



OCI Company Ltd.

Material Safety Data Sheet

MSDS

Lactic Acid

Section 1 - Chemical Product and Company Identification

Substance : Lactic acid

Recommended use : Not available

Restriction of use : Not available

Company Identification

Company : OCI Company Ltd.

Address : 230, Dokbae-ro, Nam-gu, Incheon, KOREA

Tel No. : 82 - 32 - 860 - 6114

Section 2 - Hazards Identification

- 1) Hazard Classification
- Metal corrosion : 1
 - Skin corrosion / irritation : 2
 - Serious eye damage / Eye irritation : 1
 - Reproductive toxicity : 2
 - Specific target organ toxicity : 1

2) Warning signal

Symbol



Signal word

Warning

Hazard statement

- H290 May be corrosive to metals
- H315 Causes skin irritation
- H318 Causes serious eye damage
- H335 May cause respiratory irritation
- H361 Suspected of damaging fertility or the unborn child

Prevention precautionary statements

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P234 Keep only in original container.
- P261 Pressurized container: Do not pierce or burn, even after use.
- P264 Wash thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.

P281 Use personal protective equipment as required.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice/attention.
P310 Immediately call a POISON CENTER or doctor/physician.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P321 Specific treatment (see ... on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362 Wash with plenty of soap and water.
P390 Absorb spillage to prevent material damage.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P406 Store in corrosive resistant/container with a resistant inner liner.
P501 Dispose of contents/container to the related laws.

3) NFPA	
Health Rating	3
Flammability Rating	1
Reactivity Rating	0

Section 3 - Composition, Information on Ingredients

COMPONENT: Lactic acid
CAS No.: 50-21-5
PERCENTAGE: > 85

Section 4 - First Aid Measures

General:

Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.

Inhalation:

Move to fresh air. Get medical attention if symptoms persist. If breathing stops, provide artificial respiration. For breathing difficulties, oxygen may be necessary.

Ingestion:

DO NOT INDUCE VOMITING. Drink a few glasses of water or milk. Get medical attention immediately.

Skin Contact:

Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

Eye Contact:

Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately.

Notes to the physician Treatment:

Symptoms may be delayed.

Section 5 - Fire Fighting Measures

Extinguishing media:

Water spray, foam, dry powder or carbon dioxide.

Unsuitable extinguishing media:

None known.

Unusual Fire & Explosion Hazards:

None known.

Special Fire Fighting Procedures:

Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.

Protective Measures:

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Section 6 - Accidental Release Measures

Personal precautions:

Keep unauthorized personnel away. Ventilate closed spaces before entering them. Use personal protective equipment. See Section 8 of the MSDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

Environmental precautions:

Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

Spill Cleanup Methods:

Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures:

Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.

Section 7 - Handling and Storage

Handling:

Use personal protective equipment as required. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

Storage:

Keep containers tightly closed. Store in a well-ventilated place. Store in a dry place.

Section 8 - Exposure Controls, Personal Protection

Exposure limits

None of the components have assigned exposure limits.

Protective Measures:

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

Respiratory Protection:

In case of inadequate ventilation use suitable respirator. Chemical respirator with organic vapor cartridge.

Eye protection:

Wear safety glasses with side shields (or goggles) and a face shield.

Skin and Body Protection:

Wear suitable protective clothing.

Hygiene measures:

Provide eyewash station and safety shower. Avoid contact with eyes, skin, and clothing. Do not eat, drink or smoke when using the product. Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Wash contaminated clothing before reuse.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: Liquid (Note: Solid below 62°F) - clear colorless to slightly yellow

Odor: Slight acrid odor

pH: No data available.

Freezing point: 17 °C

Boiling Point: 122 °C (1.999835 kPa)

Flash Point: > 112 °C

Evaporation Rate: No data available.

Flammability (solid, gas): No data available.

Flammability Limit - Upper (%)—: No data available.

Flammability Limit - Lower (%)—: No data available.

Vapor pressure: No data available.

Vapor density (air=1): No data available.

Relative density: 1.2

Solubility in Water: Miscible with water.

Solubility (other): No data available.

Partition coefficient (n-octanol/water): No data available.

Autoignition Temperature: No data available.

Decomposition Temperature: No data available.

Viscosity: No data available.

Explosive properties: No data available.

