

# SAFETY DATA SHEET

Creation Date 21-Feb-2012

Revision Date 18-Dec-2025

Revision Number 8

This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

## 1. Identification

|                             |  |
|-----------------------------|--|
| <b>Product Name</b>         | Propionic acid   |
| <b>Cat No. :</b>            | <b>A258-500; A258-N119; XXA2581LI; NC3780517</b>       |
| <b>CAS No</b>               | 79-09-4  |
| <b>Synonyms</b>             | Carboxyethane; Ethanecarboxylic acid; Ethylformic acid |
| <b>Recommended Use</b>      | Laboratory chemicals.                                  |
| <b>Uses advised against</b> | Food, drug, pesticide or biocidal product use.         |

### Details of the supplier of the safety data sheet

#### Company

Fisher Scientific Company  
One Reagent Lane  
Fair Lawn, NJ 07410  
Tel: (201) 796-7100

#### Emergency Telephone Number

CHEMTREC®, Inside the USA: 800-424-9300  
CHEMTREC®, Outside the USA: 001-703-527-3887

## 2. Hazard(s) identification

#### Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024)

|  |              |
|--|--------------|
| Flammable liquids                                | Category 3   |
| Corrosive to metals                              | Category 1   |
| Skin Corrosion/Irritation                        | Category 1 B |
| Serious Eye Damage/Eye Irritation                | Category 1   |
| Specific target organ toxicity (single exposure) | Category 3   |
| Target Organs - Respiratory system.              |              |

### Label Elements

#### Signal Word

Danger

#### Hazard Statements

Flammable liquid and vapor

May be corrosive to metals  
Causes severe skin burns and eye damage  
May cause respiratory irritation



#### Precautionary Statements

##### Prevention

Do not breathe dust/fume/gas/mist/vapors/spray  
Wash face, hands and any exposed skin thoroughly after handling  
Wear protective gloves/protective clothing/eye protection/face protection  
Use only outdoors or in a well-ventilated area  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
Keep container tightly closed  
Ground and bond container and receiving equipment  
Use explosion-proof electrical/ventilating/lighting equipment  
Keep only in original packaging  
Keep cool  
Take action to prevent static discharges  
Use non-sparking tools

##### Response

Immediately call a POISON CENTER or doctor

##### Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing

##### Skin

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower  
Take off contaminated clothing and wash before reuse

##### Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

##### Ingestion

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting

##### Fire

In case of fire: Use CO<sub>2</sub>, dry chemical, or foam to extinguish

##### Spills

Absorb spillage to prevent material damage

##### Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Store in corrosive resistant polypropylene container with a resistant inliner

Store in a dry place

##### Disposal

Dispose of contents/container to an approved waste disposal plant

##### Hazards not otherwise classified (HNOC)

None identified

##### Hazards classified under paragraph (d)(1)(ii) of 1910.1200

No information available

### 3. Composition/information on Ingredients

| Component | CAS No | Weight % |
|-----------|--------|----------|
|-----------|--------|----------|

|                |         |     |
|----------------|---------|-----|
| Propionic acid | 79-09-4 | >95 |
|----------------|---------|-----|

#### 4. First-aid measures

|  |  |
|--|--|
| <b>General Advice</b>                      | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.  |
| <b>Eye Contact</b>                         | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.  |
| <b>Skin Contact</b>                        | Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Call a physician immediately.  |
| <b>Inhalation</b>                          | If not breathing, give artificial respiration. Remove from exposure, lie down. 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. Call a physician immediately.   |
| <b>Ingestion</b>                           | Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately.   |
| <b>Most important symptoms and effects</b> | Causes burns by all exposure routes. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation |
| <b>Notes to Physician</b>                  | Treat symptomatically  |

#### 5. Fire-fighting measures

**Suitable Extinguishing Media** CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam.

**Unsuitable Extinguishing Media** No information available

**Flash Point** 51 °C / 123.8 °F

**Method -** No information available

**Autoignition Temperature** 485 °C / 905 °F

**Explosion Limits**

Upper 12.1 vol %

Lower 2.1 vol %

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

**Specific Hazards Arising from the Chemical**

Thermal decomposition can lead to release of irritating gases and vapors. The product causes burns of eyes, skin and mucous membranes.

