Morphological transformation.
Hamster(Eugenol)
Embryo
Sister chromatid exchange  
(Eugenol) Mouse  
Micronucleus test  

Carcinogenicity  
IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Eugenol)  

Reproductive toxicity  
No data available (Eugenol)  

Specific target organ toxicity - single exposure  
No data available (Eugenol)  

Specific target organ toxicity - repeated exposure  
No data available  

Aspiration hazard  
No data available (Eugenol)  

Additional Information  
RTECS: SJ4375000  

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated (Eugenol)  

SECTION 12: Ecological information  

12.1 Toxicity  
Toxicity to fish  
LC50 - Danio rerio (zebra fish) - 13 mg/l - 96 h (Eugenol)  
(OECD Test Guideline 203)  

Toxicity to daphnia and other aquatic invertebrates  
EC50 - Daphnia (water flea) - 1.13 mg/l - 48 h (Eugenol)  

12.2 Persistence and degradability  
Biodegradability  
Result: - Readily biodegradable  

12.3 Bioaccumulative potential  
No data available  

12.4 Mobility in soil  
No data available (Eugenol)  

12.5 Results of PBT and vPvB assessment  
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted  

12.6 Other adverse effects  
Toxic to aquatic life.  
No data available  

SECTION 13: Disposal considerations  

13.1 Waste treatment methods  
Product  
Offer surplus and non-recyclable solutions to a licensed disposal company.  

Contaminated packaging  
Dispose of as unused product.
SECTION 14: Transport information

14.1 UN number
   ADR/RID: -  IMDG: -  IATA: -

14.2 UN proper shipping name
   ADR/RID: Not dangerous goods
   IMDG: Not dangerous goods
   IATA: Not dangerous goods

14.3 Transport hazard class(es)
   ADR/RID: -  IMDG: -  IATA: -

14.4 Packaging group
   ADR/RID: -  IMDG: -  IATA: -

14.5 Environmental hazards
   ADR/RID: no  IMDG Marine pollutant: no  IATA: no

14.6 Special precautions for user
   No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
   This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment
   For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H317      May cause an allergic skin reaction.
H319      Causes serious eye irritation.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be
used only as a guide. The information in this document is based on the present state of our knowledge
and is applicable to the product with regard to appropriate safety precautions. It does not represent any
guarantee of the properties of the product. Central Drug House (P) Ltd and its Affiliates shall not be
held liable for any damage resulting from handling or from contact with the above product. See
www.cdhfinechemical.com for additional terms and conditions of sale.