**SAFETY DATA SHEET**
***FICHE SIGNALÉTIQUE***

| ACCOUNT NO *NOM DE COMPTE* | DATE | PAGES |
|---|---|---|
| 5916400 | 09/11/2021 | 9 |
| **CATALOG NO.** *NO. DE CATALOGUE* | **DESCRIPTION** | |
| A38212 | ACETIC ACID GLACIAL ACS 21/2L | |
| **CUSTOMER ORDER NO.** *VOTRE NO. DE COMMANDE* | | |
| CREDIT CARD 09/10 | | |

NIPISSING UNIVERSITY
100 COLLEGE DRIVE
NORTH BAY ON
P1B 8L7
ATTN: SAFETY OFFICER


## Fisher Scientific

**Customer Service Centre** / ***Service à la clientèle***
112 Colonnade Road
Ottawa, ON K2E 7L6

Website / *Site internet* : **fishersci.ca**
Email / *Courriel* : **help@thermofisher.com**
Voice / *Voix* : **800-234-7437**


**Important Safety Information - DO NOT DISCARD.**
***Renseignements importants pour la securite - NE PAS JETER.***

For each chemical, a safety data sheet will be sent only on the first shipment unless there is a revision to the data sheet.

*Une fiche signaletique de chaque produit chimique sera envoyee lors de la premiere livraison seulement sauf si elle a ete revisee.*

If name and/or address have changed contact your Fisher sales representative of your local Fisher branch.

*En cas de changement de nom et/ou d'adresse, contracter votre representant des ventes Fisher, ou votre succursale locale Fisher.*

Required safety data sheets not included in this mailing will follow under a separate cover.

*Toutes fiches signaletiques demandees et non incluses dans cet envoi suivront sous pli separe.*

# SAFETY DATA SHEET

**Creation Date** 05-May-2009 **Revision Date** 17-Jan-2018 **Revision Number** 4

## 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**

**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** Not for food, drug, pesticide or biocidal product use

**Details of the supplier of the safety data sheet**

**Company**
Fisher Scientific
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 by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|---|---|
| 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/sparks/open flames/hot surfaces. - No smoking
Take precautionary measures against static discharge
Wear protective gloves/protective clothing/eye protection/face protection
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wash face, hands and any exposed skin thoroughly after handling
Keep container tightly closed
**Response**
Immediately call a POISON CENTER or doctor/physician
**Inhalation**
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
**Skin**
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing 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 CO2, dry chemical, or foam for extinction
**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
**Hazards not otherwise classified (HNOC)**
None identified

## 3. Composition/Information on Ingredients

| Component | CAS-No | Weight % |
|---|---|---|
| Acetic acid | 64-19-7 | >95 |

## 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 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 and 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 ($CO_2$) 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 | Flammability | Instability | Physical hazards |
|---|---|---|---|
| 3 | 2 | 0 | N/A |

## 6. Accidental release measures

**Personal Precautions** Use personal protective equipment. 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. Use only under a chemical fume hood. Do not breathe vapors or spray mist. Do not ingest.

**Storage** Corrosives area. Keep away from heat and sources of ignition. Keep containers tightly closed in a dry, cool and well-ventilated place.

## 8. Exposure controls / personal protection

**Exposure Guidelines**

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH | Mexico OEL (TWA) |
|---|---|---|---|---|
| Acetic acid | TWA: 10 ppm<br>STEL: 15 ppm | (Vacated) TWA: 10 ppm<br>(Vacated) TWA: 25 mg/m³<br>TWA: 10 ppm<br>TWA: 25 mg/m³ | IDLH: 50 ppm<br>TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 15 ppm<br>STEL: 37 mg/m³ | TWA: 10 ppm<br>TWA: 25 mg/m³<br>STEL: 15 ppm<br>STEL: 37 mg/m³ |

*Legend*

*ACGIH - American Conference of Governmental Industrial Hygienists*
*OSHA - Occupational Safety and Health Administration*
*NIOSH IDLH: The National Institute for Occupational Safety and Health Immediately Dangerous to Life or 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** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Tightly fitting safety goggles. Face-shield.