**Hazardous Combustion Products**

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**NFPA**

| Health<br>3 | Flammability<br>2 | Instability<br>0 | Physical hazards<br>N/A |
|-------------|-------------------|------------------|-------------------------|
|-------------|-------------------|------------------|-------------------------|

## 6. Accidental release measures

**Personal Precautions** Use personal protective equipment as required. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental Precautions** Should not be released into the environment.

**Methods for Containment and Clean Up** Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

## 7. Handling and Storage

**Handling** Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance.

**Storage.** Keep containers tightly closed in a dry, cool and well-ventilated place. Corrosives area. Keep away from heat, sparks and flame. Do not store in metal containers. Incompatible Materials. Bases. Strong oxidizing agents. Amines. Halogens. Metals. Reducing Agent.

## 8. Exposure controls / personal protection

### Exposure Guidelines

| Component      | ACGIH TLV   | OSHA PEL   | NIOSH  | Mexico OEL (TWA) |
|----------------|-------------|--|--|------------------|
| Propionic acid | TWA: 10 ppm | (Vacated) TWA: 10 ppm<br>(Vacated) TWA: 30 mg/m <sup>3</sup> | REL = 10 ppm (TWA)<br>REL = 30 mg/m <sup>3</sup> (TWA)<br>STEL: 15 ppm<br>STEL: 45 mg/m <sup>3</sup> | TWA: 10 ppm      |

### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures** Use only under a chemical fume hood. Use explosion-proof electrical/ventilating/lighting equipment. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

### Personal Protective Equipment

**Eye/face Protection** Tight sealing safety goggles. Face protection shield.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

**Recommended Filter type:** Particulates filter conforming to EN 143. or. Acid gases filter. Type E. Yellow. conforming to EN14387.

**Hygiene Measures** Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

### Appearance

|  |   |  |
|--|---|--|
| <b>Physical State</b>                          | Liquid  |  |
| <b>Color</b>                                   | No information available                        |  |
| <b>Odor</b>                                    | pungent   |  |
| <b>Odor Threshold</b>                          | No information available                        |  |
| <b>Property</b>                                | <b>Values</b>                                   | <b>Remarks</b> • <b>Method</b>           |
| <b>Melting Point/Range</b>                     | -22 °C / -7.6 °F                                |  |
| <b>Softening Point</b>                         | No data available                               |  |
| <b>Boiling Point/Range</b>                     | 141 °C / 285.8 °F                               | @ 760 mmHg                               |
| <b>Flash Point</b>                             | 51 °C / 123.8 °F                                | <b>Method</b> - No information available |
| <b>Flammability (liquid)</b>                   | Flammable                                       | On basis of test data                    |
| <b>Flammability (solid,gas)</b>                | Not applicable                                  | Liquid                                   |
| <b>Explosion Limits</b>                        | <b>Lower</b> 2.1 Vol%<br><b>Upper</b> 12.1 Vol% |  |
| <b>Autoignition Temperature</b>                | 485 °C / 905 °F                                 |  |
| <b>Decomposition Temperature</b>               | No data available                               |  |
| <b>pH</b>                                      | 2.5   | 100 g/l aq. sol                          |
| <b>Viscosity</b>                               | 1.02 mPa.s at 25 °C                             |  |
| <b>Water Solubility</b>                        | Miscible  |  |
| <b>Solubility in other solvents</b>            | No information available                        |  |
| <b>Partition Coefficient (n-octanol/water)</b> | <b>log Pow</b>                                  |  |
| Propionic acid                                 | 0.33  |  |
| <b>Vapor Pressure</b>                          | 5 mbar @ 20 °C                                  |  |
| <b>Density / Specific Gravity</b>              | 0.990   |  |
| <b>Bulk Density</b>                            | Not applicable                                  | Liquid                                   |
| <b>Vapor Density</b>                           | 2.56  | (Air = 1.0)                              |
| <b>Particle characteristics</b>                | Not applicable (liquid)                         |  |
| <b>Other Information</b>                       |   |  |
| <b>Molecular Formula</b>                       | C3 H6 O2  |  |
| <b>Molecular Weight</b>                        | 74.08   |  |
| <b>Explosive Properties</b>                    | explosive air/vapour mixtures possible          |  |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactive Hazard</b>                  | None known, based on information available  |
| <b>Stability</b>                        | Stable under normal conditions.   |
| <b>Conditions to Avoid</b>              | Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition. |
| <b>Incompatible Materials</b>           | Bases, Strong oxidizing agents, Amines, Halogens, Metals, Reducing Agent                              |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> )   |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.  |
| <b>Hazardous Reactions</b>              | None under normal processing.   |

