

## 1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

**Product identifier:**

**Product Name:** ETHYL LACTATE  
**Chemical Name:** Ethyl Lactate  
**Synonyms:** 2-hydroxypropanoic acid ethyl ester  
**CAS No.:** 687-47-8/97-64-3  
**EC No.:** 211-694-1/202-598-0  
**REACH Registration Number:** 01-2119516234-49-XXXX

**Relevant identified uses of the substance or mixture and uses advised against:**

Manufacture of Cosmetic products, Manufacture of cleaning and maintenance products, Lubricants, Metal working liquids, Chemical formulations, Anti-freeze and de-icing products, Plant protection, Personal care, pharmaceutical, industrial, inks and paints.

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## 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture:**

Flam. Liq. 3  
Eye Dam. 1  
STOT SE 3

**Label elements:**



**Signal Word:**

Danger

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|                               |  |
|-------------------------------|--|
| <b>Hazard phrases:</b>        | H226- Flammable liquid and vapour.<br>H318- Causes serious eye damage.<br>H335- May cause respiratory irritation.  |
| <b>Precautionary Phrases:</b> | P210- Keep away from heat/sparks/open flames/hot surfaces. - No smoking.<br>P280- Wear protective gloves/protective clothing/eye protection/face protection.   |
| <b>IF INHALED:</b>            | P340- Remove victim to fresh air and keep at rest in a position comfortable for breathing.<br>P305+P351+P338- IF IN EYES: Rinse cautiously with water for several minutes.<br>P338- Remove contact lenses, if present and easy to do. Continue rinsing.<br>P403+P233- Store in a well-ventilated place. Keep container tightly closed. |
| <b>Risk Phrases:</b>          | Flammable.<br>Irritating to respiratory system and skin.<br>Risk of serious damage to eyes.  |
| <b>Safety Phrases:</b>        | Keep out of reach of children.<br>Keep container in a well-ventilated place.<br>Keep away from sources of ignition - No Smoking.<br>In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  |
| <b>Other hazards:</b>         |  |

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

|                       |  |
|-----------------------|--|
| <b>Mixtures:</b>      | Ethyl (S)-2-hydroxypropionate; Ethyl L-lactate; ethyl-(S)-lactate. |
| <b>Concentration:</b> | >99%   |
| <b>CAS Number:</b>    | 687-47-8/97-64-3   |
| <b>EC Number:</b>     | 211-694-1/202-598-0  |
| <b>R/H Phrases:</b>   | H226, H335, H318, R10, R37, R41                                    |
| <b>Symbols:</b>       | GHS02, GHS05, GHS07, Xi  |

## 4. FIRST AID MEASURES

### Description of first aid measures:

|                           |  |
|---------------------------|--|
| <b>IF INHALED:</b>        | Call a POISON CENTER or doctor/physician if you feel unwell.   |
| <b>IF INHALED:</b>        | If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.              |
| <b>CONTACT WITH SKIN:</b> | After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water (S27/28). |
| <b>EYE CONTACT:</b>       | If substance has got into eyes, immediately wash out with plenty of water for at least 15 minutes and get medical attention. |
| <b>IF SWALLOWED:</b>      | Call a POISON CENTER or doctor/physician if you feel unwell.   |
| <b>IF SWALLOWED:</b>      | Rinse mouth. Do NOT induce vomiting. Give 200-300mls (half pint) water to drink  |

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### Most important symptoms and effects, both acute and delayed:

Can cause damage to the eyes  
Causes irritation  
May cause drowsiness  
May cause dizziness

### Indication of any immediate medical attention and special treatment needed:

Physicians should contact the Poisons Information Service

## 5. FIRE-FIGHTING MEASURES

### Extinguishing media:

In case of fire use water spray or fog, alcohol resistant foam, dry chemical or carbon dioxide.  
Unsuitable extinguishing media - High Volume Water Jet

### Special hazards arising from the substance or mixture:

Vapours may ignite  
Flammable

### Advice for firefighters:

Wear Breathing Apparatus  
Wear full protective clothing including chemical protection suit  
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.  
Do not use water jet.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures:

Evacuate the area and keep personnel upwind.  
Wear suitable respiratory protection.  
Wear protective clothing.  
Avoid Sparks.  
Extinguish naked flames.  
Take precautionary measures against static discharge.  
Prevent the spilled product coming into contact with sources of flame.  
Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback.