**Skin and body protection** Long sleeved clothing.

**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.

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

## 9. Physical and chemical properties

| | |
|---|---|
| **Physical State** | Liquid |
| **Appearance** | Colorless |
| **Odor** | vinegar-like |
| **Odor Threshold** | No information available |
| **pH** | < 2.5 10 g/L aq.sol |
| **Melting Point/Range** | 16 - 16.5 °C / 60.8 - 61.7 °F |
| **Boiling Point/Range** | 117 - 118 °C / 242.6 - 244.4 °F |
| **Flash Point** | 40 °C / 104 °F |
| **Evaporation Rate** | 0.97 (Butyl Acetate = 1.0) |
| **Flammability (solid,gas)** | Not applicable |
| **Flammability or explosive limits** | |
| **Upper** | 19.9 vol % |
| **Lower** | 4.0 vol % |
| **Vapor Pressure** | 1.52 kPa @ 20 °C |
| **Vapor Density** | 2.10 |
| **Specific Gravity** | 1.048 |
| **Solubility** | Soluble in water |
| **Partition coefficient; n-octanol/water** | No data available |
| **Autoignition Temperature** | 427 °C / 800.6 °F |
| **Decomposition Temperature** | No information available |
| **Viscosity** | 1.53 mPa.s @ 25 °C |
| **Molecular Formula** | C2 H4 O2 |
| **Molecular Weight** | 60.05 |

## 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

**Acute Toxicity**

**Product Information**

**Component Information**

| 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

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

**Irritation** Causes severe burns by all exposure routes

**Sensitization** No information available

**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 |

**Mutagenic Effects** Not mutagenic in AMES Test

**Reproductive Effects** No information available.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known

**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**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

**Endocrine Disruptor Information** No information available

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

## 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<br>Lepomis macrochirus: LC50 = 75 mg/L/96h | Photobacterium phosphoreum: EC50 = 8.8 mg/L/15 min<br>Photobacterium phosphoreum: EC50 = 8.8 mg/L/25 min<br>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

**All of the components in the product are on the following Inventory lists:** The product is classified and labeled according to EC directives or corresponding national laws The product is classified and labeled in accordance with Directive 1999/45/EC Europe China Canada TSCA Korea Japan X = listed Australia U.S.A. (TSCA) Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP) Australia (AICS) Korea (ECL) China (IECSC) Japan (ENCS) Philippines (PICCS) Philippines Complete Regulatory Information contained in following SDS's

**International Inventories**

| Component | TSCA | DSL | NDSL | EINECS | ELINCS | NLP | PICCS | ENCS | AICS | IECSC | KECL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Acetic acid | X | X | - | 200-580-7 | - | | X | X | X | X | X |

**Legend:**
**X - Listed**
**E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.**
**F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.**
**N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.**
**P - Indicates a commenced PMN substance**
**R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.**
**S - Indicates a substance that is identified in a proposed or final Significant New Use Rule**
**T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.**
**XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).**
**Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.**
**Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.**

## U.S. Federal Regulations

**TSCA 12(b)** Not applicable

**SARA 313** Not applicable

**SARA 311/312 Hazard Categories** See section 2 for more information

**CWA (Clean Water Act)**

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

**Clean Air Act** Not applicable

**OSHA** Occupational Safety and Health Administration
Not applicable

**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)

| Component | Hazardous Substances RQs | CERCLA EHS RQs |
|---|---|---|
| Acetic acid | 5000 lb | - |

**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 |
|---|---|---|---|---|---|
| Acetic 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

## 16. Other information

**Prepared By**
Regulatory Affairs
Thermo Fisher Scientific
Email: EMSDS.RA@thermofisher.com

**Creation Date** 05-May-2009
**Revision Date** 17-Jan-2018
**Print Date** 17-Jan-2018
**Revision Summary** This document has been updated to comply with the US OSHA HazCom 2012 Standard replacing the current legislation under 29 CFR 1910.1200 to align with the Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**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**