## 11. Toxicological information

### Information on expected route of exposure

|                   |  |
|-------------------|--|
| <b>Inhalation</b> | Causes burns. Harmful by inhalation.   |
| <b>Ingestion</b>  | Causes burns. Ingestion causes burns of the upper digestive and respiratory tracts. Can burn mouth, throat, and stomach. Harmful if swallowed. |
| <b>Eyes</b>       | Causes burns. Irritating to eyes. Corrosive to the eyes and may cause severe damage including blindness. Risk of serious damage to eyes.       |

**Skin** Causes burns.

**Toxicology data for the components**

| Component      | LD50 Oral                 | LD50 Dermal                  | LC50 Inhalation                |
|----------------|---------------------------|------------------------------|--------------------------------|
| Propionic acid | LD50 = 3455 mg/kg ( Rat ) | LD50 = 3235 mg/kg ( Rabbit ) | LC50 = > 19.7 mg/l ( Rat ) 1 h |

**Toxicologically Synergistic Products** No information available

**(b) skin corrosion/irritation;** Category 1

**(c) serious eye damage/irritation;** Category 1

**(d) respiratory or skin sensitization;**

Respiratory Based on available data, the classification criteria are not met  
Skin Based on available data, the classification criteria are not met

**(e) germ cell mutagenicity;** Based on available data, the classification criteria are not met

Not mutagenic in AMES Test

**(f) carcinogenicity;** Based on available data, the classification criteria are not met

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component      | CAS No  | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|----------------|---------|------------|------------|------------|------------|------------|
| Propionic acid | 79-09-4 | Not listed |

**(g) reproductive toxicity;** Based on available data, the classification criteria are not met

**(h) STOT-single exposure;** Category 3

**Results / Target organs** Respiratory system.

**(i) STOT-repeated exposure;** Based on available data, the classification criteria are not met

**Target Organs** None known.

**(j) aspiration hazard;** Based on available data, the classification criteria are not met

**Symptoms / effects,both acute and delayed** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

**12. Ecological information**

**Ecotoxicity**

Do not empty into drains.

| Component      | Freshwater Algae   | Freshwater Fish  | Microtox              | Water Flea |
|----------------|--|--|-----------------------|------------|
| Propionic acid | EC50: = 45.8 mg/L, 72h<br>(Desmodesmus subspicatus)<br>EC50: = 43 mg/L, 96h<br>(Desmodesmus subspicatus) | LC50: = 51 mg/L, 96h static<br>(Oncorhynchus mykiss)<br>LC50: 73 - 99.7 mg/L, 96h static (Lepomis macrochirus)<br>LC50: > 1 mg/L, 96h static (Pimephales promelas) | EC50 = 59.6 mg/L 17 h | Not listed |

**Persistence and Degradability** Miscible with water Persistence is unlikely based on information available.

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Will likely be mobile in the environment due to its water solubility.

| Component      | log Pow |
|----------------|---------|
| Propionic acid | 0.33    |

