

SAFETY DATA SHEET

Creation Date 05-May-2009

Revision Date 18-December-2025

Revision Number 8

This safety data sheet was created pursuant to the requirements of: Canada WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) - SOR 2022-272

1. Identification

| | |
|-----------------------------|---|
| Product Name | Acetic acid |
| Cat No. : | A35-500; A38-212; A38-450LB; A38-500; A38-500LC; A38C-212; A38C-212EA; A38P-20; A38P-500; A38S-212; A38S-500; A38SI-212; A465-1; A465-250; A465-500; A490-212; A490-212LC; A491-212; BP1185-500; BP1185-500LC; BP2400-500; BP2401-212; BP2401-500; BP2401C-212; BP2401P-20; BP2401S-212; BP2401S-500; BP2401SI-212; S700481; XXA491ET2.5LI; NC3359272; XXA490SK212LI; NC3654017 |
| CAS-No | 64-19-7 |
| Synonyms | Glacial acetic acid; Methanecarboxylic acid; Ethanoic acid; Vinegar acid (HPLC/Certified ACS/OPTIMA/USP/FCC/EP/BP/Trace Metal Grade/Aldehyde-Free/Sequencing) |
| Recommended Use | Laboratory chemicals. |
| Uses advised against | Food, drug, pesticide or biocidal product use. |

Details of the supplier of the safety data sheet

Company

Importer/Distributor

Fisher Scientific
112 Colonnade Road,
Ottawa, ON K2E 7L6,
Canada
Tel: 1-800-234-7437

Manufacturer

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

WHMIS 2015 Classification

This product is hazardous in accordance with the Canada Hazardous Products Act (HPA) and Hazardous Products Regulation (HPR), as amended (SOR/2022-272)

| | |
|--|--------------|
| Flammable liquids | Category 3 |
| Skin Corrosion/Irritation | Category 1 A |
| Serious Eye Damage/Eye Irritation | Category 1 |

Label Elements**Signal Word**

Danger

Hazard Statements

Flammable liquid and vapor

Causes severe skin burns and eye damage

**Precautionary Statements****Prevention**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

Keep container tightly closed

Use explosion-proof electrical/ventilating/lighting/equipment

Do not breathe dust/fumes/gas/mist/vapours/spray

Wash face, hands and any exposed skin thoroughly after handling

Use only outdoors or in a well-ventilated area

Wear protective gloves/protective clothing/eye protection/face protection

Take action to prevent static discharges

Response

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

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

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

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/doctor

Wash contaminated clothing before reuse

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

Storage

Store locked up

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

Disposal

Dispose of contents/container to an approved waste disposal plant

3. Composition/Information on Ingredients

| Component | CAS-No | Weight % |
|-------------|---------|----------|
| Acetic acid | 64-19-7 | <=100 |

4. First-aid measures**General Advice**

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Skin Contact

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. |
| Inhalation | 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. |
| Ingestion | Do NOT induce vomiting. Clean mouth with water. Never give anything by mouth to an unconscious person. Call a physician immediately. |
| Most important symptoms/effects | Causes burns by all exposure routes. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting |
| Notes to Physician | Treat symptomatically |

5. Fire-fighting measures

| | |
|---|---|
| Suitable Extinguishing Media | CO ₂ , dry chemical, dry sand, alcohol-resistant foam. |
| Unsuitable Extinguishing Media | No information available |
| Flash Point | 40 °C / 104 °F |
| Method - | No information available |
| Autoignition Temperature | 427 °C / 800.6 °F |
| Explosion Limits | |
| Upper | 19.9 vol % |
| Lower | 4.0 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 (CO₂). Thermal decomposition can lead to release of irritating gases and vapors.

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 3 | Flammability 2 | Instability 0 | Physical hazards 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.

Corrosives area. Keep away from heat, sparks and flame. Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Strong oxidizing agents. Strong bases. Metals.

