Version: 02.2022

Material safety data sheet

According to EU Regulation 1907/2006 in the current version

LACTIC ACID

1. Identification of the substance/mixture and company

Trade name:	Lactic Acid
I.N.C.I.	Lactic Acid
CAS No. :	50-21-5
Utilization:	Raw material for cosmetic use. Laboratory chemical.
Supplier company identification:	Elemental SRL, Piața Cazărmii no.15, 410188-Oradea, jud.Bihor, Romania Tel/Fax: +40259-436.755, www.ellemental.com
Emergency:	RO: număr național pentru cazuri de urgență: 021 3183606 Institutul de Sănătate Publică București. International emergency number: +49 180 2273-112

2. Hazards Identification

2.1 Classification of the substance or mixture

Classification of this product has been carried out in accordance with CLP Regulation (EC) No 1272/2008.
Skin corrosion/irritation 1C Skin Corr. 1C H314
Serious eye damage/eye irritation 1 Eye Dam. 1 H318
EUH071 corrosive to the respiratory tract
For full text of abbreviations: see SECTION 16
The most important adverse physicochemical, human health and environmental effects
Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis.

2.2 Label elements

Signal word: Danger
Pictograms: GHS05

Hazard pictograms:
Hazard statements
H314 Causes severe skin burns and eye damage
Precautionary statements
Precautionary statements - prevention
P280 Wear protective gloves/eye protection
Precautionary statements - response
P302+P352 IF ON SKIN: Wash with plenty of water
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
Supplemental hazard information
EUH071 Corrosive to the respiratory tract.

2.3 Other hazards:
Special danger of slipping by leaking/spilling product.
Results of PBT and vPvB assessment: This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

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3. Declaration of ingredients

3.1. Substances
Non-applicable

3.2. Mixtures

L-lactic acid	Wt% 80	CAS 79-33-4	EC 201-196-2	Skin Corr. 1C / H314; Eye Dam. 1 / H318; EUH071; GHS-HC
Aqua	Wt% 20	CAS 7732-18-5	EC 231-791-2	N/A

4. First aid measures

4.1 Description of first aid measures

General notes
Take off immediately all contaminated clothing.
Following inhalation
Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.
Following skin contact
After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.
Following eye contact
In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.
Following ingestion
Rinse mouth immediately and drink plenty of water. Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)..

4.2 Main symptoms and effects, both acute and delayed
Corrosion, Risk of blindness, Gastric perforation, Risk of serious damage to eyes

4.3 Indication to consult a physician immediately or any special treatments: none

5. Fire fighting measures

5.1 Extinguishing media
Suitable extinguishing media: co-ordinate firefighting measures to the fire surroundings
water spray, alcohol resistant foam, dry extinguishing powder, BC-powder, carbon dioxide (CO_2)
Unsuitable extinguishing media: water jet

5.2 Special hazards arising from the substance or mixture
Combustible.
Hazardous combustion products
Carbon monoxide (CO), Carbon dioxide (CO_2), May produce toxic fumes of carbon monoxide if burning.

5.3 Advice for firefighters
In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

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6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
For non-emergency personnel
Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe vapour/spray.

6.2 Environmental precautions
Keep away from drains, surface and ground water. The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised.

6.3 Methods and material for containment and cleaning up
Advice on how to contain a spill
Covering of drains.
Advice on how to clean up a spill
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).
Other information relating to spills and releases
Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections
Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

7. Handling and storage

7.1 Precautions for safe handling
Provision of sufficient ventilation. Handle and open container with care. Clear contaminated areas thoroughly.
Advice on general occupational hygiene
Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities
Keep container tightly closed.
Incompatible substances or mixtures
Observe hints for combined storage.

7.3 Specific end uses
Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

8. Exposure controls / personal protection

8.1 Control parameters
Occupational exposure limit values (Workplace Exposure Limits)
This information is not available

8.2 Exposure controls

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General security and hygiene measures in the work place
As a preventative measure it is recommended to use basic Personal Protective Equipment in accordance with Directive 89/686/EC. For more information on Personal Protective Equipment (storage, use, cleaning, maintenance, class of protection,) consult the information leaflet provided by the manufacturer. All information contained herein is a recommendation which needs some specification from the labour risk prevention services as it is not known whether the company has additional measures at its disposal.

Respiratory protection
The use of protection equipment will be necessary if a mist forms or if the occupational exposure limits are exceeded.

Specific protection for the hands:
Mandatory hand protection.
Protective gloves against minor risks.

