

1. IDENTIFICATION

Product Name	Lactic Acid
Other Names	Propanoic acid, 2-hydroxy-
Uses	To be used as a/an Acidulant, Acidity Modifyer, Flavour, Antioxidant, Stabiliser, Preservative or Bactericidal Agent in the food feed industries.
Chemical Family	No Data Available
Chemical Formula	C ₃ H ₆ O ₃
Chemical Name	Lactic Acid
Product Description	No Data Available

Identification of the company supplying this SDS

Khotso Pty Ltd t/a eBotaniq
PO Box 60
Wahroonga NSW 2076
Telephone no. : + (0)490 069 282

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) No Data Available

Globally Harmonised System

Hazard Classification Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Hazard Categories

Serious Eye Damage/Irritation - Category 1

Skin Corrosion/Irritation - Category 2

Pictograms**Signal Word**

Danger

Hazard Statements**H315**

Causes skin irritation.

H318

Causes serious eye damage.

Precautionary Statements

Prevention

P264

Wash hands thoroughly after handling.

P280

Wear protective gloves/eye protection/face protection.

Response

P362

Take off contaminated clothing and wash before reuse.

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.

P310

Immediately call a POISON CENTER or doctor/physician.

P321

Specific treatment (see supplemental first aid instructions on this label).

Disposal

P501

Dispose of contents/container in accordance with local / regional / national / international regulations.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification

Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Act 1996

HSNO Classifications

Health Hazards

6.1D

Substances that are acutely toxic - Harmful

8.2C

Substances that are corrosive to dermal tissue UN PGIII

8.3A

Substances that are corrosive to ocular tissue

Environmental Hazards

9.3C

Substances that are harmful to terrestrial vertebrates

3. COMPOSITION/INFORMATION ON INGREDIENTS**Ingredients**

Chemical Entity	Formula	CAS Number	Proportion
Lactic Acid	No Data Available	50-21-5	50.00 - 90.00 %
Water	No Data Available	7732-18-5	Balance %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	Clean mouth with water and afterwards drink plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice. Consult a physician.
Eye	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eyes wide open while rinsing. If symptoms persist, call a physician.
Skin	Wash off immediately with plenty of water for at least 15 minutes. If symptoms persist, call a physician. Remove and wash contaminated clothing before re-use.
Inhaled	Move to fresh air in case of accidental inhalation of vapours or decomposition products. Consult a physician.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of patient. Main Symptoms: Sweating. Superficial burning sensation. Vomiting. Nausea. Shortness of breath.
Medical Conditions Aggravated by Exposure	Skin disorders. Respiratory disorders.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, remove containers from the path of fire.
Flammability Conditions	Will burn if dried and heated with a flame.
Extinguishing Media	In case of fire, use water spray, dry chemical, carbon dioxide, or appropriate foam. Solid streams of water may be ineffective and spread material. Cool closed containers exposed to fire with water spray.
Fire and Explosion Hazard	Product is a combustible liquid.
Hazardous Products of Combustion	Smoke, Carbon dioxide (CO ₂), Carbon monoxide (CO). Thermal decomposition can lead to release of irritating gases and vapours.
Special Fire Fighting Instructions	Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.
Personal Protective Equipment	Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit. Please note: Structural fire fighters uniform will provide limited protection
Flash Point	>110 °C
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	2X

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Shut off all possible sources of ignition. Avoid accidents, clean up immediately. Increase ventilation. Use clean, non-sparking tools and equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.
Clean Up Procedures	Dam up. Neutralize. Soak up with inert absorbent material. If liquid has been spilt in large quantities clean up promptly by scoop or vacuum. Keep in suitable, closed containers for disposal.
Containment	Stop leak if safe to do so.
Decontamination	Neutralize with soda or sodium carbonate and flush with plenty of water. After cleaning, flush away traces with water.
Environmental Precautionary Measures	Do not allow product to reach drains, sewers or waterways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Authority.
Evacuation Criteria	Evacuate all unnecessary personnel.
Personal Precautionary Measures	Personnel involved in the clean up should wear full protective clothing as listed in section 8.

