



JUNSEI

Material safety data sheet

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Catalog Numbers: 54465

Catalog Name: Ethyl lactate

Company Identification:

Junsei Chemical Co., Ltd.

4-16, 4-Chome, Nihonbashi-Honcho, Chuo-ku

Tokyo, 103-0023 JAPAN

EMERGENCY TELEPHONE NUMBER: +81-48-988-3621

Sales Headquarters

6, 1-Chome, Ohmano-cho, Koshigaya, Saitama 343-0844, JAPAN

FAX: +81-48-988-8719 E-mail: shiyaku-t@junsei.co.jp

Web: <http://www.junsei.co.jp/>

CREATION DATE: January 21, 2013

SECTION 2 HAZARDS IDENTIFICATION

Physical and chemical hazard

Flammable liquids : Category 3

Pyrophoric liquids : Out of category

Human health hazard

Acute toxicity Oral : Out of category

Dermal : Out of category

Serious eye damage/eye irritation : Category 2

Specific target organ systemic toxicity(single exposure)

: Category 3(respiratory tract irritation)

Environmental hazard

Hazardous to the aquatic environment-acute hazard : Out of category

Hazardous to the aquatic environment-chronic hazard : Out of category

Pictograms or symbol



Signal word : Warning

Hazard statement : Flammable liquid and vapour.

Causes serious eye irritaion.

May cause respiratory irritaion.

Cautions

Safety measurements :

- Keep away from heat/sparks/open flames/hot surfaces. - no smoking.
- Keep container tightly closed.

- Keep cool.
- Ground/bond container and receiving equipment.
- Use explosion-proof electrical/ventilating/lighting equipment.
- Use only non-sparking tools.
- Take precautionary measures against static discharge.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Wash hands thoroughly after handling.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Use only outdoors or in a well-ventilated area.

First-aid measures :

- In case of fire : Use appropriate method of extinguishing.
- If on skin (or hair) : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- If in eyes : Rinse cautiously with water for several minutes. Remove contact lenses ,if present and easy to do. Continue rinsing.
- If eyes irritation persists: Get medical advice/attention.
- If INHALED : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Storage

- Store in a well-ventilated place. Keep cool.
- Store locked up.

Disposal

- Dispose of contents and containers appropriately in accordance with related regulations.

SECTION 3 COMPOSITION, INFORMATION ON INGREDIENTS

Substance/Mixture : Substance

Component : Ethyl Lactate

Synonyms : Ethyl 2-hydroxypropanoate

Chemical formula : $C_5H_{10}O_3$

Cas number : 97-64-3

US TSCA inventory : Registered

EC number (EINECS): 202-598-0

JAPAN number (ENCS) : 2-1371

Percentage : 97.0.+%

SECTION 4 FIRST AID MEASURES

- If inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
 - If on skin : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 - If in eyes : Rinse cautiously with water for several minutes. Remove contact lenses ,if present and easy to do. Continue rinsing. If eyes irritation persists, get medical advice/attention.
 - If swallowed : Rinse mouth, give plenty of water to dilute. Get medical immediately.
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SECTION 5 FIRE FIGHTING MEASURES

Extinguishing media : Water spray, dry chemical powder, alcohol-resistant foam, carbon dioxide.

Prohibited extinguishing media : Straight streams of water.

Particular fire fighting : Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.

Protection for firefighters : Firefighters should wear protective equipment.

SECTION 6 ACCIDENTAL RELEASE MEASURES

General Information : Use proper personal protective equipment as indicated in Section 8.

Cautions for environment : Avoid release to the rivers, lakes, ocean, groundwater.

Spills/Leak : Vacuum or sweep up material and place into a suitable disposal container.

SECTION 7 HANDLING AND STORAGE

Handling: : Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes.
Use only in a chemical fume hood.

Storage: : Store in a cool, dry place.
Store in a tightly closed container.
Store in well-ventilated place.
Keep away from strong oxidants.

SECTION 8 EXPOSURE CONTROLS, PERSONAL PROTECTION

Engineering Controls : Use adequate ventilation to keep airborne concentrations low.

