SAFETY DATA SHEET

Revision date: 14-Feb-2022

Revision Number 7

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name L(+)-LACTIC ACID, PURAC

Product Code(s) 000000034661

Other means of identification

UN number 3265

Synonyms Lactic Acid 80% Solution; Lactic Acid 88% Solution; Lactic Acid FG 80%; AALAC74020.

Recommended use of the chemical and restrictions on use

Recommended use Food applications. Pharmaceutical applications.

Uses advised against No information available.

Details of the supplier of the safety data sheet

Supplier
Ixom Operations Pty Ltd (Bronson & Jacobs division) - incorporated in Australia
Street Address: 166 Totara Street
Mt Maunganui South
New Zealand

Telephone Number: +64 9 309 2528
Facsimile: +64 9 0508 366 364

For further information, please contact

Contact Point Product Safety Department

Emergency telephone number

Emergency Telephone **0 800 734 607 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

Classified as hazardous according to criteria in the Hazardous Substances (Hazard Classification) Notice 2020.

GHS Classification

SIGNAL WORD
Danger

Additives, Process Chemicals and Raw Materials (Corrosive) Group Standard 2020
Approval number: HSR002491

Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1

Label elements

Hazard statements
H314 - Causes severe skin burns and eye damage

Precautionary Statements - Prevention
Do not breathe dusts or mists
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves / protective clothing / eye protection / face protection
Precautionary Statements - Response
Specific treatment (see First aid on this SDS)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
Precautionary Statements - Storage
Store locked up
Precautionary Statements - Disposal
Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other hazards which do not result in classification
May be harmful if swallowed
May be harmful in contact with skin

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	CAS No.	Weight-%
L(+)-Lactic Acid	79-33-4	>=50
No hazardous ingredients.	-	to 100

4. FIRST AID MEASURES

Description of first aid measures

General advice For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

Emergency telephone number Poisons Information Center, New Zealand: 0800 764 766
Poisons Information Center, Australia: 13 11 26

Inhalation Remove to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Seek immediate medical attention/advice.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area. Immediate medical attention is required.

Skin contact Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and wash before reuse. Get immediate medical advice/attention.

Ingestion Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately if symptoms occur.

Most important symptoms and effects, both acute and delayed

Symptoms Irritation/Corrosion. May cause redness and tearing of the eyes.

Indication of any immediate medical attention and special treatment needed

Note to physicians Symptoms may be delayed. Can cause corneal burns. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media Dry chemical, CO2, water spray or regular foam.

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

Specific hazards arising from the chemical

Specific hazards arising from the chemical Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Corrosive hazard. Wear protective gloves/clothing and eye/face protection.

Hazardous combustion products Carbon dioxide (CO2). Carbon monoxide.

Special protective actions for fire-fighters

Special protective equipment for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Hazchem code 2X

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Avoid contact with skin, eyes and inhalation of vapors. Keep people away from and upwind of spill/leak. Do not touch or walk through spilled material. Wash thoroughly after handling. Ensure adequate ventilation.

For emergency responders Clear area of all unprotected personnel. Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of spill to collect runoff water. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Remove ignition sources. Provide adequate ventilation. Keep out of drains, sewers, ditches and waterways.

Methods for cleaning up Soak up with inert absorbent material. Use personal protective equipment as required. Pick up and transfer to properly labelled containers. After cleaning, flush away traces with water.

Precautions to prevent secondary hazards

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use personal protection equipment. Ensure adequate ventilation. Avoid breathing vapors or mists. Avoid contact with skin, eyes, and clothing. Handle in accordance with good industrial hygiene and safety practice. Use according to package label instructions.

General hygiene considerations Take off contaminated clothing and wash it before reuse. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a cool, well-ventilated place. Store away from incompatible materials (refer to SDS). Keep container closed when not in use.

Incompatible materials Oxidizing agents. Metals.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits No value assigned for this specific material by the New Zealand Workplace Health & Safety Authority.

Appropriate engineering controls

Engineering controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, CHEMICAL GOGGLES, FACE SHIELD, GLOVES (Long), APRON, RUBBER BOOTS.

Eye/face protection	Tight sealing safety goggles. If splashes are likely to occur:. Face protection shield.
Hand protection	Elbow-length impervious gloves.
Skin and body protection	Wear suitable protective clothing. Overalls. Boots.
Respiratory protection	If determined by a risk assessment an inhalation risk exists, wear an organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.
Environmental exposure controls	No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear
Color	Colourless Yellowish
Odor	Characteristic
Odor threshold	No information available.

Property	**Values**	**Remarks • Method**
pH	<1.2 @ 25°C	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	120-130 °C	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	1.2 g/cm3	None known
Water solubility	Miscible in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	-0.62 (Log Pow)	None known
Autoignition temperature	>400 °C (93% w/w)	None known
Decomposition temperature	>200 °C	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	5-60 mPas @ 25°C	None known

Other information

10. STABILITY AND REACTIVITY

Reactivity

Reactivity No information available.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Conditions to avoid

Conditions to avoid Avoid temperatures above 200 °C.