### Environmental Precautions:

Stop leak if safe to do so.  
Do not allow to enter public sewers and watercourses.  
Evacuate area.  
If polluted water reaches drainage systems or water courses, immediately inform appropriate authorities.  
Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback.

[cont...]

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## Methods and material for containment and cleaning up:

Dispose of the collected material according to regulations.  
Place in appropriate container.  
Seek expert advice for removal and disposal of all contaminated materials and wastes.  
Absorb spillage in earth or sand.

## Reference to other sections:

See Section 7 for information on safe handling.  
See Section 8 for information on personal protective equipment.

## 7. HANDLING AND STORAGE

### Precautions for safe handling:

Avoid contact with oxidising substances.  
Avoid breathing dust/fume/gas/mist/vapours/spray.  
Avoid contact with skin and eyes.  
Ensure adequate ventilation.  
Equipment should be earthed.  
Equipment should be of flameproof design.  
Eyewash bottles should be available.  
In case of accident by inhalation: remove casualty to fresh air and keep at rest.  
In use, may form flammable/explosive vapour-air mixture.  
Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
Use only non-sparking tools.  
Wear eye/face protection.  
Wear suitable gloves.

### Conditions for safe storage, including any incompatibilities:

Ground/bond container and receiving equipment.  
Keep container tightly closed, in a cool, well ventilated place.  
Keep out of reach of children.  
Protect from sunlight. Store in a well-ventilated place.

### Specific end use(s):

See Section 1.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters:

No information available

### Exposure controls:

Appropriate respiratory protection should be worn for short periods if no extraction available.  
Chemical gloves, goggles and appropriate skin protection should be worn when handling.  
Use explosion-proof ventilating and lighting equipment.  
Engineering controls should be provided which maintain airborne concentrations below the relevant guidelines.

### Occupational exposure controls:

Wear approved respirator if exposure likely to exceed MEL/OES  
Wear protective gloves/protective clothing/eye protection/face protection.

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### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Information on basic physical and chemical properties:

|                                   |                     |
|-----------------------------------|---------------------|
| <b>Odour:</b>                     | Sweet-smelling      |
| <b>Appearance:</b>                | Clear Liquid        |
| <b>Boiling point:</b>             | 154 °C              |
| <b>Vapour pressure:</b>           | 0.224 kPa at 20°C   |
| <b>Melting point:</b>             | < -3 °C             |
| <b>Soluble in water:</b>          |                     |
| <b>Relative Density:</b>          | 1.04 approx at 15°C |
| <b>Flash point:</b>               | 58.5°               |
| <b>Lower flammability limit:</b>  | 1.5% (in air)       |
| <b>Upper flammability limit:</b>  | 11.5% (in air)      |
| <b>Auto-ignition temperature:</b> | 400°C               |
| <b>Log Pow:</b>                   | 0.06                |
| <b>Viscosity:</b>                 | 2.95 mPa.s at 20°C  |
| <b>Other information:</b>         |                     |

### 10. STABILITY AND REACTIVITY

**Reactivity:** Flammable  
Stable under normal temperature conditions and recommended use

**Chemical stability:** Stable under normal conditions

**Possibility of hazardous reactions:** Vapours may ignite

**Conditions to avoid:** Avoid contact with oxidising substances  
Keep away from static electricity  
Keep away from heat and sources of ignition

**Incompatible materials:** Incompatible with oxidizing substances  
Incompatible with strong acids

**Hazardous Decomposition Products:** Decomposition products may include carbon dioxide

### 11. TOXICOLOGICAL INFORMATION

**Information on toxicological effects:** LD50 (oral, rat) >2000 mg/kg  
LD50 (skin, rat) >5000 mg/kg  
LC50 (inhalation, rat) 5.4 mg/l/4h

**Inhalation:** Causes irritation

**Contact with skin:** May cause irritation

[cont...]