7. HANDLING AND STORAGE

Handling	Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and
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recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Avoid contact with eyes, skin and clothing. Do not inhale product vapours. Avoid prolonged or repeated exposure. Operations should be carried out in an efficient fume hood or equivalent system. Remove contaminated clothing and wash before reuse. Discard contaminated shoes. Keep away from combustible material. Empty containers pose a fire risk, evaporate residue under a fume hood. Chemicals should be used only by those trained in handling potentially hazardous materials.

Storage	Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Keep at temperatures between 73°F (23°C) / 100°F (38°C). Avoid temperatures above 200°C. This product has a UN classification of 3265 and a Dangerous Goods Class 8 (Corrosive) according to The Australian Code for the Transport of Dangerous goods By Road and Rail.
Container	Container type/packaging must comply with all applicable local legislation. Store in original packaging as approved by manufacturer. Plastic or stainless steel 316 L containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC). NOTE: The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. Peak limitation is a ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15 minutes. These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.
Exposure Limits	No Data Available
Biological Limits	No information available on biological limit values for this product.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Adequate ventilation should be provided so that exposure limits are not exceeded.
Personal Protection Equipment	RESPIRATOR: In case of mist, spray or aerosol exposure wear suitable personal respiratory protection, Breathing apparatus needed only when aerosol or mist is formed (AS 1715/1716). EYES: Tightly fitting safety goggles, face-shield (AS 1336/1337). HANDS: Rubber gloves. Break through time > 8 hours (AS 2161). CLOTHING: Corrosion-resistant coveralls and safety footwear (AS 3765/2210).
Work Hygienic Practices	Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Liquid / Viscous Liquid
Odour	Odourless
Colour	Clear Colorless to Light yellow
pH	<1
Vapour Pressure	0.0813 torr (@ 25 °C)
Relative Vapour Density	No Data Available
Boiling Point	120 °C
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	Completely Soluble
Specific Gravity	1.18 - 1.25 H ₂ O=1
Flash Point	>110 °C
Auto Ignition Temp	No Data Available
Evaporation Rate	<1 Butyl Acetate = 1.0

Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	5 mPa.s - 60 mPa.s (@ 25 °C)
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No Data Available
Potential for Dust Explosion	Product is a liquid
Fast or Intensely Burning Characteristics	No Data Available
Flame Propagation or Burning Rate of Solid Materials	No Data Available
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No Data Available
Properties That May Initiate or Contribute to Fire Intensity	No Data Available
Reactions That Release Gases or Vapours	No Data Available
Release of Invisible Flammable Vapours and Gases	No Data Available

10. STABILITY AND REACTIVITY

General Information	Combustible liquid.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Heat, flames and sparks. Avoid temperatures above 200 Deg C.
Materials to Avoid	Strong acids. Nitric acid. Hydrofluoric acid. Oxidizing agents
Hazardous Decomposition Products	Smoke, Carbon dioxide (CO ₂) , Carbon monoxide (CO). Thermal decomposition can lead to release of irritating gases and vapours.
Hazardous Polymerisation	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

General Information	<p>Main Symptoms Sweating. Superficial burning sensation. Vomiting. Nausea. Shortness of breath.</p> <p>2-Hydroxypropanoic Acid: LD50 Oral Rat: approximately 3730 mg/kg LD50 Derma Rabbit: > 2000 mg/kg Rabbit eye, Rabbit skin: Severe irritation Target Organ Effects: Eyes, Skin, Mucous membranes Corrosivity Skin corrosion/irritation, Serious eye damage/eye irritation, Corrosive by inhalation.</p> <p>Acute toxicity Draize test, rabbit, eye: 750 ug Severe;</p>
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	Draize test, rabbit, skin: 5 mg/24H Severe; Draize test, rabbit, skin: 100 mg/24H Moderate; Oral LD 50 Rat = 3543 mg/kg Oral LD 50 Mouse = 4875 mg/kg Dermal LD 50 Rabbit > 2000 mg/kg
Eye/Irritant	Risk of serious damage to eyes. Liquid aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes.
Ingestion	Irritating to mouth, throat and stomach.
Inhalation	Avoid breathing vapors or mists. Irritating to respiratory system. Irritating to mucous membranes.
Skin/Irritant	Irritating to skin. Prolonged skin contact causes burns.
Carcinogen Category	No Data Available

