Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

SAFETY DATA SHEET

GLACIAL ACETIC ACID

1. Identification

Product identifier: Acetic acid 99.5%
Product code:
Synonym(s): Methane Carboxylic Acid, Acetic Acid (glacial)

Product Use: Process chemical, Laboratory and scientific research and development
Restrictions on use: None known.

Company Identification: Corco Chemical Corporation
299 Cedar Lane
Fairless Hills, PA 19030
Phone: 215-295-5006
Fax: 215-295-0781

24 Hour Emergency Telephone Number:
CHEMTREC (U.S.): 1-800-424-9300
CHEMTREC (Outside U.S.): 1-703-527-3887

SDS Date of Preparation: 10/07/2024

2. Hazard(s) identification

Classification of the Substance or Mixture:
Flammable Liquid Category 3
Serious Eye Damage Category 1
Skin Corrosion Category 1A

Label Elements:
Danger!

Hazard Statements
H226 Flammable liquid and vapor.
H314 Causes severe skin burns and eye damage.

Precautionary Statements
P210 Keep away from heat, sparks, open flames, and hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground and bond container and receiving equipment.
P241 Use explosion-proof electrical, ventilating, or lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe mist or vapors.
P264 Wash thoroughly after handling.
P280 Wear protective gloves, protective clothing, eye protection and face protection.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P310 Immediately call a POISON CENTER or doctor.
P363 Wash contaminated clothing before reuse.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor.
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P310 Immediately call a POISON CENTER or doctor.
P370+P378 In case of fire: Use water spray, dry chemical, alcohol resistant foam, or carbon dioxide to extinguish.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents and container in accordance with local and national regulations.

Other Hazards: None known.

3. Composition/information on ingredients

Ingredient	CAS Number	Percent	Hazardous Chemical
Acetic Acid	64-19-7	99.5+%	Yes

4. First-aid measures

Inhalation: Immediately remove victim to fresh air. If breathing is difficult, oxygen should be administered by qualified personnel. If breathing has stopped, administer artificial respiration. Get immediate medical attention.

Skin contact: Immediately flush skin with plenty of water for 15 minutes while removing contaminated clothing and shoes. Get immediate medical attention. Launder clothing before re-use. (Discard contaminated shoes).

Eye contact: Immediately flush skin with plenty of water for 15 minutes while removing contaminated clothing and shoes. Get immediate medical attention. Launder clothing before re-use. (Discard contaminated shoes).

Ingestion: Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious or convulsing person. Keep the victim calm and warm. Get immediate medical attention.

Most important symptoms/effects, acute and delayed: Corrosive effects. May cause severe eye, skin, respiratory tract irritation and burns. May cause temporary blindness and severe eye damage.

Indication of immediate medical attention and special treatment, if necessary: Immediate medical attention is required for all routes of exposure.

5. Fire-fighting measure

Suitable (and unsuitable) extinguishing media: Use water fog, alcohol-resistant foam, carbon dioxide and dry chemical.

Specific hazards arising from the chemical: Flammable liquid and vapor. Vapors are heavier than air and may flow along surfaces to remote ignition sources and flash back. Sensitive to static discharge.

Special protective equipment and precautions for fire-Fighters: Wear an approved, positive pressure, self-contained breathing apparatus and full protective clothing. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Evacuate spill area and keep unprotected personnel away. Remove all ignition sources such as open

flames, spark producing equipment, pilot lights, etc. Minimize generation of static electricity which may cause sparking. Prevent contact with eyes, skin, and clothing. Wear appropriate protective clothing. Do not breathe vapors or mists. Ventilate area with explosion proof equipment.

Methods and materials for containment and cleaning up: Contain and recover liquid when possible. Use non-sparking tools and equipment. Neutralize with alkaline material (soda ash, lime,) then absorb with an inert material (e. g., vermiculite, dry sand, earth,) and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures.

7. Handling and Storage

Precautions for safe handling: Do not breathe mist or vapor. Use with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Prevent contact with eye, skin, and clothing. Always wear impervious gloves, chemical safety goggles and protective clothing when handling this material. Keep product away from heat, sparks, flames and all other sources of ignition. No smoking in storage or use areas. Wash hands thoroughly after handling. Use with non-sparking tools and explosion proof equipment. Electrically bond and ground containers for transfer. Keep containers closed when not in use.

When diluting, always add acid to water- not water to acid. Adding water to acid generates heat and will cause dangerous boiling and splashing.

Conditions for safe storage, including any incompatibilities: Store in a cool, dry, well ventilated location away from heat and open flames. Keep away from incompatible materials. Protect container from physical damage. Keep containers closed when not in use. Keep out of the reach of children.

8. Exposure Control / Personal Protection

Chemical Name	Exposure Limits
Acetic Acid	10 ppm TWA, 15 ppm STEL ACGIH TLV 10 ppm TWA OSHA PEL

Appropriate Engineering Controls: A system of local and / or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please

refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Respiratory Protection: In operations where the occupational exposure limits are exceeded, an approved respirator with applicable cartridges or supplied air respirator should be used. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

Eye Protection: Use chemical safety goggles and full face shield where splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

9. Physical and chemical properties

Appearance: Clear liquid.
Physical state: Liquid.
Form: Liquid.
Color: Colorless.
Odor: Strong vinegar-like.
Odor threshold: Not available.
pH: 2.4 Aqueous solution, 1.0 molar= pH 2.4; 0.1 molar= pH 2.9; 0.01 molar= pH 3.4
Melting Point/Freezing Point: 61.9 °F (16.6 °C)
Boiling Point / Boiling Range: 244.22 °F (117.9 °C)
Flash point: 103.00 °F (39.44 °C) Closed Cup
Evaporation rate: Not available.
Flammability (solid, gas): Not applicable.
Upper / Lower Flammability or Explosive Limits: LEL: 4 %, UEL: 19.9%
Vapor pressure: 2.093 kPa at 25 °C
Vapor density: 2.1
Relative density: 1.01
Solubility(ies): Miscible
Partition coefficient (n-octanol/water): -0.2
Auto-ignition temperature: 798.8 °F (426 °C)
Decomposition temperature: Not available.
Viscosity: 1.22 at 20°C, centipoises

10. Stability and reactivity

Reactivity: Not reactive under normal conditions of use.

