**GERANIOI**
CAS No 106-24-1

**MATERIAL SAFETY DATA SHEET**
SDS/MSDS

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

1.1 **Product identifiers**

<table>
<thead>
<tr>
<th>Product name</th>
<th>Geraniol</th>
</tr>
</thead>
</table>

| CAS-No. | 106-24-1 |

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**

<table>
<thead>
<tr>
<th>Company</th>
<th>Central Drug House (P) Ltd 7/28 Varadaan House New Delhi -110002 INDIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone</td>
<td>+91 11 49404040</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:care@cdhfinechemical.com">care@cdhfinechemical.com</a></td>
</tr>
</tbody>
</table>

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**

- Skin irritation (Category 2), H315
- Serious eye damage (Category 1), H318
- 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**

<table>
<thead>
<tr>
<th>Pictogram</th>
</tr>
</thead>
</table>

**Signal word** Danger

**Hazard statement(s)**

- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
Precautionary statement(s)
P280 Wear protective gloves/ eye protection/ face protection.
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
none

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances
Synonyms: trans-3,7-Dimethyl-2,6-octadien-1-ol

Formula: (CH₃)₂C=CHCH₂CH₂C(CH₃)=CHCH₂OH
Molecular weight: 154.25 g/mol
CAS-No.: 106-24-1
EC-No.: 203-377-1

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>Geraniol</td>
<td>Skin Irrit. 2; Eye Dam. 1; Skin Sens. 1; H315, H318, H317</td>
<td></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. Evacuate personnel to safe areas.
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. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Storage class (TRGS 510): Combustible liquids

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
Tightly fitting safety goggles. Faceshield (8-inch minimum). 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 enginee 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**

a) Appearance Form: clear, liquid
   Colour: colourless

b) Odour No data available

c) Odour Threshold No data available

d) pH No data available

e) Melting point/freezing point Melting point/freezing point: -14.99 °C

f) Initial boiling point and boiling range 229 - 230 °C - lit.

g) Flash point 108 °C - closed cup - Tested according to Annex V of Directive 67/548/EEC.

h) Evaporation rate No data available

i) Flammability (solid, gas) No data available

j) Upper/lower flammability or explosive limits No data available

k) Vapour pressure 1 hPa at 70.6 °C

l) Vapour density 5.33 - (Air = 1.0)

m) Relative density 0.879 g/cm3 at 20 °C

n) Water solubility 0.1 g/l at 25 °C

o) Partition coefficient: n-octanol/water log Pow: 2.5 at 25 °C

p) Auto-ignition temperature No data available

q) Decomposition temperature No data available

r) Viscosity No data available

s) Explosive properties No data available

t) Oxidizing properties No data available

9.2 **Other safety information**
Relative vapour density 5.33 - (Air = 1.0)
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
No data available

10.5 Incompatible materials
Strong oxidizing agents, Acid chlorides, Acid anhydrides

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 - 3,600 mg/kg(Geraniol)
Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Coma. Skin and Appendages:
Other: Hair.
LD50 Dermal - Rabbit - > 5,000 mg/kg(Geraniol)

Skin corrosion/irritation
Skin - Rabbit(Geraniol)
Result: Irritating to skin. - 24 h
(OECD Test Guideline 404)

Serious eye damage/eye irritation
Eyes - Rabbit(Geraniol)
Result: Risk of serious damage to eyes. - 24 h
(Directive 67/548/EEC, Annex V, B.5.)

Respiratory or skin sensitisation
- Guinea pig(Geraniol)
May cause sensitisation by skin contact.

Germ cell mutagenicity
No data available(Geraniol)

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
No data available(Geraniol)

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

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available(Geraniol)
Additional Information
RTECS: RG58300000

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache (Geraniol)

SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish
static test LC50 - Danio rerio (zebra fish) - ca. 22 mg/l - 96 h (Geraniol) (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates
Immobilization EC50 - Daphnia magna (Water flea) - 10.8 mg/l - 48 H (Geraniol) (OECD Test Guideline 202)

Toxicity to algae
Growth inhibition EC50 - Desmodesmus subspicatus (green algae) - 13.1 mg/l - 72 h (Geraniol)

12.2 Persistence and degradability
Biodegradability
aerobic Chemical oxygen demand - Exposure time 3 d (Geraniol)
Result: 80 - 100 % - Readily biodegradable (OECD Test Guideline 301A)

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available (Geraniol)

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects
Harmful to aquatic life.

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.

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.

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.