

# Safety Data Sheet

According to Regulation (EU) No. 1907/2006 (REACH), Annex II

Version: 1.0/EN

Revision date: 15/01/2014

Product name: Lactic acid CAS No. 79-33-4 EC No. 201-196-2

Printing date: 15/01/2014

## Section 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

**Substance name:** L-(+)-lactic acid 80% food grade  
**REACH Reg. No.:** The substance has been pre-registered. The transition time according to REACH Regulation, Article 23 is still not expired.  
**Index No.:** Not available.  
**CAS No.:** 79-33-4,  
50-21-5 (general CAS number)  
**EC No.:** 201-196-2,  
200-018-0 (general EC number)

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

**Identified uses:** It is used as acidulant, pH modifier, flavouring agent, preservative in the food and beverage, as natural antibiotics in the feeding stuff, it is also used as cleaning agent or antiseptic/disinfectant/pesticide in washing/cleaning and biocidal products, or it is used as raw material be used to produce lactates and mixture formulation, or to produce lactide or PLA (poly-lactic acid).  
**Uses advised against:** Not available.

### 1.3 Details of the supplier of the SDS

**Only representative:** REACH COMPLIANCE SERVICES LIMITED  
**Address:** Suite 1E, Paramount Court, Corrig Road, Sandyford, Dublin 18, Ireland  
**E-mail:** Info@reach24h.com  
**Telephone:** 00353 (0)1 8899951  
**Fax:** 00353 (0)1 6865683

**Manufacturer:** HENAN JINDAN LACTIC ACID TECHNOLOGY CO., LTD.  
**Address:** No. 08 Jindan Avenue, Dancheng County, Henan, China  
**Postcode:** 477150  
**E-mail:** jindanla@jindanlactic.com (Ms. Guo Huifen)  
**Telephone:** +86 394 3196766  
**Fax:** +86 394 3195838

### 1.4 Emergency telephone number

Germany: +49-(0)6131-19240, Belgium: +32-(0)70-245245, France: +33-(0)2-41482121, Netherlands: +31-(0)30-2748888, Spain: +34 (0)93 2279833, Italy: +39-(0)3-5269469, Switzerland: +41-(0)1-251515, Poland: +48-(0)58 3016516, Russia: +7-(0)495-6281687, Denmark: +45 (0)82 121212, Austria: +43 (0)1 404002222, Romania: +40 2121 06282, Finland: +358 (0)9 471977, Sweden: +46 (0)8 331231, Norway: +47 22 591300, UK: 0870 600 6266, Ireland: +353 (0)1 8379964, Greece: +30 10 7793777, Turkey: 0 800 314 7900, Portugal: 808 250 143, Czech Republic: +42 (0)2 24919293, Lithuania: +370 (0)2 362052, Bulgaria: +359 (0)2 9154409, Croatia: +385 (0)1 2348342, Hungary: +36 80 201199

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## Section 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008[CLP]

Skin Irritation Category 2; H315

Eye Damage Category 1; H318

Classification according to Council Directive 67/548/EEC

Hazard symbols:



Xi. Irritant

R-phrases: R38; R41

#### Additional information

Full text of R-phrase(s) and H-statement(s): see section 16.

### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Product identifier: L-(+)-lactic acid 80% food grade

Hazard pictogram(s):



GHS05

Signal word: Danger.

Hazard statements: H315: Causes skin irritation.

H318: Causes serious eye damage.

#### Precautionary statements:

Prevention: P264: Wash thoroughly after handling.

P280: Wear protective gloves / protective clothing / eye protection / face protection.

Response: P302 + P352: IF ON SKIN: Wash with plenty of soap and water.

P332 + P313: If skin irritation occurs: Get medical advice/attention.

P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337 + P313: If eye irritation persists: Get medical advice/attention.

P362: Take off contaminated clothing and wash before reuse.

#### Supplemental Hazard information (EUH):

No information available.

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Special rules for supplemental label elements for certain mixtures:

No information available.

## 2.3 Other hazards

No information available.

## Section 3: Composition/information on ingredients

### 3.1 Substance information

Substance name	Synonym	CAS No.	EC No.	Classification under 67/548/EEC	Concentration
L-(+)-lactic acid 80% food grade	(S)-lactic acid 80% food grade (S)-2-hydroxypropionic acid	79-33-4	201-196-2	Xi; R38 Xi; R41	78-92%

Substance name	Synonym	CAS No.	EC No.	Classification under CLP	Concentration
L-(+)-lactic acid 80% food grade	(S)-lactic acid 80% food grade (S)-2-hydroxypropionic acid	79-33-4	201-196-2	Skin Irrit. 2; H315 Eye Dam. 1; H318	78-92%

Remark:

Full text of R-phras(e)s and H-statement(s): see section 16.