Oxidizing properties: No data available.

Section 10 - Stability and Reactivity

Stability:

Material is stable under normal conditions.

Possibility of hazardous reactions:

Hazardous polymerization does not occur.

Conditions to avoid:

Heat. Contact with incompatible materials.

Incompatible materials:

Hydrofluoric Acid. Oxidizing agents. Iodides. Albumin.

Hazardous decomposition products:

Thermal decomposition may release oxides of carbon.

Section 11 - Toxicological Information

Acute Toxicity (Oral):

LD 50 (Rat): 3,730 mg/kg

LD 50 (Guinea pig): 1,810 mg/kg

Acute Toxicity (Inhalation):

LC 50 (Rat, 4 h): 7.94 mg/l

Inhalation:

Harmful if inhaled.

Ingestion:

Harmful if swallowed.

Skin corrosion/irritation:

Causes skin irritation.

Serious eye damage/eye irritation:

Causes serious eye damage.

Respiratory sensitizer/Skin sensitizer:

Not a skin sensitizer.

Carcinogenicity:

This substance has no evidence of carcinogenic properties.

Mutagenesis:

No mutagenic components identified

Reproductive toxicity:

No components toxic to reproduction

Other Effects:

None known.

Section 12 - Ecological Information

Ecotoxicity:

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Acute toxicity(Fish): No data available.

Chronic Toxicity(Fish): No data available.

Acute toxicity(Aquatic invertebrates): No data available.

Chronic Toxicity(Aquatic invertebrates): No data available.

Acute toxicity(Aquatic plants): No data available.

Persistence and degradability: Expected to be readily biodegradable.

Bioaccumulative potential: No data available on bioaccumulation.

Mobility: No data available.

Section 13 - Disposal Considerations

Disposal Methods:

Discharge, treatment, or disposal may be subject to national, state, or local laws.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

Section 14 - Transport Information

DOT

UN number: UN 3265

Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s.(Lactic Acid)

Transport hazard class(es): 8

Subsidiary risk label: -

Packing group: II

Label(s): 8

Marine Pollutant

IMDG - International Maritime Dangerous Goods Code

UN number: UN 3265

UN proper shipping name: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.(Lactic Acid)

Transport hazard class(es): 8

Subsidiary risk label: -

Packing group: II

Label(s): 8

Marine Pollutant:

EmS No.: F-A; S-B

IATA

UN number: UN 3265

Proper Shipping Name: Corrosive liquid, acidic, organic, n.o.s.(Lactic Acid)

Transport hazard class(es): 8

Subsidiary risk label: -

Packing group: II

Label(s): 8

Section 15 - Regulatory Information

Inventory Status:

Australia AICS: On or in compliance with the inventory
Canada DSL Inventory List: On or in compliance with the inventory
EU EINECS List: On or in compliance with the inventory
EU ELINCS List: Not in compliance with the inventory.
Japan (ENCS) List: On or in compliance with the inventory
EU No Longer Polymers List: Not in compliance with the inventory.
China Inv. Existing Chemical Substances: On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI): On or in compliance with the inventory
Canada NDSL Inventory: Not in compliance with the inventory.
Philippines PICCS: On or in compliance with the inventory
US TSCA Inventory: On or in compliance with the inventory
New Zealand Inventory of Chemicals: On or in compliance with the inventory
Switzerland Consolidated Inventory: Not in compliance with the inventory.
Japan ISHL Listing: On or in compliance with the inventory
Japan Pharmacopoeia Listing: Not in compliance with the inventory.

US Regulations

CERCLA Hazardous Substance List (40 CFR 302.4):
Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3): None
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130): None

SARA Title III

Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A): None None
Section 311/312 (40 CFR 370): X Acute (Immediate)
Chronic (Delayed)
X Fire
Reactive
Pressure Generating
Section 313 Toxic Release Inventory (40 CFR 372): None present or none present in regulated quantities.

State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): No ingredient regulated
by CA Prop 65 present.
Massachusetts Right-To-Know List: No ingredient regulated by MA Right-to-Know Law present.
New Jersey Right-To-Know List: LACTIC ACID Listed
Pennsylvania Right-To-Know List: LACTIC ACID Listed

Section 16 - Other Information

Sources : KOSHA, National Emergency Management Agency

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