## MATERIAL SAFETY DATA SHEET
**ETHYL LACTATE**  
CAS No 97-64-3

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

1.1 **Product identifiers**  
   - **Product name**: Ethyl Lactate  
   - **CAS-No.**: 97-64-3

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  
   - **Address**: 7/28 Vardaan House, 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**  
     - Flammable liquids (Category 3), H226  
     - Specific target organ toxicity - single exposure (Category 3), H335  
     - Serious eye damage (Category 1), H318

   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**

   ![Pictogram](image)

   - **Signal word**: Danger
   - **Hazard statement(s)**
     - H226: Flammable liquid and vapour.
     - H318: Causes serious eye damage.
     - H335: May cause respiratory irritation.
Precautionary statement(s)
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
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

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Substances
Synonyms : Ethyl 2-hydroxypropionate

Formula : C₅H₁₀O₃
Molecular weight : 118.13 g/mol
CAS-No. : 97-64-3
EC-No. : 202-598-0
Index-No. : 607-129-00-7

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>Ethyl lactate</td>
<td>Flam. Liq. 3; Eye Dam. 1;</td>
<td>&lt;= 100 %</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>97-64-3</td>
<td></td>
</tr>
<tr>
<td>EC-No.</td>
<td>202-598-0</td>
<td>STOT SE 3; H226, H318,</td>
</tr>
<tr>
<td>Index-No.</td>
<td>607-129-00-7</td>
<td>H335</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
Do NOT induce vomiting. 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
   Use water spray to cool unopened containers.

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.
   Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low 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.

6.3 Methods and materials for containment and cleaning up
   Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

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. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.
   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): Flammable 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, Flame retardant antistatic protective clothing., 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.

**SECTION 9: Physical and chemical properties**

9.1 **Information on basic physical and chemical properties**

| a) Appearance | Form: liquid |
| b) Odour | No data available |
| c) Odour Threshold | No data available |
| d) pH | No data available |
| e) Melting point/freezing point | -26 °C |
| f) Initial boiling point and boiling range | 154 °C - lit. |
| g) Flash point | 46 °C - closed cup |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Upper/lower flammability or explosive limits | Lower explosion limit: 1.5 % (V) |
| k) Vapour pressure | 2 mmHg at 20 °C |
| l) Vapour density | 4.73 |
| m) Relative density | 1.031 g/cm3 at 25 °C |
| n) Water solubility | No data available |
| o) Partition coefficient: n-octanol/water | No data available |
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  4.73

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
Heat, flames and sparks.

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 - 8,200 mg/kg(Ethyl lactate)
Inhalation: No data available(Ethyl lactate)
LD50 Dermal - Rabbit - > 5,000 mg/kg(Ethyl lactate)

Skin corrosion/irritation
No data available(Ethyl lactate)

Serious eye damage/eye irritation
No data available(Ethyl lactate)

Respiratory or skin sensitisation
No data available(Ethyl lactate)

Germ cell mutagenicity
No data available(Ethyl lactate)

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 (Ethyl lactate)

Specific target organ toxicity - single exposure
May cause respiratory irritation (Ethyl lactate)

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available (Ethyl lactate)

Additional Information
RTECS: OD5075000

SECTION 12: Ecological information

12.1 Toxicity
Toxicity to fish LC50 - Danio rerio (zebra fish) - 320 mg/l - 96 h (Ethyl lactate)
 mortality NOEC - Danio rerio (zebra fish) - 180 mg/l - 96 h (Ethyl lactate)
Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 560 mg/l - 48 h (Ethyl lactate)

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available (Ethyl lactate)

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
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. 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: 1192
IMDG: 1192
IATA: 1192

14.2 UN proper shipping name
ADR/RID: ETHYL LACTATE
IMDG: ETHYL LACTATE
IATA: Ethyl lactate
14.3 **Transport hazard class(es)**
   ADR/RID: 3  IMDG: 3  IATA: 3

14.4 **Packaging group**
   ADR/RID: III  IMDG: III  IATA: III

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.**

- **H226** Flammable liquid and vapour.
- **H318** Causes serious eye damage.
- **H335** May cause respiratory 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.