Chemical stability: Stable under ordinary conditions of use and storage.

Possibility of hazardous reactions: Hazardous polymerization will not occur.

Conditions to avoid: Keep away from heat, sparks, flames and other sources of ignition.

Incompatible materials: Strong oxidizing agents

Hazardous decomposition products: Carbon Dioxide and Carbon Monoxide may form when heated to decomposition.

11. Toxicological Information

Potential Health Effects:

Inhalation: Inhalation of mists or vapors may cause severe irritation and burns of the nose, throat and upper respiratory tract. Higher concentrations can cause burns, pulmonary edema and death.

Skin Contact: Causes severe skin irritation and burns with redness, ulceration, pain, dermatitis, and scarring. Concentrated solutions cause deep ulcers and discolor skin.

Eye Contact: Vapors cause irritation. Splashes cause severe pain, eye damage, and permanent blindness.

Ingestion: Swallowing can cause severe injury leading to death. Symptoms include sore throat, vomiting, and diarrhea. Ingestion of as little as 1.0 ml has resulted in perforation of the esophagus.

Chronic Exposure: Repeated or prolonged exposures may cause darkening of the skin, erosion of exposed front teeth, and chronic inflammation of the nose, throat, and bronchial tubes.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders, eye disease, or cardiopulmonary diseases may be more susceptible to the effects of this substance.

Carcinogenicity: None of the components of this product are listed as a carcinogen or suspected carcinogen by OSHA, IARC, and NTP.

Reproductive Effects: Reproductive harm is not expected from this product.

Mutagenic Effects: Not expected to cause mutagenic activity.

Acute Toxicity:

Acetic Acid: Oral rat LD50: 3310 mg/kg, Inhalation rat LC50 40.0 mg/L/4hr

12. Ecological information

Exotoxicity:

Product	**Species**	**Test Results**
Acetic Acid	Rainbow trout	>300.82 mg/L 96 hr LC50
	Daphnia magna	>300.82 mg/L 48 hr EC50

This product may be hazardous for the environment due to its low pH. Releases to the environment should be avoided.

Persistence and Degradability: If released to water, Acetic Acid will biodegrade readily. If released to soil, it will biodegrade readily.

Bioaccumulative Potential: Acetic Acid shows no potential for biological accumulation or food chain contamination. BCF estimated < 1.

Mobility in Soil: No data available.

Other adverse effects: None known.

13. Disposal considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport information

	UN Number	**Proper shipping name**	**Hazard Class**	**Packing Group**	**Environmental Hazard**
US DOT	UN2789	Acetic Acid (glacial)	8(3)	II	Not applicable
IMDG	UN2789	Acetic Acid (glacial)	8(3)	II	Not applicable
IATA	UN2789	Acetic Acid (glacial)	8(3)	II	Not applicable

*** Hazardous Substance (49CFR172.101):** Acetic Acid (RQ5,000 lbs)- (6,250 lbs. product)

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

Special Precautions for User: Not applicable

15. Regulatory information

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.
All components of the mixture on the TSCA 8(b) inventory are designated "active".

US. OSHA Specifically Regulated Substances, a "Hazardous Chemical" (29 CFR 1910.1200)
Not on regulatory list.

CERCLA Hazardous Substance List (40 CFR 302.4)
This product has a Reportable Quantity (RQ) of 6,250 lbs. (based on the RQ for Acetic Acid of 1,000 lbs present at 10-80%). Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories:
SARA 311/312
Refer to Section 2 for OSHA Hazard Classification.

Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None

SARA 302 Extremely hazardous substance
None

Other federal regulations:

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.
Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.
Clean Water Act (CWA) Section 112(r) (40 CFR68.130)
Hazardous substance
Safe Drinking Water Act (SDWA)
Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Not listed.

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Not regulated.

DEA Exempt Chemical Mixtures Code Number

Not regulated.

Food and DrugAdministration (FDA)

Total food additive
Direct food additive
GRAS food additive

US state regulations

US state regulations California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This product does not contain chemicals known in the State of California to cause cancer and/or reproductive harm.

State Right To Know Act – Rhode Island (RTK), Massachusetts (substance list), Pennsylvania (Hazardous Substances), and New Jersey (Worker and Community Right-to-know Act)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes

United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s)

16. Other information

Date of Current Revision: 10/07/2024
Revision Summary: Updated all sections.
Date of Previous Revision: 10/13/2023

Disclaimer - The information in the SDS is based on the data available at the time. While believed to be accurate, Corco does not claim it to be all inclusive. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. It is not intended to provide product performance or applicability information, and no express or implied warranty of any kind is made with respect to the product, the underlying product data, or the information contained herein. We will not provide advice on such matters, or be responsible for any injury or damage resulting from the use of the product described herein.