8. Exposure controls / personal protection

Exposure Guidelines

| Component | Alberta | British Columbia | Ontario TWAEV | Quebec |
|-------------|--|-----------------------------|-----------------------------|--|
| Acetic acid | TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³ | TWA: 10 ppm STEL: 15 ppm | TWA: 10 ppm STEL: 15 ppm | TWA: 10 ppm TWA: 25 mg/m ³ STEL: 15 ppm STEL: 37 mg/m ³ |

| Component | Manitoba | New Brunswick | Newfoundland and Labrador | Nova Scotia |
|-------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Acetic acid | TWA: 10 ppm STEL: 15 ppm | TWA: 10 ppm STEL: 15 ppm | TWA: 10 ppm STEL: 15 ppm | TWA: 10 ppm STEL: 15 ppm |

| Component | Nunavut | Prince Edward Island | Saskatchewan | Yukon |
|-------------|-----------------------------|-----------------------------|-----------------------------|--|
| Acetic acid | TWA: 10 ppm STEL: 15 ppm | TWA: 10 ppm STEL: 15 ppm | TWA: 10 ppm STEL: 15 ppm | TWA: 10 ppm TWA: 25 mg/m ³ STEL: 25 ppm STEL: 43 mg/m ³ |

| Component | ACGIH TLV | OSHA PEL | NIOSH |
|----------------------------------|-----------------------------|--|--|
| Acetic acid 64-19-7 (<=100) | TWA: 10 ppm STEL: 15 ppm | (Vacated) TWA: 10 ppm (Vacated) TWA: 25 mg/m ³ TWA: 10 ppm TWA: 25 mg/m ³ | IDLH: 50 ppm REL = 10 ppm (TWA) REL = 25 mg/m ³ (TWA) STEL: 15 ppm STEL: 37 mg/m ³ |

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.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment**Eye Protection**

Tight sealing safety goggles or Face protection shield Goggles

Hand Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

| Glove material | Breakthrough time | Glove thickness | Glove comments |
|----------------|-------------------|-----------------|------------------------|
| Butyl rubber | > 480 minutes | 0.7 mm | Splash protection only |

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. 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.

To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

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

When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls

Prevent product from entering drains.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance

Physical State Liquid

Color Colorless

Odor vinegar-like

Odor Threshold No information available

Property**Values****Remarks****Method**

Melting Point/Range 16 - 16.5 °C / 60.8 - 61.7 °F

Softening Point No data available

Boiling Point/Range 117 - 118 °C / 242.6 - 244.4 °F

Flash Point 40 °C / 104 °F

Method - No information available

Flammability (liquid) Flammable

On basis of test data

Flammability (solid,gas) Not applicable

Liquid

Explosion Limits **Lower** 4 vol%

Upper 19.9 vol%

Autoignition Temperature 427 °C / 800.6 °F

Decomposition Temperature No data available

pH < 2.5

10 g/L aq.sol

Viscosity 1.53 mPa.s @ 25 °C

Water Solubility Miscible

Solubility in other solvents No information available

Partition Coefficient (n-octanol/water)

Component **log Pow**

Acetic acid -0.2

Vapor Pressure 1.52 kPa @ 20 °C

Density / Specific Gravity 1.048

Bulk Density Not applicable

Liquid

Vapor Density 2.10

(Air = 1.0)

Particle characteristics Not applicable (liquid)

Other Information

Molecular Formula C2 H4 O2

Molecular Weight 60.05

Explosive Properties explosive air/vapour mixtures possible

Evaporation Rate 0.97 (Butyl Acetate = 1.0)

10. Stability and reactivity

Reactive Hazard

None known, based on information available

| | |
|---|---|
| Stability | Stable under normal conditions. |
| Conditions to Avoid | Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition. |
| Incompatible Materials | Strong oxidizing agents, Strong bases, Metals |
| Hazardous Decomposition Products | Carbon monoxide (CO), Carbon dioxide (CO ₂), Thermal decomposition can lead to release of irritating gases and vapors |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information

Information on expected route of exposure

| | |
|-------------------|--|
| Inhalation | Causes severe burns. May be harmful if inhaled. |
| Ingestion | Causes severe burns. Ingestion causes burns of the upper digestive and respiratory tracts. Can burn mouth, throat, and stomach. May be harmful if swallowed. |
| Eyes | Risk of serious damage to eyes. May cause blindness or permanent eye damage. Corrosive to the eyes and may cause severe damage including blindness. |
| Skin | Causes severe burns. May be harmful in contact with skin. |

Toxicology data for the components

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|-------------|--------------------|-------------|-----------------------|
| Acetic acid | 3310 mg/kg (Rat) | - | > 40 mg/L (Rat) 4 h |

Toxicologically Synergistic Products No information available

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; No data available

(d) respiratory or skin sensitization;
Respiratory No data available
Skin No data available

