



# MATERIAL SAFETY DATA SHEET

L-ETHYL LACTATE

## SECTION 1- MATERIAL/COMPANY IDENTIFICATION

Company Name Musashino Chemical (China) Co., Ltd.  
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Charge Department Safety Management Department  
Responsibility for MSDS Safety Manager Fan Gui-Zeng  
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MSDS Revision Date June 12, 2010

## SECTION 2- COMPSITION/INFORMATION ON INGREDIENTS

Chemical name Ethyl-L(S)-2-Hydroxy propionate  
Component 98% up  
Formula  $\text{CH}_3\text{CH}(\text{OH})\text{COOCH}_2\text{CH}_3$   
Mol.W. 118.13  
CAS NO. 687-47-8  
UN Dangerous Goods 1192  
Number

## SECTION 3- HAZARDS IDENTIFICATION

Class Name 3.3 High flash-point flammable liquid  
Human Health Effects Vapor may cause irritant of eyes, mucous membranes and skin

## SECTION 4- FIRST AID MEASURES

General advice Show this safety data sheet to the doctor in attendance.  
Skin contact Immediately remove all contaminated clothing, including  
footwear. flush skin and hair with plenty of water or tepid water.  
Eye contact Immediately hold eyelids apart and flush eyes with plenty of  
water at least 15minutes.If irritation persists, call a physician.  
Inhalation Immediately remove to fresh air.  
If breathing is difficult, give oxygen, call a physician.  
Ingestion If swallowed, give plenty of water or salt water.  
If in doubt, Call a physician immediately.

## SECTION 5- FIRE FIGHTING MEASURES

Specific hazards Flammable. Can happen explosion in fire and high temperature.  
Chemical reaction with strong oxidizing agents. Burning  
produces irritant fumes

Extinguishing media Remove a source of fire. Use a fire extinguisher. Cool the container with plenty of water. Standing upwind side and wear breathing apparatus.  
Water, carbon dioxide(CO<sub>2</sub>), foam.

## SECTION 6- ACCIDENTAL RELEASE MEASURES

Personal precautions Prepare extinguishing media before starting on cleaning.  
Wear protective clothing and self-contained breathing apparatus.  
Avoid contact with skin and eyes. Take person refuge in upwind side. Keep person out the place. Keep away from heat and flames promptly.

Environmental precautions Prevent further leakage or spillage, Prevent product from entering drains

Methods for cleaning up In case of small quantities of leakage, pack a absorbent material into container after absorbing spilled material. Clean up the leaked place with plenty of water.  
In case of large quantities of leakage, Tighten rope around the leakage place. Flush spilled material into container after leading to suitable retaining areas stopping the fluid by sand and the like.  
Clean up the leaked place with plenty water.

## SECTION 7- HANDLING AND STORAGE

Handling Caution not to generate firer, as to fire, static electricity, and spark.  
Take account of preventing the materials from leak.  
Wear protective clothing to prevent from contacting and inhaling the materials.

Storage Avoid direct rays of the sun.  
Keep container tightly closed.  
Keep away from high temperature substances.  
Use earth and anti-explosive electric-apparatus in storage areas.

Packaging material Polyethylene plastic containers etc.

## SECTION 8- EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering measures to reduce exposure Ensure adequate ventilation, especially in confined areas.

Personal protection equipment Wear personal protective equipment. Avoid contact with skin and eyes. Especially if necessary, wear organic gas mask, air mask, or self-contained breathing apparatus.

Hygiene measures Set up safety shower, hands washer and eyes washer nearby handling the materials. Indicate the positions distinctly. When using, do not eat, drink or smoke. Remove and wash

contaminated clothing before re-use.

## SECTION 9- PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colorless to yellowish Clear liquid having an characteristic odor.
Boiling point	154°C
Vapor pressure	2.79kPa(20°C) 5.33kPa(30°C)
Melting point	-25°C
Flash point	53.5°C(closed up)
Autoignition temperature	400°C
Explosion limits	Lower 1.5 vol% upper 11.4 vol%
Density(20°C)	1.030~1.038g/ml
Solubility	Freely soluble in water, most organic solvents
Viscosity	2.8 mPa.s @25°C

## SECTION 10- STABILITY AND REACTIVITY

Stability	Stable at normal conditions. Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures above 53.5°C
Materials to avoid	Avoid oxidizing agents, acid, alkaline, water,
Hazardous decomposition products	CO, CO <sub>2</sub>

## SECTION 11- TOXICOLOGICAL INFORMATION

Acute toxicity	LD50 2500 mg/ kg bw. (mouse, oral)
	LD50 >5000 mg/ kg bw. (rat, oral)
	LC50 > 5.62 g/m <sup>3</sup> (rat)

## SECTION 12- ECOLOGICAL INFORMATION

Mobility	Completely soluble, readily biodegradable and hydrolyses, no hazardous polymerization.
Chemical Oxygen Demand (COD)	1.78 g O <sub>2</sub> /g
Biochemical Oxygen Demand (BOD) <sub>20</sub>	1.43 g O <sub>2</sub> /g

## SECTION 13- DISPOSAL CONSIDERATIONS

Waste from residues/unused products	Burn up absorbent sand gradually in the opened incinerator after absorbing the materials, or burn up the materials directly in the incinerator through atomizer.
Contaminated packaging	Decontaminate empty containers with water, dilute with water and flush to waste system. Recycle containers if possible.

Further information Treatment, storage, transportation, and disposal must be in accordance with local regulations.

## SECTION 14- TRANSPORTATION INFORMATION

China Dangerous Goods No.33602

UN Dangerous Goods No. 1192

Packaging Class III

Packaging label 3

Sticking properly on label, indicating material name, lot No., net weight etc

Further information The materials transportation by vehicles, the sender serves deliverers with instructions for safe handling.

In transportation confirm leakless of the container, and load the materials not to upset, fall and damage. Secure preventing the load from falling.

## SECTION 15- REGULATORY INFORMATION

CHIMICAL DANGEROUS SUBSTANCES SAFETY MANAGEMETN REGULATORY(CHINA)

CHIMICAL DANGEROUS SUBSTANCES SAFETY MANAGEMETN DETAILED RULES AND REGULATORY(CHINA)

SAFETY USING CHEMICAL REGULATORY IN WORKING SITE (CHINA)

Class 3.3 High flash-point flammable liquid