The rest unspecified ingredients are impurities, and they are not hazard.

## Section 4: First aid measures

### 4.1 Description of first aid measures

**General notes:** In all cases of doubt, or when symptoms persist, seek medical attention.

**Following inhalation:**

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

**Following skin contact:**

Immediate medical attention is not required.

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.

**Following 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.

**Following ingestion:**

Immediate medical attention is required. Drink plenty of water.

Do not induce vomiting. Call a physician immediately.

**Notes for the doctor:**

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Treat symptomatically and supportively.

Treatment may vary with condition of victim and specifics of incident.

## 4.2 Most important symptoms and effects, both acute and delayed

### Potential Acute Health Effects:

Ingestion: burns, vomiting, gastrointestinal disturbance.

Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath, headache, and dizziness.

Inflammation of the eye is characterized by redness, watering, and itching.

Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

### Potential Chronic Health Effects:

Repeated or prolonged contact with spray mist may produce chronic eye irritation, severe skin irritation, and respiratory tract irritation leading to frequent attacks of bronchial infection.

## 4.3 Indication of the immediate medical attention and special treatment needed

Persons with pre-existing skin, eye, or respiratory disease may be at increased risk from the irritant or allergic properties of this material. Attending physician should treat exposed patients symptomatically.

## Section 5: Fire-fighting measures

### 5.1 Extinguishing media

#### Suitable extinguishing media:

Small fire: Use dry chemical powder. Large fire: Use water spray, fog or foam.

#### Unsuitable extinguishing media:

Do not use water jet.

### 5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: thermal decomposition can lead to release of irritating gases and vapours.

### 5.3 Advice for fire-fighters

As in any fire, wear a self-contained breathing apparatus in pressure-demand, and full protective gear.

## Section 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

See Section 4 for information on emergency procedures.

### 6.2 Environmental precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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## 6.3 Methods and material for containment and cleaning up

Neutralize with soda or sodium carbonate. Soak up with inert absorbent material and dispose of as hazardous waste. (E.g. sand, silica gel, acid binder, universal binder, sawdust).

Keep in suitable, closed containers for disposal. After cleaning, flush away traces with plenty of water.

## 6.4 Reference to other sections

See Section 7 for information on safe handling.

See section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

## Section 7: Handling and storage

### 7.1 Precautions for safe handling

Normal measures for preventive fire protection. Keep container dry. Keep away from heat.

Keep away from sources of ignition. Empty containers pose a fire risk; evaporate the residue under a fume hood. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

### 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Keep in properly labelled containers.

Keep in cool, dry, sunless and ventilative place.

Packaging materials: Plastic or stainless steel 316 L containers.

Storage class: 12 (VCI storage system).

Acid resistant floors; avoid temperatures above 100 °C.

### 7.3 Specific end use(s)

Not available.

## Section 8 : Exposure controls/personal protection

### 8.1 Control parameters

**Occupational exposure limit values:**

There are no currently occupational exposure limit values established for the substance.

**Biological limit values:**

There are no currently biological limit values established for the substance.

**Exposure limits at intended use:**

Not available.

### 8.2 Exposure controls

**Appropriate engineering controls:**

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

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## Personal protective equipment:

Eye and face protection: Safety glasses, Face-shield.

Skin protection: Hand protection: Rubber gloves. Break through time > 8 h.  
The following materials are suitable for protective gloves (Permeation time  $\geq$  8 h):

Natural rubber/Natural latex - NR (0.5 mm) (use non-powdered and allergen free products)

Polychloroprene - CR (0.5 mm)

Nitrile rubber/Nitrile latex - NBR (0.35 mm)

Butyl rubber - Butyl (0.5 mm)

Fluoro carbon rubber - FKM (0.4 mm)

Body protection: Long sleeved clothing, chemical resistant apron boots.

Respiratory protection: Not required; except in case of aerosol formation. Breathing apparatus needed only when aerosol or mist is formed.

Thermal hazards: Not available.

## Environmental exposure controls:

Prevent from entering sewers, basements and workpans, or any place where its accumulation can be dangerous.

