

Material Safety Data Sheet _ Lactic Acid

MSDS-01

Section 1- Identification of the Substance/Preparation and the Company Undertaking

1.1 Identification of the substance or preparation

LACTIC ACID

1.2 Use of the substance/preparation

To be used as acidulant, acidity modifier, flavouring agent, preservative in the food industries, as natural antibiotics in the feed industries or cleaning agent in cleaning.

1.3 Company/undertaking identification

1.4. Emergency telephone

Section 2- Composition / Information on Ingredients

Chemical nature of the preparation Lactic Acid; alpha-Hydroxypropionic acid

Chemical Name	CAS#	Percent (%)	EINECS/ELINCS
Lactic acid	79-33-4; 50-21-5(general)	50-90	200-018-0
Water		balance	

Section 3- Hazards Identification

Most important hazards Irritating to eyes and skin. Risk of serious damage to eyes.

Section 4- First Aid Measures

General advice

Show this safety data sheet to the doctor in attendance.

Inhalation

Immediate medical attention is not required. Move to fresh air.

Skin contact

Immediate medical attention is not required
Wash off immediately with soap and plenty of water
removing all contaminated clothes and shoes

Eye contact

Immediate medical attention is not required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.

Ingestion

Immediate medical attention is required. Drink plenty of water. Do not induce vomiting. Call a physician immediately.

Protection of first-aiders

Wear personal protective equipment.

Section 5- Fire-fighting Measures

Suitable extinguishing media

Water, carbon dioxide (CO₂), foam.

Extinguishing media which must not be used for safety reasons

None.

Specific hazards

Thermal decomposition can lead to release of irritating gases and vapours.

Special protective equipment for firefighters

Use personal protective equipment.

Specific methods

Standard procedure for chemical fires.

Section 6- Accidental Release measures

Personal precautions

Use personal protective equipment.

Avoid contact with skin and eyes.

Environmental precautions

Prevent further leakage or spillage. No special environmental precautions required.

Methods for cleaning up

Neutralize with soda or sodium carbonate and flush with plenty of water.

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

Pick up and transfer to properly labelled containers.

After cleaning, flush away traces with water.

Section 7- Handling and Storage

Handling

Technical measures/Precautions

Avoid temperatures above 200°C.

Safe handling advice

Wear personal protective equipment.

Do not breathe spray mist.

Storage

Technical measures/Storage conditions

Keep container tightly closed; Keep in properly labelled containers; keep in cool, dry, sunless and ventilative place.

Incompatible products

No data available.

Packaging material

Plastic or stainless steel 316 L containers.

Section 8- Exposure Controls / Personal Protection

Engineering measures to reduce exposure

Ensure adequate ventilation, especially in confined areas.

Control parameters

None.

Personal protection equipment

Respiratory protection

Not required; except in case of aerosol formation.

Breathing apparatus needed only when aerosol or mist is formed.

Hand protection

Rubber gloves. Break through time > 8 hours.

Eye protection

Face-shield.

Skin and body protection

Long sleeved clothing, chemical resistant apron boots.

Hygiene measures

Avoid contact with skin When using, do not eat, drink or smoke.

Remove and wash contaminated clothing before re-use.

Section 9- Physical and Chemical Properties

Form aqueous solution

Colour colourless to yellowish

Odour characteristic

pH < 2.0@ 20 °C (10% solution)

Boiling point/range 120°C @ 15 mm Hg

Acidity (pK_a) 3.85

Decomposition temperature > 180°C

Flash point > 112 C

Autoignition temperature none

Explosion limits not applicable

Vapor Pressure: 0.0813 mm Hg @ 25°C

Specific Gravity/Density: 1.18-1.25 g/cm³ @20°C (H₂O=1)

Solubility Water solubility: completely soluble

Partition coefficient (n-octanol/water) no data available

Viscosity 5-60 mPa.s @ 25 °C (50-90%)

Section 10- Stability and Reactivity

Stability

Stable at normal conditions. Hazardous polymerisation does not occur.

Conditions to avoid

Avoid temperatures above 200°C.

Materials to avoid

Oxidizing agents.

Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapours.

Section 11- Toxicological Information

Acute toxicity

Draize test, rabbit, eye: 750 ug Severe;

Draize test, rabbit, skin: 5 mg/24H Severe;

Draize test, rabbit, skin: 100 mg/24H Moderate;

LD50/oral/rat = 3543 mg/kg

LD50/oral/mouse = 4875 mg/kg

LD50/dermal/rabbit > 2000mg/kg

Local effects

Irritating to eyes and skin.

Risk of serious damage to eyes.

Inhalation of mist causes irritation of respiratory system.

Specific effects

Did not show carcinogenic effects in animal experiments.

Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Section 12- Ecological Information

Mobility

Completely soluble.

Persistence / degradability

Readily biodegradable, according to appropriate OECD test.

Biochemical oxygen demand (BOD)₅ = 0.45 mg O₂ /mg

Biochemical oxygen demand (BOD)₂₀ = 0.60 mg O₂/mg

Chemical oxygen demand (COD) = 0.90 mg O₂ /mg

Bioaccumulation

None.

Ecotoxicity

EC₅₀/48h/Daphnia = 240mg/l

LC₅₀/48h/Fish = 320 mg/l

EC₅₀/Algae = 3500 mg/l (neutral)

Section 13- Disposal Considerations

Waste from residues / unused products

Can be disposed as waste water, when in compliance with local regulations.

Can be landfilled or incinerated, when in compliance with local regulations.

Contaminated packaging

Clean container with water.

Empty containers should be taken for local recycling, recovery or waste disposal.

Further information

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

Section 14- Transport Information

Not classified as dangerous in the meaning of transport regulations.

Section 15- Regulatory Information

The product is classified in accordance with Annex VI to Directive 67/548/EEC.

Symbols Xi - Irritant

R- Phrases R41 - Risk of serious damage to eyes.

R38 - Irritating 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.

EU food additive number: E 270

USA : GRAS

German Water Hazard Class (WGK): 1

Section 16- Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Henan Jindan lactic Acid Technology Co.,Ltd be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Henan Jindan lactic Acid Technology Co.,Ltd has been advised of the possibility of such damages.