### 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 14. Transport information

#### DOT

|                         |                |
|-------------------------|----------------|
| UN-No                   | UN3463         |
| Proper Shipping Name    | PROPIONIC ACID |
| Hazard Class            | 8              |
| Subsidiary Hazard Class | 3              |
| Packing Group           | II             |

#### TDG

|                         |                |
|-------------------------|----------------|
| UN-No                   | UN3463         |
| Proper Shipping Name    | PROPIONIC ACID |
| Hazard Class            | 8              |
| Subsidiary Hazard Class | 3              |
| Packing Group           | II             |

#### IATA

|                         |                |
|-------------------------|----------------|
| UN-No                   | UN3463         |
| Proper Shipping Name    | PROPIONIC ACID |
| Hazard Class            | 8              |
| Subsidiary Hazard Class | 3              |
| Packing Group           | II             |

#### IMDG/IMO

|                         |                |
|-------------------------|----------------|
| UN-No                   | UN3463         |
| Proper Shipping Name    | PROPIONIC ACID |
| Hazard Class            | 8              |
| Subsidiary Hazard Class | 3              |
| Packing Group           | II             |

### 15. Regulatory Information

#### United States of America Inventory

| Component      | CAS No  | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|----------------|---------|------|---|-----------------------------|
| Propionic acid | 79-09-4 | X    | ACTIVE  | -                           |

#### Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

- - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)** Not applicable

**TSCA 12(b) - Notices of Export** Not applicable

#### **International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component      | CAS No  | DSL | NDSL | EINECS    | PICCS | ENCS | ISHL | AICS | IECSC | KECL     |
|----------------|---------|-----|------|-----------|-------|------|------|------|-------|----------|
| Propionic acid | 79-09-4 | X   | -    | 201-176-3 | X     | X    | X    | X    | X     | KE-29352 |

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

#### **U.S. 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**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

##### **CWA (Clean Water Act)**

| Component      | CWA - Hazardous Substances | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants |
|----------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Propionic acid | X                          | 5000 lb                     | -                      | -                         |

**Clean Air Act** Not applicable

**OSHA - Occupational Safety and Health Administration**

##### **CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

| Component      | Hazardous Substances RQs | CERCLA Extremely Hazardous Substances RQs | SARA Reportable Quantity (RQ) |
|----------------|--------------------------|---|-------------------------------|
| Propionic acid | 5000 lb                  | -   | 5000 lb<br>2270 kg            |

**California Proposition 65** This product does not contain any Proposition 65 chemicals.

#### **U.S. State Right-to-Know Regulations**

| Component      | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|----------------|---------------|------------|--------------|----------|--------------|
| Propionic acid | X             | X          | X            | -        | X            |

#### **U.S. Department of Transportation**

Reportable Quantity (RQ): Y  
DOT Marine Pollutant N  
DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

#### Other International Regulations

**Mexico - Grade** Moderate risk, Grade 2

#### **Authorisation/Restrictions according to EU REACH**

| Component      | CAS No  | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|----------------|---------|---|---|---|
| Propionic acid | 79-09-4 | -   | Use restricted. See entry 75.<br>(see link for restriction details)           | -   |

#### **REACH links**

<https://echa.europa.eu/substances-restricted-under-reach>

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

| Component      | CAS No  | OECD HPV | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|----------------|---------|----------|------------------------------|---------------------------|--|
| Propionic acid | 79-09-4 | Listed   | Not applicable               | Not applicable            | Not applicable                             |

#### **Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**

Not applicable

#### **Other International Regulations**

| Component      | CAS No  | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|----------------|---------|---|--|----------------------------|------------------------------------|
| Propionic acid | 79-09-4 | Not applicable  | Not applicable   | Not applicable             | Annex I - Y34                      |

### 16. Other Information

#### **Prepared By**

Product stewardship (Regulatory Affairs)  
Thermo Fisher Scientific  
email - begel.sdsdesk@thermofisher.com

#### **Creation Date**

21-Feb-2012

#### **Revision Date**

18-Dec-2025

#### **Print Date**

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#### **Revision Summary**

Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024.

#### **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 SDS**