

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : L-(+)-Lactic acid

Product Number : L6402
Brand : Sigma

Company : Sigma-Aldrich Canada, Ltd
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CANADA

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : (S)-2-Hydroxypropionic acid
Sarcosolactic acid

Formula : C₃H₆O₃
Molecular Weight : 90.08 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
L-(+)-Lactic acid			
79-33-4	201-196-2	-	-

3. HAZARDS IDENTIFICATION

WHMIS Classification
E Corrosive Material Corrosive

HMIS Classification
Health Hazard: 2
Flammability: 1
Physical hazards: 0

Potential Health Effects

Inhalation : May be harmful if inhaled. Causes respiratory tract irritation.
Skin : May be harmful if absorbed through skin. Causes skin irritation.
Eyes : Causes eye irritation.
Ingestion : May be harmful if swallowed.

4. FIRST AID MEASURES**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES**Flammable properties**

Flash point : 110 °C (230 °F) - closed cup

Ignition temperature : no data available

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions**

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE**Handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage

Keep container tightly closed in a dry and well-ventilated place.

hygroscopic

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment**Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Safety glasses

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Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form : solid

Safety data

pH : 1.2

Melting point : 53 °C (127 °F)

Boiling point : no data available

Flash point : 110 °C (230 °F) - closed cup

Ignition temperature : no data available

Lower explosion limit : no data available

Upper explosion limit : no data available

Density : 1.200 g/cm³

Water solubility : no data available

10. STABILITY AND REACTIVITY**Storage stability**

Stable under recommended storage conditions.

Conditions to avoid

Avoid moisture.

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

LD50 Oral - rat - 3,543 mg/kg

LD50 Dermal - rabbit - > 2,000 mg/kg

Irritation and corrosion

Skin - rabbit - Skin irritation - 24 h

Eyes - rabbit - Severe eye irritation

Sensitisation

no data available

Chronic exposure

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IARC:

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.

Genotoxicity in vitro - Hamster - ovary

Cytogenetic analysis

Reproductive toxicity - mouse - Oral

Maternal Effects: Other effects. Specific Developmental Abnormalities: Musculoskeletal system.

Signs and Symptoms of Exposure

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential Health Effects

Inhalation : May be harmful if inhaled. Causes respiratory tract irritation.

Skin : May be harmful if absorbed through skin. Causes skin irritation.

Eyes : Causes eye irritation.

Ingestion : May be harmful if swallowed.

Additional Information

RTECS: OD2800000

12. ECOLOGICAL INFORMATION**Elimination information (persistence and degradability)**

no data available

Ecotoxicity effects

Toxicity to daphnia and other aquatic invertebrates. : EC50 - Daphnia magna (Water flea) - 180 - 320 mg/l - 48 h

Toxicity to algae : mortality NOEC - Pseudokirchneriella subcapitata - 320 mg/l - 96 h

EC50 - Pseudokirchneriella subcapitata (green algae) - > 2,800 mg/l - 84 h

Further information on ecology

no data available

13. DISPOSAL CONSIDERATIONS**Product**

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION**DOT (US)**

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

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15. REGULATORY INFORMATION**DSL Status**

All components of this product are on the Canadian DSL list.

WHMIS Classification

E Corrosive Material Corrosive

16. OTHER INFORMATION**Further information**

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