

MATERIAL SAFETY DATA SHEET

L-ETHYL LACTATE

MSDS NO.011

SECTION 1- MATERIAL/COMPANY IDENTIFICATION

Chemical Name	Ethyl-L(S)-2-hydroxypropionate
Company Name	Musashino Chemical (China) Co., Ltd.
Address	No.66 Chunfeng Rd. Economic & Technological Development Zone of Yichun, Jiangxi. 336000 China
Charge Department for MSDS	Safety Management Department
Responsibility for MSDS	Fan Gui-Zeng
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SECTION 2- HAZARDS IDENTIFICATION

Symbols	Xi - Irritant 3.3 class flammable products
Human Health Effects	Vapor may cause irritant of eyes, mucous membranes and skin

SECTION 3- COMPSITION/INFORMATION ON INGREDIENTS

Chemical name	Ethyl-L(S)-2-hydroxypropionate
Component	98% up
Formula	CH ₃ CH(OH)COOCH ₂ CH ₃
Molecular Weight	118.13
CAS No.	687-47-8
UN No	1192

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, drink plenty of water or salt water. If in doubt, Call a physician immediately.

SECTION 5- FIRE FIGHTING MEASURES

Specific hazards	Flammable. Can be 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 (CO₂), foam, dry power.

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 an 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	Transparent, Clear liquid having a characteristic odor.
Boiling point	154°C at 17 hPa-lit

Density (20°C)	1.030 ~ 1.038 g/ml(20°C)
Vapor pressure	2.79 kPa (20°C) 5.33 kPa (30°C)
Melting point	-25°C
Flash point	53.5°C (closed cup)
Auto ignition temperature	400°C
Explosion limits	up11.4 vol % less1.5 vol %
Solubility	No data available
Viscosity	2.8 densitymPa.s (25°C)

SECTION 10- STABILITY AND REACTIVITY

Stability	Stable at normal conditions. Avoid high than 200°C
Hazardous Polymerization	Non
Materials to avoid	Strong oxidant, acid, alkali, water, air, more than 55 °C high temperature
Combustion products (decomposition)	carbonic oxide and carbon dioxide

SECTION 11- TOXICOLOGICAL INFORMATION

Acute toxicity	Median lethal dose LD50 above 5000 mg/kg bw. (mice through the mouth)
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SECTION 12- ECOLOGICAL INFORMATION

Solubility	Completely soluble, readily biodegradable and hydrolyses, no hazardous polymerization.
COD	1.78 g O ₂ /g
BOD	1.43 g O ₂ /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

Packaging label	Class 3 sticking properly on label, indicating material name, lot No., net weight etc
UN-No	1192
Packing classify	Class 3
Further information	The materials transportation by vehicles, the sender serves deliverers with instructions for safe handling. In transportation confirm leak less of the container, and load the materials not to upset, fall and damage. Secure preventing the

load from falling.

SECTION 15- REGULATORY INFORMATION

Risks	R10 flammable R37/R36-Irritating to eyes and respiratory system R41-Have serious harm to the eyes
Safety term	R24-Avoid skin contact
US Regulations	S6-If contact with eye, Immediately hold eyelids apart and flush eyes with plenty of water at least 15minutes. S39-Wear goggles.
China Regulations	Chemical Dangerous Substances Safety Management Regulatory Chemical Dangerous Substances Safety Management Detailed Rules And Regulatory Safety Using Chemical Regulatory In Working Site

SECTION 16- OTHER INFORMATION

Revision Date	20120/06/01
CAS No	687-47-8
LC50	Median lethal concentration
LD50	Median lethal dose