

MATERIAL SAFETY DATA SHEET

DL-LACTIC ACID

MSDS NO.013

SECTION 1- MATERIAL/COMPANY IDENTIFICATION

Chemical Name	DL-2-Hydroxy propionic acid
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
Tel.	+86-795-3156266
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SECTION 2- HAZARDS IDENTIFICATION

Symbols	Xi - Irritant
Skin contact	Irritant
Health hazard	Skin contact may cause severe skin irritation with discomfort or rash. Prolonged exposure may cause skin burns or ulceration.

SECTION 3- COMPSITION/INFORMATION ON INGREDIENTS

Chemical name	DL-2-Hydroxy propionic acid
Component	Lactic Acid (90% aqueous solution)
Formula	CH ₃ CH(OH)COOH
Molecular Weight	90.08

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

Flammability	Product is considered non-flammable.
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Fire extinguish	Remove a source of fire. Use a fire extinguisher.
Extinguishing media	Dry Chemicals, Water, carbon dioxide (CO ₂), foam.
Specific hazards	Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 6- ACCIDENTAL RELEASE MEASURES

Personal precautions	Wear chemical splash goggles, rubber boots and rubber gloves. Avoid contact with skin and eyes.
Environmental precautions	Prevent further leakage or spillage.
Methods for cleaning up	Neutralized the materials with sodium carbonate or sodium hydrogen carbonate. Pack an absorbent material into a properly labeled container after absorbing neutralized solution with sand or diatom earth. Clean up the leaked place with plenty of water

SECTION 7- HANDLING AND STORAGE

Handling	Wear personal protective equipment to prevent skin contacting acid liquid. Keep the container well when handling
Storage	Keep container tightly closed. Keep in properly labeled containers. Store in areas shielded the light, and below room temperature. Keep away from strong bases storage areas.
Packaging material	Polyethylene plastic containers etc.

SECTION 8- EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protection equipment	Wear protective clothing. Safety glasses face shield and rubber gloves. Breathing apparatus needed only when aerosol or mist is formed.
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 or yellowish syrupy liquid having an acid taste. Odorless or a slight characteristic odor.
Density(20°C)	1.08~1.20g/ml (33~90% lactic acid solution)
PH	< 2 (25°C)
Boiling point	125°C(90% solution)
Flash point	>112°C
Decomposition temperature	>200°C

Solubility	Soluble in water, alcohol.
Corrosion test	4.5~60 mPa.s (25°C) (33~90% lactic acid solution)
Viscosity	On metal non corrosive (SUS-41 1.14 mm/year)

SECTION 10- STABILITY AND REACTIVITY

Stability	Stable at normal conditions. Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures above 200°C
Materials to avoid	Avoid oxidizing agents, alkaline substances. Exothermic reaction with alkaline substances.

SECTION 11- TOXICOLOGICAL INFORMATION

Acute toxicity	LD50 4875 mg/kg bw. (mouse, oral) (as 100% lactic acid) LD50 3730 mg/kg bw. (rat, oral) (as 100% lactic acid)
Irritation	500 mg/24 hr sev. (rabbit skin) 750 µg sev. (rabbit eye)
Carcinogenicity	Bacterial mutagenic test: Negative
Skin Contact	Irritant

SECTION 12- ECOLOGICAL INFORMATION

Mobility	Completely soluble, readily biodegradable does not occur hazardous polymerization.
Chemical Oxygen Demand (COD)	0.9 g O ₂ /g
Biochemical Oxygen Demand (BOD) ₂₀	0.67 g O ₂ /g
Bioaccumulation	None
Ecotoxicity	EC50/48h/Daphnia = 240mg/l LC50/48h/Fish = 320mg/l EC50/Algae= 3500mg/l (neutral)

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

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

US Regulations	US TSCA Inventory Status Y
FDA	GRAS
R-Phrases	R41-Risk of serious damage to eyes. R38-Irritation to skin.
S-Phrases	S24-Avoid contact with skin. S26-In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S37/39-Wear suitable gloves and eye/face protection.
China Regulations	The safe use of chemicals regulation workplace China: Food additives (Food safety law) China: Cosmetics raw materials (Drug law)

SECTION 16- OTHER INFORMATION

Revision Date	2020/06/01
EEC-NO.	E270
EC-NO.	201-196-2
LC50	Median lethal concentration
LD50	Median lethal dose
FDA	The food and drug administration