## Consumer exposure controls:

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Handle in accordance with good industrial hygiene and safety practice.

Wash hands before breaks and at the end of workday.

## Section 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance:	Liquid
Colour:	Dark Brown
Odour:	Mild acid odor
pH:	< 2.0 at 20 °C (10% solution)
Melting point:	53 °C
Boiling point:	122 °C @ 12 mmHg
Decomposition temperature:	> 200 °C
Flash point:	Not applicable.
Auto-ignition temperature:	Not applicable.
Vapour pressure:	0.0813 hPa at 25 °C
Vapour density:	3.11 (air=1)
Density:	1.19-1.21 g/cm <sup>3</sup> at 25 °C (80% solution)
Bulk density:	Not applicable.
Solubility(ies):	Completely soluble in water at 20 °C
Partition coefficient (n -octanol/water):	Log Pow = ca. -0.62 at 20 °C (OECD Guide-line 117)
Viscosity, dynamic:	No data available.

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**Flammability:** Not auto flammable.

## 9.2 Other information

No data available.

## Section 10: Stability and reactivity

### 10.1 Reactivity

Decomposition when heated.

Incompatible with iodides, hydrofluoric acid and nitric acid, oxidizing agents, Albumin.

Mixtures of lactic acid, hydrofluoric acid and nitric acid are unstable and should not be stored.

Lactic acid and nitric acid react autocatalytically after a quiescent period, attaining a temperature of about 90 °C with vigorous gas evolution after about 12 h.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No dangerous reactions known. Hazardous polymerization does not occur.

### 10.4 Conditions to avoid

Heating, Avoid temperatures above 200 °C. Incompatible materials.

### 10.5 Incompatible materials

Oxidizing agents, alkali materials.

### 10.6 Hazardous decomposition products

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

Hazardous decomposition products formed under fire conditions. - Carbon oxides.

## Section 11: Toxicological information

### 11.1 Toxicokinetics, metabolism and distribution

Not available.

### 11.2 Information on toxicological effects

#### Acute toxicity:

Acute Oral toxicity: LD<sub>50</sub> = 3730 mg/kg (rat) (IUCLID OECD Guide-line 401);

Acute Inhalation toxicity: No data available.

Acute Dermal toxicity: LD<sub>50</sub> > 2000 mg/kg (rabbit) (IUCLID OECD Guide-line 402);

Skin corrosion/irritation:

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Draize test, rabbit, skin: 500 mg/24h Severe;

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

Skin, rabbit: irritating (OECD Guide-line 404)

**Serious eye damage/irritation:**

Draize test, rabbit, eye: 750 ug Severe.

**Respiratory or skin sensitization:**

No data available.

**CMR effects (Carcinogenicity, Mutagenicity and Toxicity for Reproduction):**

**Carcinogenicity:**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC, ACGIH, NTP, OSHA.

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

**Toxicity for Reproduction:** No data available.

**STOT-single exposure and repeated exposure:**

No data available.

**Symptoms related to the physical, chemical and toxicological characteristics:**

**In case of ingestion:** Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May cause stomach perforation.

**In case of skin contact:** May cause skin irritation. Prolonged skin contact may produce dermatitis.

**In case of inhalation:** Inhalation of vapors is irritating to the respiratory system, may cause throat pain and cough. Inhalation of vapors in high concentration may cause shortness of breath (lung oedema). Chronic exposure may cause dermatitis, gastrointestinal disturbance, coughing.

**In case of eye contact:** Severe eye irritation. Risk of serious damage to eyes. Liquid causes severe inflammation of conjunctiva and may cause severe damage of the cornea.

**Additional information:**

RTECS # : OD2800000

## Section 12: Ecological information

### 12.1 Toxicity

Acute fish toxicity: LC<sub>50</sub> = 320 mg/l/96h (*Brachydanio rerio*) (IUCLD OECD Guide-line 203);

Acute daphnia toxicity: EC<sub>50</sub> = 240 mg/l/48h (*Daphnia magna*) (IUCLID OECD Guide-line 202);

Acute algae toxicity: EC<sub>50</sub> = 3500 mg/l/70h (*Selenastrum capricornutum*) (IUCLID OECD 201);

### 12.2 Persistence and degradability

Degradation: 80% L-(+)-lactic acid, 50% after 5 days and 67% after 20 days.

Biochemical oxygen demand (BOD)<sub>5</sub> = 0.45 mg O<sub>2</sub>/mg.

