Safety Data Sheet · OSHA HCS 2024

Acetic Acid Glacial ACS Grade

ACS Grade

Standard	Revised	Emergency
OSHA HCS 2024 · GHS Rev. 7	2026-11-12	Chemtel 1-800-255-3924 (24/7)

1 Identification

Product Identifier	Acetic Acid Glacial ACS Grade
Grade	ACS Grade
CAS Number	64-19-7
Chemical Formula	CH3COOH
Molecular Weight	60.05 g/mol
Manufacturer	Alliance Chemical 204 South Edmond Street, Taylor, TX 76574
Emergency Phone	Chemtel 1-800-255-3924 (24/7)
Synonyms	Ethanoic acid; glacial acetic acid; methanecarboxylic acid
Recommended Use	Laboratory and analytical reagent (ACS grade); buffer preparation; chemical synthesis.
Restrictions on Use	No restrictions identified beyond the conditions of safe use in Sections 7 and 8.

2 Hazard Identification



Flammable



Corrosive



Irritant / harmful

Classification

Flammable liquids, Category 3

Acute toxicity (dermal), Category 4

Skin corrosion/irritation, Category 1

Serious eye damage/eye irritation, Category 1

Signal Word

Danger

Hazard Statements

H226 Flammable liquid and vapor

H312 Harmful in contact with skin

H314 Causes severe skin burns and eye damage

Precautionary Statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof electrical, ventilating, and lighting equipment.

P242 Use non-sparking tools.

P243 Take precautionary measures against static discharge.

P260 Do not breathe dust, fume, gas, mist, vapors or spray.

P264 Wash hands and face thoroughly after handling.

P280 Wear protective gloves, protective clothing, and eye/face protection.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P302+P352 IF ON SKIN: Wash with plenty of water and soap.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

P312 Call a POISON CENTER or doctor if you feel unwell.

P321 Specific treatment (see first-aid information on this label).

P362 Take off contaminated clothing and wash before reuse.

P363 Wash contaminated clothing before reuse.

P370+P378 In case of fire: Use dry chemical, CO2 or water spray 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, regional, national, and international regulations.

Classification, hazard (H) and precautionary (P) statements and pictograms per OSHA HCS 2024 (29 CFR 1910.1200, Appendices A–C), aligned with GHS Rev. 7.

3 Composition / Information on Ingredients

Component	CAS No.	Formula	Concentration
Acetic acid	64-19-7	C2H4O2	99.2-100% (w/w)

Concentrations are nominal; lot-specific values appear on the Certificate of Analysis. Components not contributing to classification are omitted.

4 First-Aid Measures

Eyes

Rinse with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention immediately.

Skin

Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing. Wash with soap. Get medical attention immediately.

Inhalation

Move person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

Ingestion

Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

Most Important Symptoms and Effects

Causes burns to the skin, eyes and mucous membranes; eye contact may cause permanent damage including blindness; ingestion burns the mouth, throat and stomach.

Absorption through the skin may cause systemic poisoning.

Immediate Medical Attention and Special Treatment

Immediate medical attention is required after eye or skin contact or ingestion; tissue damage may continue after exposure ends.

5 Fire-Fighting Measures

Suitable Extinguishing Media	Dry chemical, CO2, water spray. Use water spray to cool containers.
Unsuitable Extinguishing Media	Do not use a solid water stream as it may scatter and spread fire.
Specific Hazards Arising from the Chemical	Vapors are heavier than air and may form explosive mixtures with air; they can travel to a source of ignition and flash back. Fire may release corrosive and toxic gases. Containers may rupture when heated.
Protective Equipment	Wear self-contained breathing apparatus and full protective clothing.
Hazardous Combustion Products	Carbon monoxide and carbon dioxide.

6 Accidental Release Measures

Personal Precautions	Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.
Hazard-Specific Precautions	Eliminate all ignition sources. Use non-sparking tools and explosion-proof equipment; ground and bond containers during cleanup. Do not touch spilled material without protective equipment. Neutralize residue only with a method suitable for the material, then collect.
Environmental Precautions	Prevent leakage or spillage from entering drains, sewers, or waterways.
Containment & Cleanup	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7 Handling and Storage

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area. Use corrosion-resistant containers. Keep away from incompatible materials (see Section 10). Keep containers tightly closed.
Specific Storage Precautions	Store in a ventilated area for flammable and corrosive liquids, above 17 °C (63 °F) to prevent freezing, in containers of glass, stainless steel or compatible polyethylene. Keep away from oxidizers and bases.

8 Exposure Controls / Personal Protection

Occupational Exposure Limits

Limit	Value
OSHA PEL	10 ppm TWA
ACGIH TLV	10 ppm TWA / 15 ppm STEL
NIOSH REL	10 ppm TWA / 15 ppm STEL
IDLH	50 ppm
Other Limits	NIOSH IDLH 50 ppm

Engineering Controls	Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.

