

Revision date 16/06/2015
Date of the previous version 12/03/2009

SAFETY DATA SHEET
Version 2 - EN

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product Name L-lactic acid
Trade name LA Envirolac 50

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

Recommended use Animal feed.
Uses advised against No information available.

1.3 Details of the supplier of the safety data sheet

Purac Biochem
Arkelsedijk 46
NL-4206 AC Gorinchem
The Netherlands
Tel.: +31 183 695695
Fax: +31 183 695604
E-mail: sds@corbion.com

1.4 Emergency telephone number

UK National Poisons Information Service (NPIS)
111 or in less urgent matters 999

IE National Poisons Information Centre
+353 1 809 2566 or +353 1 837 9964 (only for for healthcare professionals)

Purac Biochem
+31 183 695695

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to EU
Regulation 1272/2008/EC

Skin Corrosion/Irritation Category 2 - H315
Serious eye damage/eye irritation Category 1 - H318

For the full text of the H-Statements mentioned in this section, see Section 16.

2.2 Label elements



Signal Word Danger

L-lactic acid

Revision date 16/06/2015

Hazard statements	H315 - Causes skin irritation H318 - Causes serious eye damage
Precautionary Statements	P280 - Wear protective gloves/protective clothing/eye protection/face protection P302 + P352 - IF ON SKIN: Wash with plenty of water and soap P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P310 - Immediately call a POISON CENTER/doctor P362 - Take off contaminated clothing
Contains	L-(+)-lactic acid

2.3 Other hazards

None known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
3.2 Mixtures

Chemical name	EC-No	CAS-No	Weight %	Classification (1272/2008/EC)	REACH registration number
L-(+)-lactic acid	201-196-2	79-33-4	55-80	Skin Irrit. 2 H315 Eye Dam. 1 H318	01-2119474164-39-000

For the full text of the H-Statements mentioned in this section, see Section 16.

SECTION 4: FIRST AID MEASURES
4.1 Description of first aid measures

General Advice	Keep person warm and at rest. When symptoms persist or in all cases of doubt seek medical advice. Wash contaminated clothing before re-use.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Consult a physician.
Skin Contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Consult a physician.
Ingestion	Rinse mouth. Get medical attention immediately if symptoms occur.
Inhalation	Move to fresh air. Get medical attention immediately if symptoms occur.
Protection of first-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

4.2 Most important symptoms and effects, both acute and delayed

Main symptoms	Causes severe damage to eyes: Burning feeling, Redness, Pain. Causes skin irritation: Itching, Redness.
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4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically. If breathing is difficult, give oxygen. Keep victim under observation. Symptoms may be delayed.
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SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Extinguishing Media Water spray, Foam, Dry powder, Carbon dioxide (CO₂).

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Special Hazard None in particular.

5.3 Advice for firefighters

Fire fighting measures Evacuate non-essential personnel. Move containers from fire area if you can do it without risk. Keep containers and surroundings cool with water spray. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Special protective equipment for fire-fighters Wear self-contained breathing apparatus and protective suit.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Do not touch or walk through spilled material. Avoid contact with skin, eyes and clothing. Avoid breathing vapours or mists. Use personal protective equipment. Ensure adequate ventilation.

6.2 Environmental precautions

Should not be released into the environment. Prevent further leakage or spillage if safe to do so.

6.3 Methods and material for containment and cleaning up

Large amounts: Prevent further leakage or spillage if safe to do so. Dike to collect large spills. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water. Small amounts: Wipe up with absorbent material (e.g. cloth, fleece). After cleaning, flush away traces with water. Never return spills in original containers for re-use.

6.4 Reference to other sections

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Avoid breathing vapours or mists. Ensure adequate ventilation. Wear personal protective equipment. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Keep containers tightly closed in a cool, well-ventilated place. Incompatible with oxidising agents.

7.3 Specific end use(s)

Exposure scenario Not available.

Other information Not available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Exposure Limits Contains no substances with occupational exposure limit values.

Biological Limit Values Not established.

Recommended monitoring procedures No information available.

Derived No Effect Level (DNEL) Not determined.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Marine water	Intermittent release	Sewage treatment plant	Freshwater sediment	Marine sediment	Soil	Oral
L-(+)-lactic acid	1.3 mg/L			10 mg/L				

8.2 Exposure controls

Appropriate Engineering Controls Ensure adequate ventilation, especially in confined areas Keep at temperatures below 200 °C / 392 °F Ensure that eyewash stations and safety showers are close to the workstation location

Individual protection measures, such as personal protective equipment

Eye Protection

Safety glasses with side-shields (EN166).

Hand Protection

Protective gloves (EN374): Butyl rubber. Glove thickness: 0.5 mm . Break through time: >8 hours. Unsuitable materials: Natural Rubber, Nitrile rubber, Fluorinated rubber, PVC.

Skin and Body Protection

Long sleeved clothing.

Respiratory Protection

In case of insufficient ventilation wear suitable respiratory equipment (APF).

Recommended Filter Type

A, Brown.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Workers must be trained in the proper use and handling of this product as required under applicable regulations. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before re-use.