Incompatible materials

Incompatible materials Oxidizing agents. Metals.

Hazardous decomposition products

Hazardous decomposition products Carbon dioxide (CO2). Carbon monoxide.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Information on likely routes of exposure

Product Information No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

Inhalation Inhalation may cause severe respiratory irritation and pulmonary edema.

Eye contact Corrosive to the eyes and may cause severe damage including blindness.

Skin contact Contact causes severe skin irritation and possible burns. Causes severe burns.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Can burn mouth, throat, and stomach.

Symptoms Irritation/Corrosion. May cause redness and tearing of the eyes.

Acute toxicity

Numerical measures of toxicity
No information available.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50

L(+)-Lactic Acid	3543 mg/kg bodyweight (EPA OPP 81-1 method)	> 2000 mg/kg bodyweight (EPA OPP 81-2 method)	> 7.94 mg/l/4h (OECD 403 method)

See section 16 for terms and abbreviations

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation Causes severe burns. Classification is based on mixture calculation methods based on component data.

Serious eye damage/eye irritation Causes serious eye damage. Classification is based on mixture calculation methods based on component data.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity Keep out of waterways. Avoid contaminating waterways.

Terrestrial ecotoxicity There is no data for this product.

Chemical name	Algae/aquatic plants	Fish	Crustacea
L(+)-Lactic Acid	EC50: =3.5mg/L (70h, Pseudokirchneriella subcapitata)	LC50: =320mg/L (96h, Brachydanio rerio) LC50: 100 - 180mg/L (96h, Lepomis macrochirus) LC50: 100 - 180mg/L (96h, Oncorhynchus mykiss)	EC50: =240mg/L (48h, Daphnia magna) EC50: 180 - 320mg/L (48h, Daphnia magna)

Persistence and degradability

Persistence and degradability Readily biodegradable.

Bioaccumulative potential

Bioaccumulation No information available.

Mobility

Mobility in soil No information available.

Component Information

Chemical name	Partition coefficient
L(+)-Lactic Acid	-0.62

Other adverse effects

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Dispose of product in packaging/container in a way that is consistent with the Hazardous Substances (Disposal) Notice 2017 and the Act, and Hazardous Substances (Amendments and Revocations) Notice 2020. Treat the chemical using a method that changes the characteristics or composition of the chemical so that the chemical is no longer a hazardous chemical; or export the chemical from New Zealand as waste. Class 6 and 8 chemicals – may be discharged into the environment if a tolerable exposure limit has been set for the substance (or a component of that chemical); and the discharge does not, after reasonable mixing, result in the concentration of the substance in an environmental medium exceeding the tolerable exposure limit. If there is not tolerable exposure limit for the substance, then it may only be discharged into the environment if the substance is very rapidly converted to substances that are not hazardous substances.

Contaminated packaging For packages that have been in direct contact with hazardous chemicals, the person must ensure that the package is rendered incapable of containing any chemical. It must be disposed of in a manner that is consistent with the requirements for disposal of the chemical that it contained, taking into account the material the package is manufactured from. Packages may only be reused or recycled if the package has been treated to remove any residual contents of the hazardous chemical (class 1, 2, 3, 4, or 5); or the contents of the residue in the package are below the threshold for the chemical to be classified as hazardous (class 6, 8, or 9 chemical).

14. TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT Classified as a Dangerous Good according to NZS 5433 Transport of Dangerous Goods on Land; DANGEROUS GOODS.

UN number	3265
Proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (LACTIC ACID)
Hazard class	8
Packing group	III
Special Provisions	223, 274
Hazchem code	2X

IATA Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN number	3265
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (LACTIC ACID)
Transport hazard class(es)	8
Packing group	III

IMDG Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN number	3265
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (LACTIC ACID)
Transport hazard class(es)	8
Packing group	III
IMDG EMS Fire	F-A
IMDG EMS Spill	S-B

15. REGULATORY INFORMATION

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

New Zealand

National regulations See section 8 for national exposure control parameters

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International Inventories

NZIoC	All the constituents of this material are listed on the New Zealand Inventory of Chemicals.
TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AIIC	All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals.

Legend:
NZIoC - New Zealand Inventory of Chemicals
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

16. OTHER INFORMATION

Supplier Safety Data Sheet 09/ 2021
PURAC is a registered tradename.

Prepared By This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

Issuing Date: 14-Feb-2022

Reason(s) For Issue: 5 Yearly Revised Primary SDS
Update in Toxicological Information
Update in Ecological Information
Change in Hazardous Chemical Classification

Revision Note:
The symbol (*) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

Key literature references and sources for data used to compile the SDS
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australian Industrial Chemicals Introduction Scheme (AICIS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications
Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Disclaimer
This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Bronson & Jacobs representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

Bronson and Jacobs incorporating the businesses of Woods and Woods and Keith Harris and Australian Botanical Products.

End of Safety Data Sheet