Eye/Face Protection	Wear chemical safety goggles or face shield.
Skin Protection	Wear chemical-resistant gloves and protective clothing.
Respiratory Protection	Where mist, spray or dust is generated (e.g., spraying, atomization, pressure washing), use a NIOSH-approved half-face air-purifying respirator with combination acid gas / P100 cartridges. Ensure local exhaust ventilation.

Exposure limits sourced from NIOSH Pocket Guide, OSHA 29 CFR 1910.1000 and ACGIH TLVs.

9 Physical & Chemical Properties

Appearance	Colorless, clear liquid
Odor	Pungent, vinegar-like
Odor Threshold	No data available
pH	2.4 (1 M solution)
Melting Point / Freezing Point	16.6 °C (62 °F) — solidifies in cool storage
Boiling Point	118 °C (244 °F) at 760 mmHg
Flash Point	39 °C (102–103 °F), closed cup
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	LEL 4.0% / UEL 19.9% (v/v in air)
Vapor Pressure	15.6 mmHg at 25 °C
Vapor Density	2.1 (air = 1)
Relative Density	1.05 at 20–25 °C (water = 1)
Solubility	Completely miscible with water
Partition Coefficient (n-octanol/water)	No data available
Auto-ignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	1.06–1.22 mPa·s at 20–25 °C
Particle Characteristics	Not applicable
Form	Liquid
Density	1.051 g/cm^3 at 68 °F (USCG, 1999)

Values shown reflect product-specific canonical data. Lot-specific ranges may vary; see the Certificate of Analysis for the shipped lot.

10 Stability and Reactivity

Reactivity	Not reactive under normal conditions of use and storage.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Temperatures above 39 °C (flash point), open flames, sparks and static discharge; freezing below 16.6 °C.
Incompatible Materials	Strong oxidizers (chromic, nitric and perchloric acids, peroxides, permanganates); bases and caustics; ammonium nitrate; acetaldehyde; most common metals (corrosion, hydrogen). Attacks many plastics, rubbers and coatings.

Hazardous Decomposition Products	Carbon monoxide and carbon dioxide.

11 Toxicological Information

See below for route-specific acute toxicity data.

Likely Routes of Exposure	Inhalation, skin contact, eye contact, ingestion.
Symptoms	Causes burns to the skin, eyes and mucous membranes; eye contact may cause permanent damage including blindness; ingestion burns the mouth, throat and stomach. Absorption through the skin may cause systemic poisoning.
Delayed and Chronic Effects	No delayed or chronic effects identified beyond the classification in Section 2.

Route	Value
LD50 Oral (rat)	3,310 mg/kg
LD50 Dermal (rabbit)	1,060 mg/kg (basis for H312)
LC50 Inhalation (rat, 4h)	11 mg/L (vapor)

Carcinogen Classification

Agency	Status
IARC	Not listed as carcinogen.
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12 Ecological Information

Ecotoxicity	Algae ErC50: 486.5 mg/L (72 h, Desmodesmus subspicatus); Daphnia EC50: 18.9 mg/L (48 h, Daphnia magna (range 18.9–79.5; pH-driven)); Fish LC50: 64.8 mg/L (96 h, Oncorhynchus mykiss (measured))
Persistence & Degradability	Not persistent — Readily biodegradable (96%, 20 d)
Bioaccumulative Potential	log Kow −0.17 (20 °C)
Mobility in Soil	Very high mobility in soil

13 Disposal Considerations

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

EPA RCRA Waste Codes	D001 (ignitable, flash point 39 °C) and D002 (corrosive). Acetic acid is not a P- or U-listed waste.

If discarded, this material may be an ignitable hazardous waste (EPA RCRA D001, 40 CFR 261.21(a)(1): flash point below 60 °C; aqueous solutions with less than 24% alcohol by volume are excluded). If discarded, this material may be a corrosive hazardous waste (EPA RCRA D002, 40 CFR 261.22): aqueous with pH ≤ 2 or ≥ 12.5, or a liquid that corrodes steel at more than 6.35 mm per year. The waste generator must make the final hazardous-waste determination.

14 Transport Information

US DOT (49 CFR)

UN Number	UN2789
Proper Shipping Name	Acetic acid, glacial or acetic acid solution, with more than 80 percent acid, by mass
Hazard Class	8
Subsidiary Hazard Class	3
Packing Group	II

IMDG / IATA classifications may differ from US DOT. Verify current regulations before international shipment.

15 Regulatory Information

Inventory / List	Status
California Proposition 65	Not listed
US EPA TSCA Active Inventory	Listed
EPCRA SARA 313 (TRI)	Not listed
CERCLA Reportable Quantity (RQ)	Acetic acid (CAS 64-19-7) 5,000 lb (2,270 kg), about 570 US gal; no single package reaches it.

SARA 311/312 hazard categories correspond to the GHS classification in Section 2. Data retrieved as of: California Proposition 65 2026-11-02; US EPA TSCA Active Inventory 2026-11-02; EPCRA SARA 313 (TRI) 2026-11-02.

16 Other Information

Revision Date	2026-11-12
Format	16-section format per OSHA HCS 2024 (29 CFR 1910.1200, Appendix D), aligned with GHS Rev. 7.

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