Occupational exposure limits

ACGIH (2010) : Not established

OELs (2012) : Not established

Personal protective equipment :

Eye Protection : Goggles

Hand Protection : Protective gloves

Skin and body protection : Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection : Wear respiratory protection.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Physical State : Liquid

Appearance : Clear colorless

Odor : Characteristic odor

pH : No data available

Vapor Pressure : 3.75 mmHg (25 °C)

Viscosity : No data available

Boiling Point : 154

Freezing/Melting Point : -26

Autoignition Temperature : 400

Flash Point : 46.1 (Closed Cup)
Explosion Limits, lower : 1.4 %
Explosion Limits, upper : 14.1 %
Decomposition Temperature : No data available
Solubility in water : miscible
Specific Gravity/Density : 1.042 (14/4)
Molecular Formula : $C_5H_{10}O_3$
Molecular Weight : 118.13

SECTION 10 STABILITY AND REACTIVITY

Chemical Stability : Stable in ordinary handling conditions.
Vapors may form explosive mixtures with air.
Conditions to Avoid : Heat, sparks or flames.
Incompatibilities with Other Materials : Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide.
Hazardous Polymerization : Will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral : Classified into out of category based on rat oral $LD_{50} > 2,000$ mg/kg bw. (PATTY (5th, 2001)) .

Dermal : Classified into out of category based on rabbit $LD_{50} > 5,000$ mg/kg bw (HSDB (2012)).

Gas : Not applicable (GHS definition).

Vapours : Not possible to classify because of no data.

Dusts and mists: Not possible to classify because of no data.

Skin corrosion/Irritation: Not possible to classify because of no data.

Serious eye damage/eye irritation: Classified into category 2 based on the description that this substance is irritating in the eye irritation test with the rabbits (HSDB (2012)).

Respiratory sensitization: Not possible to classify because of no data.

Skin sensitization: Not possible to classify because of insufficient data.

Mutagenicity: Not possible to classify because of no data.

Carcinogenic effects: Not possible to classify because of no data.

Effects on the reproductive system: Not possible to classify because of no data.

Specific target organ systemic toxicity single exposure

: Classified into Category 3 (respiratory irritation) based on the statement "inhalation by 400ppm causes the respiratory irritation(nose and throat) in human (HSDB (2012))".

Specific target organ systemic toxicity repeated exposure

: Not possible to classify because of no data.

Aspiration hazard : Not possible to classify because of no data.

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity:

Hazardous to the aquatic environment (acute) : Classified into out of category based on 96hr.
LC₅₀ = 320 mg/L of fishes(Zebrafish) , 48hr.EC₅₀=560mg/L of Crustacea(Daphnia magna.) and 72hr.EC₅₀ = 3,500mg/L of Algae (Pseudokirchneriella subcapitata) (AQUIRE, 2010).

Hazardous to the aquatic environment (chronic) : Classified into out of category based on aqueous solubility(1,000,000 mg/L (PHYSPROP Database, 2010)) and low acute toxicity.

SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

SECTION 14 TRANSPORT INFORMATION

IATA Shipping Name: Ethyl Lactate
Hazard Class: 3 (Flammable liquid)
UN Number: 1192
Packing Group:
IMO Shipping Name: ETHYL LACTATE
Hazard Class: 3 (Flammable liquid)
UN Number :1192
Packing Group:
RID/ADR Shipping Name: Ethyl Lactate
Hazard Class: 3 (Flammable liquid)
UN Number :1192
Packing Group:

SECTION 15 REGULATORY INFORMATION

Fire Service Act
: Article 2, Category inflammable liquid
Industrial Safety and Health Act
: Not regulated
Ordinance for Enforcement of the Civil Aeronautics Act
: Article 194 in Regulation 3 inflammable liquid(flash point ; not more than 60)
Regulations for the carriage and storage of dangerous goods in ship
: Article 2 No.1 (1) inflammable liquids
Substance Registration :
Australia (AICS) : Registration
Canada(DSL) : Registration
Korea number (ECL) : KE-20855
China(IECSC) : Registration

SECTION 16 OTHER INFORMATION

REFERENCES:

- The Merck Index 14 edition, Monographs No. 3817
- Chemical Risk Information Platform (CHRIP)

- Information about the status of the implementation of GHS in Japan (ID= 21A3515)
- Registry of Toxic Effects of Chemical Substances, No OD5075000
- Hazardous Substances Data Bank (HSDB)

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.

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