Replace gloves in case of any sign of damage. For prolonged periods of prolonged periods of exposure to the product for professional users/industrials, we recommend using CE III gloves in line with standards EN 420:2003+ A1:2009 and EN ISO 374-1:2016. As the product is a mixture of several substances, the resistance of the glove material can not be predicted in advance with total reliability and has therefore to be checked prior to the application

Ocular and facial protection:
Mandatory face protection
Panoramic glasses against splash/projections.

EN 166:2001 EN ISO 4007:2018. Clean daily and disinfect periodically according to the manufacturer´s instructions. Use if there is a risk of splashing.

Body protection:
Work clothing EN 166:2001, EN ISO 4007:2018, Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 6529:2013, EN ISO 6530:2005, EN ISO 13688:2013, EN 464:1994
Anti-slip work shoes, EN ISO 20347:2012, Replace before any evidence of deterioration. For periods of prolonged exposure to the product for professional/industrial users CE III is recommended, in accordance with the regulations in EN ISO 20345:2012 y EN 13832-1:2007

Environmental exposure controls:
In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container.

9. Physical and chemical properties

9.1 Information on physical and chemical properties

Physical state liquid
Form viscous
Colour colourless - light yellow
Odour faintly perceptible
Melting point/freezing point not determined
Boiling point or initial boiling point and boiling range >100 °C
Flammability this material is combustible, but will not ignite readily

Lower and upper explosion limit not determined
Flash point >110 °C
Auto-ignition temperature ⩾400 ° C
Decomposition temperature >200 °C
pH (value) <2 (25 °C)
Kinematic viscosity not determined
Solubility(ies): Water solubility miscible in any proportion
Partition coefficient
Partition coefficient n-octanol/water (log value): this information is not available
Vapour pressure not determined
Density 1,20 – 1,22 g/cm³ at 20 °C
Relative vapour density information on this property is not available

9.2 Other information
Surface tension at 20 ºC: 44 – 50 mN/m
Refraction index: na

10. Stability and reactivity

10.1 Reactivity
This material is not reactive under normal ambient conditions.
If heated
Vapours may form explosive mixtures with air.
10.2 Chemical stability
The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure
10.3 Possibility of hazardous reactions
Violent reaction with: strong oxidiser, Strong alkali
10.4 Conditions to avoid
Keep away from heat. Decompostion takes place from temperatures above: >200 °C.
10.5 Incompatible materials
No additional information.
10.6 Hazardous decomposition products
Hazardous combustion products: see section 5.

11. Toxicological information

11.1 Information on toxicological effects
Test data are not available for the complete mixture.
Classification procedure
The method for classification of the mixture is based on ingredients of the mixture (additivity formula).
Classification according to GHS (1272/2008/EC, CLP)
Acute toxicity
Shall not be classified as acutely toxic.

Acute toxicity of components of the mixture

L-lactic acid 79-33-4 oral LD50 3.543 mg/kg rat
L-lactic acid 79-33-4 inhalation:dust/mist LC50 >7,94 mg/l/4h rat
L-lactic acid 79-33-4 dermal LD50 >2.000 mg/kg rabbit

Skin corrosion/irritation
Causes severe skin burns and eye damage.
Serious eye damage/eye irritation
Causes serious eye damage.
Respiratory or skin sensitisation
Shall not be classified as a respiratory or skin sensitiser.
Germ cell mutagenicity
Shall not be classified as germ cell mutagenic.
Carcinogenicity
Shall not be classified as carcinogenic.
Reproductive toxicity
Shall not be classified as a reproductive toxicant.
Specific target organ toxicity - single exposure
Shall not be classified as a specific target organ toxicant (single exposure).
Specific target organ toxicity - repeated exposure
Shall not be classified as a specific target organ toxicant (repeated exposure).
Aspiration hazard
Shall not be classified as presenting an aspiration hazard.
Symptoms related to the physical, chemical and toxicological characteristics
If swallowed: If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)
If in eyes: causes burns, Causes serious eye damage, risk of blindness
If inhaled: corrosive to the respiratory tract, cough, Dyspnoea
If on skin: causes severe burns, causes poorly healing wounds
Other information: none