Biochemical oxygen demand (BOD)<sub>20</sub> = 0.60 mg O<sub>2</sub>/mg.

Chemical oxygen demand (COD) = 0.90 mg O<sub>2</sub>/mg.

Result: readily biodegradable, according to appropriate OECD test.

### 12.3 Bioaccumulative potential



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Log Pow = ca. -0.62 at 20 °C (OECD Guide-line 117). (EPA-HPV Data Set)

No appreciable bioaccumulation potential is to be expected (log Pow <1).

## 12.4 Mobility in soil

Based on best current information, there is no data known associated with this product.

## 12.5 Results of PBT and vPvB assessment

Based on best current information, there is no data known associated with this product.

## 12.6 Other adverse effects

No data available.

## Section 13: Disposal considerations

### 13.1 Waste treatment methods

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

Clean container with water. Empty containers should be taken for local recycling, recovery or waste disposal.

## Section 14: Transport information

### 14.1 Land transport (ADR/RID/GGVSE)

This product is not regulated as a hazardous material or dangerous goods for transportation.

### 14.2 Sea transport (IMDG-Code/GGVSee)

This product is not regulated as a hazardous material or dangerous goods for transportation.

### 14.3 Air transport (ICAO-TII/IATA-DGR)

This product is not regulated as a hazardous material or dangerous goods for transportation.

### 14.4 Additional information

No data available.

## Section 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulation:

**Authorisations:** No information available.

**Restrictions on use:** No information available.

**EINECS:** This substance is listed in the inventory.

**DSD (67/548/EEC):** This substance is not listed in the Annex I.

**Other chemical regulation:**

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<b>USA - TSCA:</b>	This substance is listed in the inventory.
<b>Canada - DSL:</b>	This substance is listed in the inventory.
<b>Australia - AICS:</b>	This substance is listed in the inventory.
<b>Korea - ECL:</b>	This substance is listed in the inventory.
<b>Japan - ENCS:</b>	This substance is listed in the inventory.
<b>China - IECSC:</b>	This substance is listed in the inventory.

## 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

## Section 16: Other information

### 16.1 Revision Information:

Date of the previous revision: Not applicable.

Date of this revision: 20/11/2010

Revision summary: The first new SDS

### 16.2 Abbreviations and acronyms

<b>GHS</b>	Globally Harmonized System of Classification and Labelling of Chemicals.
<b>CAS:</b>	Chemical Abstracts Service (division of the American Chemical Society).
<b>EINECS:</b>	European Inventory of Existing Commercial Chemical Substances.
<b>IARC:</b>	International agency for research on cancer.
<b>ACGIH:</b>	American Conference of Industrial Hygienists.
<b>NTP:</b>	American National Training Professional.
<b>OSHA:</b>	The Occupational Safety and Health Administration.
<b>RID:</b>	European Rail Transport.
<b>IMDG:</b>	International Maritime Code for Dangerous Goods.
<b>IATA:</b>	International Air Transport Association.
<b>OSHA:</b>	The United States Occupational Safety and Health Administration.
<b>TSCA:</b>	Toxic Substances Control Act, The American chemical inventory.
<b>DSD:</b>	Dangerous Substance Directive (67/548/EEC).
<b>IECSC:</b>	Inventory of existing chemical substances in China.
<b>DSL:</b>	Domestic Substances List, The Canadian chemical inventory.
<b>AICS:</b>	The Australian Inventory of Chemical Substances.
<b>ECL:</b>	Existing Chemicals List, the Korean chemical inventory.
<b>MITI:</b>	Japanese Existing and New Chemical Substances

### 16.3 Key literature references and sources for data

ESIS IUCLID Dataset: European chemical Substances Information System.

EPA-HPV Data Set.

ICSC: International Chemical Safety Cards Dataset.

GESTIS - Substance database.

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## 16.4 Relevant R-phrases and H-statements

### R-phrases (code and full text):

R41: Risk of serious damage to eyes.

R38: Irritating to skin.

### H-statements (code and full text):

H315: Causes skin irritation.

H318: Causes serious eye damage.

## 16.5 Training advice

No data available.

## 16.6 Declare to reader

The information in this Safety Data Sheet (SDS) was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable. According to REACH Article 31(5), the SDS shall be supplied in an official language of the Member State(s) where the substance or mixture is placed on the market, unless the recipient Member State(s) concerned provide otherwise. It should also be noted that this SDS is applicable to the countries with English as an official language.

----- End of the SDS -----