



SAFETY DATA SHEET

Issue Date: 24-Apr-2012

Revision Date: 14-Apr-2021

Version 1

1. Identification

Product identifier

Product Name: Lactic Acid 88% FG

Other means of identification

Product Code: 32764

Synonyms: S(+)-2-Hydroxypropanoic acid, milk acid, Sarcosolactic acid

UN/ID No: UN3265

Recommended use of the chemical and restrictions on use

Recommended Use: Industrial, Manufacturing or Laboratory use.

Restrictions on Use: None known

Details of the supplier of the safety data sheet

Manufacturer: Hawkins, Inc.
2381 Rosegate
Roseville, MN 55113
(612) 331-6910

Emergency telephone number

Emergency Telephone: CHEMTREC: 1-800-424-9300 (US) / +1 703-741-5970 (International)

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

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

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Signal word: Danger

Hazard statements:

Causes severe skin burns and eye damage

May be corrosive to metals



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
 Keep only in original container

Precautionary Statements - Response:

Immediately call a POISON CENTER or doctor
 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
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
 Wash contaminated clothing before reuse
 IF INHALED: Remove person to fresh air and keep comfortable for breathing
 Immediately call a POISON CENTER or doctor
 IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
 Absorb spillage to prevent material damage

Precautionary Statements - Storage:

Store locked up
 Store in corrosion resistant container with a resistant inner liner

Precautionary Statements - Disposal:

Dispose of contents/container to an approved waste disposal plant

Unknown Acute toxicity: Not applicable

Other Information

Not applicable

3. Composition/information on ingredients

Chemical name	CAS No.	Weight-%
(S)-Lactic Acid	79-33-4	87.1-92.4
Water	7732-18-5	Balance

Any concentration shown as a range is due to batch variation or the exact percentage has been withheld as a trade secret.

4. First-aid measures**Description of first aid measures**

General advice	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Inhalation	Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.
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. Keep eye wide open while rinsing. Do not rub affected area. Get immediate medical advice/attention.
Skin contact	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical advice/attention.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get immediate medical advice/attention.
Self-protection of the first aider	Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8). Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

Symptoms

Redness. Burning. May cause blindness. Coughing and/ or wheezing.

Indication of any immediate medical attention and special treatment needed

Note to physicians

Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically. Symptoms may be delayed. Keep victim under observation.

5. Fire-fighting measures

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Large Fire

CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media

Do not scatter spilled material with high pressure water streams. Do not use straight streams.

Specific hazards arising from the chemical

The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating and toxic gases and vapors. Do not allow run-off from fire-fighting to enter drains or water courses. Contact with metals may evolve flammable hydrogen gas.

Hazardous combustion products

Carbon oxides.

Explosion Data

Sensitivity to mechanical impact None.

Sensitivity to static discharge None.

Special protective equipment for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Other information

Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so. Keep out of drains, sewers, ditches and waterways.

Methods for cleaning up

Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers. Clean contaminated surface thoroughly. After cleaning, flush away traces with water.

7. Handling and storage

Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust

ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials. Protect from sunlight. Keep at a temperature not exceeding 200 °C.

Incompatible Materials

Oxidizing agent. Strong bases. Strong acids. Iodides. Albumin.

Packaging materials

Plastic container of HDPE, stainless steel 316L.

8. Exposure controls/personal protection

Control parameters

Exposure Limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls

Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection

Face protection shield. Tight sealing safety goggles.

Hand protection

Wear suitable gloves. Impervious gloves.

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Environmental exposure controls

Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains.