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|                           |                                     |
|---------------------------|-------------------------------------|
| <b>Contact with eyes:</b> | Can cause damage to the eyes        |
| <b>Ingestion:</b>         | Harmful if swallowed.               |
| <b>Carcinogenicity:</b>   | No evidence of carcinogenic effects |
| <b>Teratogenicity:</b>    | No evidence of reproductive effects |
| <b>Mutagenicity:</b>      | No evidence of reproductive effects |

### 12. ECOLOGICAL INFORMATION

|  |   |
|--|---|
| <b>Toxicity:</b>                           | LC50 (fish) 320 mg/l (96 hr)<br>EC50 (Daphnia magna) 683 mg/l (48 hr)<br>IC50 (algae) 2200 mg/l |
| <b>Persistence and degradability:</b>      | Readily biodegradable.  |
| <b>Bioaccumulation Potential:</b>          | Bioaccumulation is insignificant.   |
| <b>Mobility in soil:</b>                   | Soluble in water.   |
| <b>Results of PBT and vPvB assessment:</b> | Not a PBT according to REACH Annex XIII.  |
| <b>Other Adverse Effects:</b>              | On available data, substance is not harmful to the environment.                                 |

### 13. DISPOSAL CONSIDERATIONS

|                                 |  |
|---------------------------------|--|
| <b>Waste treatment methods:</b> | Incinerate under controlled conditions, using incinerator suitable for the disposal of noxious chemical waste.<br>This material and/or its container must be disposed of as hazardous waste. |
| <b>Classification:</b>          | Must be dealt with as Hazardous Waste.   |

### 14. TRANSPORT INFORMATION

|  |               |
|--|---------------|
| <b>UN Number:</b>  | 1192          |
| <b>UN Proper Shipping Name:</b>  | ETHYL LACTATE |
| <b>Transport hazard class(es):</b>   | 3             |
| <b>Packing group:</b>  | III           |
| <b>Environmental hazards:</b>  |               |
| <b>Special precautions for user:</b>   |               |
| <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:</b> |               |

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## Transport Regulations:



### Emergency Action Code:

Proper Shipping Name: ETHYL LACTATE

EAC: °2Y

### Road/Rail (ADR/RID):

Proper Shipping Name: ETHYL LACTATE

ADR UN No.: 1192

ADR Hazard Class: 3

ADR Item No.:

ADR/RID No.:

Tramcard:

Tunnel Code: D/E

### Sea (IMDG):

Proper Shipping Name: ETHYL LACTATE

IMDG UN No.: 1192

IMDG Hazard Class: 3

IMDG Page No.:

IMDG Pack Group: III

IMDG EmS:

IMDG MFAG:

### Air (ICAO/IATA):

Proper Shipping Name: ETHYL LACTATE

ICAO UN No.: 1192

ICAO Hazard Class: 3

ICAO Packing Group: III

### DOT / CFR (US Department of Transportation):

DOT Proper Shipping Name:

Hazardous Material:

Hazard Class:

Identification Number:

Product RQ (lbs):

[cont...]

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### 15. REGULATORY INFORMATION

**Safety, health and environmental regulations/legislation specific for the substance or mixture:**

Revised SDS to CLP/GHS requirements

**Chemical Safety Assessment:** A Chemical Safety Assessment has been carried out.

**Note:** The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

### 16. OTHER INFORMATION

**Text not given with phrase codes where they are used elsewhere in this safety data sheet:**

H226: Flammable liquid and vapour.

H318: Causes serious eye damage.

H335: May cause respiratory irritation.

R37: Irritating to respiratory system.

R41: Risk of serious damage to eyes.

**Legal disclaimer:** The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.