12. ECOLOGICAL INFORMATION

Ecotoxicity	2-Hydroxypropanoic Acid: Acute Fish Toxicity: LC 50: 96 h 100-180 mg/L (Lepomis macrochirus) static LC 50: 96 h 100-180 mg/L (Oncorhynchus mykiss) static LC 50: 96 h 320 mg/L (Brachydanio rerio) semi-static Daphnia (Water flea): LC 50: 48 h 180 - 320 mg/L (Daphnia magna) EC 50: 48 h 240 mg/L (Daphnia magna) Fresh Water Algae: EC 50: 70 h 3.5 mg/L (Pseudokirchneriella subcapitata) EC 50/48 h/Daphnia = 240 mg/l LC 50/48 h/Fish = 320 mg/l EC 50/Algae = 3500 mg/l (neutral)
Persistence/Degradability	Readily biodegradable, according to appropriate OECD test. Biochemical oxygen demand (BOD) 5 = 0.45 mg O ₂ /mg Biochemical oxygen demand (BOD) 20 = 0.60 mg O ₂ /mg Chemical oxygen demand (COD) = 0.90 mg O ₂ /mg
Mobility	2-Hydroxypropanoic Acid (Weight 88%) Log Pow: -0.62
Environmental Fate	Do NOT allow product to enter waterways, drains or sewers.
Bioaccumulation Potential	None.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.
Special Precautions for Land Fill	Contact a specialist disposal company or the local waste regulator for advice.

14. TRANSPORT INFORMATION

Land Transport (Australia)
ADG

Proper Shipping Name CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Lactic Acid)

Class	8 Corrosive Substances
Subsidiary Risk(s)	C1 Combustible Liquids - Flash point 61 - 150 °C
EPG	36 Toxic And/Or Corrosive Substances Combustible
UN Number	3265
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Land Transport (Malaysia)

ADR

Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Lactic Acid)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	36 Toxic And/Or Corrosive Substances Combustible
UN Number	3265
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Land Transport (New Zealand)

NZS 5433

Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Lactic Acid)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
EPG	36 Toxic And/Or Corrosive Substances Combustible
UN Number	3265
Hazchem	2X
Pack Group	II
Special Provision	No Data Available

Land Transport (United States of America)

US DOT

Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Lactic Acid)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
ERG	153 Substances - Toxic and/or Corrosive (Combustible)
UN Number	3265
Hazchem	No Data Available
Pack Group	II
Special Provision	No Data Available

Sea Transport

IMDG

Proper Shipping Name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Lactic Acid)
Class	8 Corrosive Substances
Subsidiary Risk(s)	No Data Available
UN Number	3265
Hazchem	No Data Available
Pack Group	II
Special Provision	No Data Available

EMS FA,SB
Marine Pollutant No

Air Transport
IATA

Proper Shipping Name CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Lactic Acid)
Class 8 Corrosive Substances
Subsidiary Risk(s) No Data Available
UN Number 3265
Hazchem No Data Available
Pack Group II
Special Provision No Data Available

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information No Data Available
Poisons Schedule (Aust) No Data Available

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Act 1996

Approval Code HSR008008

National/Regional Inventories

Australia (AICS) Listed
Canada (DSL) Not Determined
Canada (NDSL) Not Determined
China (IECSC) Not Determined
Europe (EINECS) Not Determined
Europe (REACH) Not Determined
Japan (ENCS/METI) Not Determined
Korea (KECI) Not Determined
Malaysia (EHS Register) Not Determined
New Zealand (NZIoC) Not Determined
Philippines (PICCS) Not Determined

Switzerland (Giffliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Not Determined

16. OTHER INFORMATION

This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace, including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers on request and is also available on our website.

Since the actual use of this product is beyond the control of Khotso Pty Ltd t/a eBotaniq, we make no warranty, expressed or implied, concerning the use of this product. It is the responsibility of users to ascertain that the product is suitable for intended applications.

