



Lactic Acid 10%

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 06/10/2025 Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Trade name : Lactic Acid 10%
Product code : NCM4011
Type of product : Food Safety -- [Food Safety]
Part Number(s) : NCM4011|700004875

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

Relevant identified uses

Use of the substance/mixture : Laboratory chemicals
Scientific research and development

1.3. Details of the supplier of the safety data sheet

Neogen Corporation
620 Leshner Place
48912 Lansing, Michigan
United States of America
T 800.234.5333
sds@neogen.com, <https://www.neogen.com/>

1.4. Emergency telephone number

Emergency number : 24 hours:
Medical: 1-800-498-5743 (U.S. and Canada) or 1-651-523-0318 (international)
Spill/CHEMTREC: 1-800-424-9300 (U.S. and Canada) or 1-703-527-3887 (international)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Lactic acid (50-21-5)
Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Lactic acid (50-21-5)

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

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SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Lactic acid	CAS-No.: 50-21-5 EC-No.: 200-018-0	≥ 10 – < 15	Eye Dam. 1, H318 Skin Irrit. 2, H315

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: If you feel unwell, seek medical advice.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.
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For non-emergency personnel

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|----------------------|---|
| Protective equipment | : Wear recommended personal protective equipment. |
| Emergency procedures | : Ventilate spillage area. |

For emergency responders

- | | |
|----------------------|---|
| Protective equipment | : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |
| Emergency procedures | : Evacuate unnecessary personnel. Stop leak if safe to do so. |

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

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|-------------------------|---|
| For containment | : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible. |
| Methods for cleaning up | : Take up liquid spill into absorbent material. |
| Other information | : Dispose of materials or solid residues at an authorized site. |

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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|-------------------------------|---|
| Precautions for safe handling | : Ensure good ventilation of the work station. Wear personal protective equipment. |
| Hygiene measures | : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |

7.2. Conditions for safe storage, including any incompatibilities

- | | |
|---------------------|---|
| Technical measures | : Keep in a cool, well-ventilated place away from heat. |
| Storage conditions | : Keep cool. Protect from sunlight. |
| Storage temperature | : 2 – 8 °C |
| Packaging materials | : Store always product in container of same material as original container. |

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):



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Eye and face protection

Eye protection:

Safety glasses

Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Clear. Colourless.
Odour	: Characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

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10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

Lactic acid (50-21-5)

LD50 oral rat	3543 – 4936 mg/kg bodyweight (EPA OPP 81-1: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral, 14 day(s))
LD50 oral	3730 mg/kg
LD50 dermal rabbit	> 2000 mg/kg (EPA OPP 81-2, 24 h, Rabbit, Male / female, Experimental value, Isomer, Dermal, 14 day(s))
LC50 Inhalation - Rat	> 7.94 mg/l (OECD 403: Acute Inhalation Toxicity, 4 h, Rat, Male / female, Experimental value, Isomer, Inhalation (aerosol), 14 day(s))
LC50 Inhalation - Rat (Vapours)	7.94 mg/l Source: National Library of Medicine/Hazardous Substances Data Bank

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)

Lactic acid (50-21-5)

pH	No data available in the literature
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Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)

Lactic acid (50-21-5)

pH	No data available in the literature
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Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

Lactic acid (50-21-5)

Viscosity, kinematic	No data available in the literature
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11.2. Information on other hazards

No additional information available

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SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

Lactic acid (50-21-5)	
LC50 - Fish [1]	130 mg/l (EPA 660/3 - 75/009, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value, Nominal concentration)
LC50 - Fish [2]	195 mg/l Test organisms (species):
EC50 - Crustacea [1]	250 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 96h - Algae [1]	99054.883 mg/l Source: Ecological Structure Activity Relationships
ErC50 algae	3.5 g/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Read-across, Nominal concentration)

12.2. Persistence and degradability

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Persistence and degradability	Not rapidly degradable
Lactic acid (50-21-5)	
Persistence and degradability	Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.45 g O ₂ /g substance
Chemical oxygen demand (COD)	0.9 g O ₂ /g substance
ThOD	1.066 g O ₂ /g substance

12.3. Bioaccumulative potential

Lactic acid (50-21-5)	
Partition coefficient n-octanol/water (Log Pow)	-0.54 (Experimental value, EU Method A.8: Partition Coefficient, 25 °C)
Bioaccumulative potential	Not bioaccumulative.

12.4. Mobility in soil

Lactic acid (50-21-5)	
Surface tension	70.7 mN/m (20 °C, 0.1 %, OECD 115: Surface Tension of Aqueous Solutions)
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	< 1.32 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Ecology - soil	Highly mobile in soil.

12.5. Results of PBT and vPvB assessment

Component	
Substance(s) not meeting the PBT criteria of REACH regulation, in accordance with Annex XIII	Lactic acid (50-21-5)

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Component

Substance(s) not meeting the vPvB criteria of REACH regulation, in accordance with Annex XIII	Lactic acid (50-21-5)
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12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
HP Code	: HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not regulated	Not regulated	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not applicable

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Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

Explosives Precursors Regulation (EU 2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (EC 273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ACGIH	American Conference of Government Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)

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Abbreviations and acronyms:	
CSA	Chemical safety assessment
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
EN	European Standard
EWC	European waste catalogue
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety Health Administration
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
PPE	Personal protection equipment
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
TF	Technical function
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TWA	Time Weighted Average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
UFI	Unique Formula Identifier

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Full text of H- and EUH-statements:	
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
H315	Causes skin irritation.
H318	Causes serious eye damage.

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.