(e) germ cell mutagenicity; No data available
 Not mutagenic in AMES Test

(f) carcinogenicity;
 The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|-------------|---------|------------|------------|------------|------------|------------|
| Acetic acid | 64-19-7 | Not listed | Not listed | Not listed | Not listed | Not listed |

(g) reproductive toxicity; No data available

(h) STOT-single exposure; No data available

| | |
|---|--|
| (i) STOT-repeated exposure; | No data available |
| Target Organs | No information available. |
| (j) aspiration hazard; | Based on available data, the classification criteria are not met |
| Symptoms / effects, both acute and delayed | Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. |
| 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 |
|-------------|------------------|--|---|--------------------|
| Acetic acid | - | Pimephales promelas: LC50 = 88 mg/L/96h Lepomis macrochirus: LC50 = 75 mg/L/96h | Photobacterium phosphoreum: EC50 = 8.8 mg/L/15 min Photobacterium phosphoreum: EC50 = 8.8 mg/L/25 min Photobacterium phosphoreum: EC50 = 8.8 mg/L/5 min | EC50 = 95 mg/L/24h |

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 |
|-------------|---------|
| Acetic acid | -0.2 |

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 | UN2789 |
| Proper Shipping Name | ACETIC ACID, GLACIAL |
| Hazard Class | 8 |
| Subsidiary Hazard Class | 3 |
| Packing Group | II |

TDG

| | |
|--------------------------------|----------------------|
| UN-No | UN2789 |
| Proper Shipping Name | ACETIC ACID, GLACIAL |
| Hazard Class | 8 |
| Subsidiary Hazard Class | 3 |
| Packing Group | II |

IATA

| | |
|--------------|--------|
| UN-No | UN2789 |
|--------------|--------|

| | |
|--------------------------------|----------------------|
| Proper Shipping Name | ACETIC ACID, GLACIAL |
| Hazard Class | 8 |
| Subsidiary Hazard Class | 3 |
| Packing Group | II |
| IMDG/IMO | |
| UN-No | UN2789 |
| Proper Shipping Name | ACETIC ACID, GLACIAL |
| Hazard Class | 8 |
| Subsidiary Hazard Class | 3 |
| Packing Group | II |

15. Regulatory information

International Inventories

| Component | CAS-No | DSL | NDSL | TSCA | TSCA Inventory notification - Active-Inactive | EINECS | ELINCS | NLP |
|-------------|---------|-----|------|------|---|-----------|--------|-----|
| Acetic acid | 64-19-7 | X | - | X | ACTIVE | 200-580-7 | - | - |

| Component | CAS-No | IECSC | KECL | ENCS | ISHL | TCSI | AICS | NZIoC | PICCS |
|-------------|---------|-------|------|------|------|------|------|-------|-------|
| Acetic acid | 64-19-7 | X | X | X | X | X | X | X | X |

Legend:

X - Listed '-' - Not listed

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

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

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

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

Canada

SDS in compliance with provisions of information as set out in Canadian Standard - Part 4, Schedule 1 and 2 of the Hazardous Products Regulations (HPR) and its amendments and meets the requirements of the HPR (Paragraph 13(1)(a) of the revised Hazardous Products Act (HPA)).

| Component | Canada - National Pollutant Release Inventory (NPRI) | Canadian Environmental Protection Agency (CEPA) - List of Toxic Substances | Canada's Chemicals Management Plan (CEPA) |
|-------------|--|--|---|
| Acetic acid | Part 4 Substance | | |

Other International Regulations

Authorisation/Restrictions according to EU REACH

| Component | 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) |
|-------------|---|---|---|
| Acetic acid | - | Use restricted. See entry 75. (see link for restriction details) | - |

REACH links

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

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

Not applicable

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) |
|-------------|---------|----------|------------------------------|---------------------------|--|
| Acetic acid | 64-19-7 | Listed | Not applicable | Not applicable | Not applicable |

| 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) |
|-------------|---------|---|--|----------------------------|------------------------------------|
| Acetic acid | 64-19-7 | 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 | 05-May-2009 |
| Revision Date | 18-December-2025 |
| Print Date | 18-December-2025 |
| Revision Summary | This document has been updated to comply with the requirements of WHMIS 2015 which includes the amended Hazardous Products Act (HPA) and the Hazardous Products Regulation (HPR) to align with the Globally Harmonised System (GHS) (V7/8) for the Classification and Labelling of Chemicals. |

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