Environmental exposure controls

The product should not be allowed to enter drains, water courses or the soil.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state @20°C	Liquid
Appearance	Clear
Colour	Colourless / Yellowish
Odour	Characteristic
pH	< 1.2 (@25°C)
Melting/freezing point	No information available
Boiling point/boiling range	120-130 °C / 249-266 °F (@ 1013 hPa)
Flash point	Not applicable.
Evaporation rate	Not applicable
Flammability (solid, gas)	No information available
Flammability Limits in Air	No information available
Explosion Limits	Not applicable
Vapour pressure	Not applicable
Vapour density	Not applicable
Relative density	No information available
Solubility	
Water solubility	Miscible
Partition coefficient (n-octanol/water)	-0.62
Autoignition temperature	> 400 °C / > 752 °F (solution 93 % w/w)
Decomposition temperature	> 200 °C / > 392 °F
Viscosity, dynamic	5-60 mPa.s (@25°C)
Explosive properties	Not applicable
Oxidising properties	Not applicable

9.2 Other information

Density	1.2 g/cm ³
Surface tension	44-50 mN/m (@ 50-90%)

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

None known.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No information available.

10.4 Conditions to avoid

Temperatures above 200 °C / 392 °F.

10.5 Incompatible materials

Oxidizing agents.

10.6 Hazardous decomposition products

None under normal use.

SECTION 11: TOXICOLOGICAL INFORMATION
11.1 Information on toxicological effects
Acute Toxicity
Ingestion

No known effect.

Skin Contact

No known effect (LD50 Dermal, Rabbit: >2000 mg/kg).

Inhalation

No known effect.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
L-(+)-lactic acid	3543 mg/kg (Rat, female) 4936 mg/kg (Rat, male)	>2000 mg/kg (Rabbit)	>7.94 mg/L (Rat) 4h mist

Skin Corrosion/Irritation

Mixture: Causes skin irritation.

Serious eye damage/irritation

Mixture: Causes serious eye damage.

Chemical name	Skin Corrosion/Irritation	Serious eye damage/irritation
L-(+)-lactic acid	OECD 404, in vivo, Rabbit, solution (88 %) Result: corrosive	CEET, Ex vivo, solution (88 %) Result: Severe eye irritation

Respiratory or skin sensitisation

No known effect.

Germ Cell Mutagenicity

Not known to cause heritable genetic damage.

Carcinogenicity

Contains no ingredient listed as a carcinogen.

Reproductive Toxicity

Not known to cause birth defects or have a deleterious effect on a developing fetus. Not known to adversely affect reproductive functions and organs.

STOT-single exposure

No known effect.

STOT-repeated exposure

No known effect.

Aspiration Hazard

No known effect.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Contains no substances known to be hazardous for the environment.

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Micro-organisms	Toxicity to daphnia and other aquatic invertebrates
L-(+)-lactic acid	EC50: >2.8 g/L 72h Pseudokirchnerella subcapitata EC50: 3.5 g/L 70h Pseudokirchnerella subcapitata	LC50: 130 mg/L 96h Oncorhynchus mykiss LC50: 320 mg/L 96h Danio rerio	LC50: >100 mg/L 3h	EC50: 130 mg/L 48h Daphnia magna EC50: 250 mg/L 48h Daphnia magna

12.2 Persistence and degradability

Readily biodegradable.

12.3 Bioaccumulative potential

Does not bioaccumulate.

Chemical name	Log Pow	Bioconcentration factor (BCF)
L-(+)-lactic acid	-0.62	

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB).

12.6 Other adverse effects

No information available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated Packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: TRANSPORT INFORMATION

According to: ADR, RID, ADN, IMDG, IATA/ICAO.

14.1 UN number

Not regulated.

14.2 UN proper shipping name

Not regulated

14.3 Transport hazard class(es)

Not regulated.

14.4 Packing group

Not regulated.

14.5 Environmental hazards

Not applicable.

14.6 Special precautions for user

Not applicable.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

SECTION 15: REGULATORY INFORMATION

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

Restrictions on use None.

Other Regulations No information available.

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3	H315 - Causes skin irritation H318 - Causes serious eye damage
Revision note	Indication of the changes made to the previous version of the SDS: Trade name, Precautionary statements, Respiratory Protection.
Training Advice	Workers must be trained in the proper use and handling of this product as required under applicable regulations.
Abbreviations/acronyms	REACH: Registration, Evaluation, Authorisation and Restriction of Chemical substances (E)EC: European Commission STOT: Specific Target Organ Toxicity PBT: Persistent, Bioaccumulating, Toxic vPvB: very Persistent and very Bioaccumulating PROC: Process Category ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route ADN: Accord européen relatif au transport international des marchandises Dangereuses par voies de Navigation intérieures IMDG: International Maritime Dangerous Goods Code ICAO: International Civil Aviation Organization
SDS No.	CO00055

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 and Regulation (EC) No. 453/2010. Label element according to Regulation (EC) No 1272/2008.

Disclaimer

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End of Safety Data Sheet