11.2 Endocrine disrupting properties
None of the ingredients are listed.

11.3 Information on other hazards
There is no additional information.

12. Ecological information

12.1 Toxicity: Shall not be classified as hazardous to the aquatic environment

12.2 Persistence and degradability: Readily biodegradable

12.3 Bioaccumulation potential: No data available

12.4 Ground mobility: Data are not available

12.5 Results of PBT and vPvB assessment: Data are not available.

12.6 Endocrine disrupting properties: None of the ingredients are listed.

12.7 Other adverse effects: Data are not available.

13. Disposal considerations

13.1 Waste treatment methods
This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.
Sewage disposal-relevant information
Do not empty into drains.
Regulations related to waste management:
In accordance with Annex II of Regulation (EC) No 1907/2006 (REACH) the community or state provisions related to waste management are stated
Community legislation: Directive 2008/98/EC, 2014/955/EU, Regulation (EU) No 1357/2014

14. Transport information

14.1 UN number or ID number
ADR/RID/ADN UN 3265
IMDG-Code UN 3265
ICAO-TI UN 3265
14.2 UN proper shipping name
ADR/RID/ADN CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
IMDG-Code CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.
ICAO-TI Corrosive liquid, acidic, organic, n.o.s.
Technical name (hazardous ingredients) L-Lactic acid
14.3 Transport hazard class(es)
ADR/RID/ADN 8
IMDG-Code 8
ICAO-TI 8
14.4 Packing group
ADR/RID/ADN III
IMDG-Code III
ICAO-TI III
14.5 Environmental hazards non-environmentally hazardous acc. to the dangerous goods regulations
14.6 Special precautions for user
Provisions for dangerous goods (ADR) should be complied within the premises.
14.7 Maritime transport in bulk according to IMO instruments
The cargo is not intended to be carried in bulk.

15. Regulatory information

15.1 Regulations and legislation on health, safety and environment specific to the substance or mixture
Relevant provisions of the European Union (EU)
Restrictions according to REACH, Annex XVII
Lactic acid this product meets the criteria for classification in accordance with Regulation No 1272/2008/EC: R3 3
L-lactic acid substances in tattoo inks and permanent make-up: R75 75

List of substances subject to authorisation (REACH, Annex XIV)/SVHC - candidate list
None of the ingredients are listed.
Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)
none of the ingredients are listed
Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)
none of the ingredients are listed
Water Framework Directive (WFD)
none of the ingredients are listed
Regulation on the marketing and use of explosives precursors
none of the ingredients are listed
Regulation on drug precursors
none of the ingredients are listed
Regulation on substances that deplete the ozone layer (ODS)
none of the ingredients are listed
Regulation concerning the export and import of hazardous chemicals (PIC)
none of the ingredients are listed
Regulation on persistent organic pollutants (POP)
none of the ingredients are listed

16. Additional information

Key literature references and sources for data
Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.
Regulation (EC) No. 1907/2006 (REACH), amended by 2020/878/EU.
Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

List of relevant phrases (code and full text as stated in section 2 and 3)
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.

Abbreviations and acronyms:
ADN Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ADR/RID/ADN Agreements concerning the International Carriage of Dangerous Goods by Road/Rail/Inland Waterways (ADR/RID/ADN)
BCF Bioconcentration factor
BOD Biochemical Oxygen Demand
CAS Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
COD Chemical oxygen demand
DGR Dangerous Goods Regulations (see IATA/DGR)
EC50 Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing

50 % changes in response (e.g. on growth) during a specified time interval
EC No The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS European Inventory of Existing Commercial Chemical Substances
ELINCS European List of Notified Chemical Substances
EmS Emergency Schedule
ErC50 ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
Eye Dam. Seriously damaging to the eye
Eye Irrit. Irritant to the eye
GHS "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA International Air Transport Association
IATA/DGR Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO International Civil Aviation Organization
ICAO-TI Technical instructions for the safe transport of dangerous goods by air
IMDG International Maritime Dangerous Goods Code
IMDG-Code International Maritime Dangerous Goods Code
index No The Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
LC50 Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50 Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
log KOW n-Octanol/water
NLP No-Longer Polymer
PBT Persistent, Bioaccumulative and Toxic
PNEC Predicted No-Effect Concentration
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals
RID Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr. Corrosive to skin
Skin Irrit. Irritant to skin
SVHC Substance of Very High Concern
VOC Volatile Organic Compounds
vPvB Very Persistent and very Bioaccumulative

Disclaimer:

This material safety data sheet does not constitute a guarantee of the properties of the product and is not a contractual legal report. The information is given in good faith on the basis of our best knowledge of the product at the indicated time. However, we cannot accept responsibility or liability for any consequences arising from its use, no warranty for correctness and completeness is given. We caution the users against the incurred possible risks when the product is used at other ends than the use for which it was initially planned. It is the user's responsibility during handling, storage and product use to consult the main regulatory texts in force regarding workers and environment protection.