General hygiene considerations

Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical State:	Liquid
Appearance:	Clear
Color:	Colorless to light yellow
Odor:	Slight Pungent
Odor Threshold:	No information available
pH:	No information available
Salt Out Point:	No information available
Melting Point/Freezing Point:	< -80 °C / -112 °F
Boiling Point/Boiling Range:	No information available
Flash Point:	No information available
Evaporation Rate (BuAc=1):	No information available
Flammability (solid, gas):	No information available
Flammability Limits in Air:	No information available
Vapor Pressure (mm Hg):	No information available
Vapor density (Air =1):	No information available

Specific Gravity (H ₂ O=1):	1.21
Water Solubility:	Miscible in water
Solubility(ies):	No information available
Partition Coefficient (n-octanol/water):	No information available
Autoignition Temperature:	No information available
Decomposition Temperature:	No information available
Kinematic Viscosity:	No information available
Dynamic Viscosity:	No information available

Other information

Explosive properties	No information available
Oxidizing properties	No information available
Molecular Weight:	90.08

10. Stability and reactivity

Reactivity	Contact with metals may evolve flammable hydrogen gas.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Contact with strong bases will cause excessive heat and splattering.
Conditions to avoid	Exposure to air or moisture over prolonged periods.
Incompatible Materials	Oxidizing agent. Strong bases. Strong acids. Iodides. Albumin.
Hazardous decomposition products	Carbon oxides.

11. Toxicological information**Information on likely routes of exposure****Product Information****Inhalation**

Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal.

Eye contact

Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact

Specific test data for the substance or mixture is not available. Causes severe burns.

Ingestion

Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics**Symptoms**

Redness. Burning. May cause blindness. Coughing and/ or wheezing.

Numerical measures of toxicity**Acute Toxicity:**

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)	4,036.80 mg/kg
ATEmix (dermal)	2,166.70 mg/kg

Component Information

Chemical name	Oral LD ₅₀ :	Dermal LD ₅₀ :	LC ₅₀ (Lethal Concentration):
(S)-Lactic Acid 79-33-4	= 3730 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 7.94 mg/L (Rat) 4 h
Water 7732-18-5	> 90 mL/kg (Rat)	-	-

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

Skin corrosion/irritation	Causes severe burns.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes burns. Risk of serious damage to eyes.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.
Other Adverse Effects:	No information available.

12. Ecological information**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to microorganisms	Toxicity to daphnia and other aquatic invertebrates
(S)-Lactic Acid 79-33-4	-	320 mg/L (LC50 96 h semi-static - Brachydanio rerio) 100 - 180 mg/L (LC50 96 h static - Lepomis macrochirus) 100 - 180 mg/L (LC50 96 h static - Oncorhynchus mykiss)	-	240 mg/L (EC50 48 h - Daphnia magna) 180 - 320 mg/L (EC50 48 h Static - Daphnia magna)

Persistence and Degradability: No information available.

Bioaccumulation: There is no data for this product.

Component Information

Chemical name	Partition Coefficient:
(S)-Lactic Acid 79-33-4	-0.62

Mobility: No information available.

Other Adverse Effects: No information available.

13. Disposal considerations

Waste treatment methods

Waste from residues/unused products

Dispose of in accordance with local, state, and national regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging

Do not reuse empty containers.

14. Transport information

DOT

UN/ID No	UN3265
Proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (LACTIC ACID)
Hazard Class	8
Packing Group	II
Description	UN3265, CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (LACTIC ACID), 8, PG II



15. Regulatory information

International Inventories

Chemical name	TSCA	AICS	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS
(S)-Lactic Acid 79-33-4	Present ACTIVE	Present	Present	-	Present	-	Present	Present	Present	Present
Water 7732-18-5	Present ACTIVE	Present	Present	-	Present	-	Present	Present	Present	Present

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

AICS - Australian Inventory of Chemical Substances

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

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 and later calendar years will need to be consistent with updated hazard classifications.

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Clean Water Act (CWA)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

OSHA - Process Safety Management - Highly Hazardous Chemicals

This product does not contain any substances regulated under Process Safety Management (29 CFR 1910.119).

Department of Homeland Security - Chemical Facility Anti-Terrorism Standards (CFATS)

This product does not contain any substances regulated under the Chemical Facility Anti-Terrorism Standards (6 CFR 27).

16. Other information

Prepared By:	HSE Department
Issue Date:	24-Apr-2012
Revision Date:	14-Apr-2021
Revision Note:	Reviewed and Re-issued. Format change.

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet