

## Glacial Acetic Acid SDS

### Section 1 - Chemical Product and Company Identification

Product Name & Other Names: Glacial Acetic Acid or Acetic Acid or Ethanoic acid or Ethylic acid or Methanecarboxylic acid or Vinegar.

CAS#: 64-19-7

EINECS EC Number: 200-580-7

Molecular Formula: CH<sub>3</sub>COOH

Molecular Weight: 60.05

Relevant uses and uses advised against (if any): Industrial Manufacturing.

Suppliers: As per letterhead.

### Section 2 - Hazards Identification

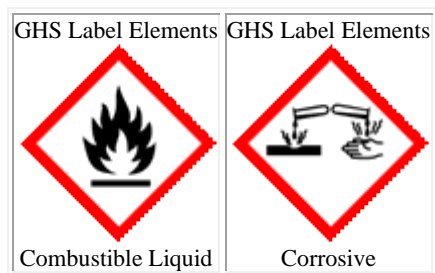
#### **GHS, Globally Harmonized System Classification in accordance with 29 CFR 1910 Classification according to Regulation (EC) No 1272/2008**

Flammable liquids (Category 3) H227

Skin corrosion/irritation (Category 1A, B, C) H314

Acute aquatic toxicity (Category 3) H402

#### **Labeling according to GHS & Regulation (EC) No 1272/2008**



#### **Signal Words (GHS-US): Danger**

#### **Hazard statements (GHS-US):**

H227: Combustible liquid.

H314: Causes severe skin burns and eye damage.

H402: Harmful to aquatic life.

#### **Precautionary statements (GHS-US):**

P210: Keep away from heat, sparks, open flames, hot surfaces. - No smoking.

P260: Do not breathe mist, vapors, spray.

P264: Wash exposed skin thoroughly after handling.

P280: Wear protective clothing, protective gloves, eye protection, face protection.

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

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

P304+P340: IF INHALED: remove victim to fresh air and keep at rest in a position 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.



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P314: Get Medical advice/attention if you feel unwell.  
P337+ P313: If eye irritation persists: Get medical advice/ attention.  
P370+P378: In case of fire: Use carbon dioxide (CO<sub>2</sub>), powder, alcohol-resistant foam for extinction.  
P403+P235: Store in a well-ventilated place. Keep cool.  
P405: Store locked up.  
P273: Avoid release to the environment.  
P501: Dispose of contents/container to comply with local, state, and federal regulations.

**Classification according to EU Directives 67/548/EEC or 1999/45/EC:**

**Hazard Symbol:**

C = Corrosive

**Risk Phrases:**

R10 = Flammable.

R35 = Causes severe burns.

R41 Risk of serious damage to eyes.

**Section 3 - Composition/Information on Ingredients**

**Product Name & Other Names:** Glacial Acetic Acid or Acetic Acid or Ethanoic acid or Ethylic acid or Methanecarboxylic acid or Vinegar.

**CAS#:** 64-19-7

**EINECS EC Number:** 200-580-7

**Percent:** 99-100% on dry basis. Dilution is always with water.

**Section 4 - First Aid Measures**

**Always consult a physician after the first aid is given.**

**Eyes:** Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid. Do NOT allow victim to rub or keep eyes closed.

**Skin:** Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse.

**Ingestion:** Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:** Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

**Notes to Physician:** Treat symptomatically and supportively.

**Section 5 - Fire Fighting Measures**

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Flammability:** Flammable. Explosive in presence of oxidizing materials.

**Flash Point:** 40C 104F

**Auto Ignition Temperature:** 463C 865F

**Extinguishing Media:** Use DRY chemical powder, alcohol foam, water spray or fog. Cool containing vessels with water jet to prevent pressure build-up, auto-ignition, or explosion.

**Section 6 - Accidental Release Measures**

**Personal precautions, protective equipment, and emergency procedures:** Ventilate area of leak or spill. Avoid breathing dust/fumes/gas/mist/vapors/spray. Use individual protective equipment (waterproof boots, suitable protective clothing, safety

glasses, etc.). Restrict unprotected personnel from the area. Prevent any contact with hot surfaces. Do not approach facing the wind. Do not touch the spilled material.

**Environmental precautions:** Do not let the product enter drains, soil, or water sources.

**Methods and materials used for containment Cleanup procedures and Storage:** Contain spilled material. Cover with an inert, non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite). Vacuum or sweep-up and remove to an approved disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate as per law. Remove all ignition sources and ventilate area. Neutralize with sodium bicarbonate or calcium hydroxide or dry soda ash or calcium carbonate and deposit in a sealed bag or container. Use water spray to dilute spill to a non-flammable mixture. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation.

### **Section 7 - Handling and Storage**

**Precautions for safe handling:** Apply according to good manufacturing and industrial hygiene practices. Ensure proper ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Wash thoroughly after handling. Do not drink, eat, or smoke while handling. Avoid contact with skin, eyes, and clothing. Minimize dust generation. Avoid breathing dust/fumes/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation. Use individual protective equipment (waterproof boots, suitable protective clothing, safety glasses, etc.). Prevent any contact with hot surfaces.

**Conditions for safe storage, including any incompatibilities:** Store in cool, dry, and ventilated area away from heat sources and protected from sunlight in tightly closed original container. Keep air contact to a minimum. Store protected from heat, sparks and ignition sources and incompatible materials. Avoid contact with skin and eyes. Avoid inhalation of dust/mist/vapor. Do not store with incompatible materials like strong oxidizing agents, strong alkalis, and metals. Store protected from heat and flames.

### **Section 8 - Exposure Controls, Personal Protection**

**Airborne Exposure Limits: Airborne Exposure Limits:**

OSHA Permissible Exposure Limit (PEL): 10 ppm (TWA).

ACGIH Threshold Limit Value (TLV): 10 ppm (TWA); 15 ppm (STEL).

NIOSH 10ppm TWA; 25 mg/m<sup>3</sup> TWA 50ppm IDLH

**Ventilation System:** A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. 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.

**Personal Respirators (NIOSH Approved):** For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerin, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

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

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

### **Section 9 - Physical and Chemical Properties**

**Appearance:** Clear Liquid

**Odor:** Vinegar odor

**Odor threshold:** Not available.

**pH:** 2 for 1% solution, 2.4 (1.0M solution)

**Relative density:** around 1.05

**Boiling Point:** 118C (244.5F)

**Melting Point:** 16.6C (61.9F).

**Flash point:** Not available.

**Auto-ignition temperature:** Not available.

**Decomposition temperature:** Not available.

**Upper/lower flammability or explosive limits:** Not available.

**Vapor pressure:** Not available.

**Vapor density:** Not available.



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Evaporation rate: Not available.  
Flammability (solid, gas): Not available.  
Partition coefficient: n-octanol/water: Not available.  
Solubility: Soluble in water  
Viscosity: Not available.  
Molecular Formula: C<sub>2</sub>H<sub>4</sub>O<sub>2</sub>  
Molecular Weight: 60.05

### **Section 10 - Stability and Reactivity**

Chemical Stability: Stable under normal temperatures and pressures. It is hygroscopic.  
Conditions to Avoid: Incompatible materials, dust generation, moisture, exposure to heat, spark, moist air or water.  
Incompatibilities with Other Materials: Oxidizing agents, strong alkalis and metals.  
Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.  
Hazardous Polymerization: Will not occur.

### **Section 11 - Toxicological Information**

Acute oral toxicity (LD50): 3310 mg/kg [Rat].  
Acute dermal toxicity (LD50): 1060 mg/kg [Rabbit].  
Acute toxicity of the vapor (LC50): 5620 1 hours [Mouse].  
LC50 Inhalation - rat - 4 h - 11.4 mg/l 4 hours  
Carcinogenicity: No component of this product present at levels greater than or equal to 0.1% is identified as possible or confirmed human carcinogen by IARC, ACGIH, OSHA and NTP.  
Mutagenic Effects: Not available.  
Teratogenic Effects: Not available.  
Developmental Toxicity: Not available.  
Reproductive Effects: No information available.

### **Section 12 - Ecological Information**

Persistence and Degradability: The material will readily biodegrade.  
Mobility: Mobile due to water solubility  
Bioaccumulation/ Accumulation: Unlikely to bioaccumulate  
Results of PBT and vPvB assessment: No data available for assessment.  
Toxicity: (LC50): 423 mg/l 24 hours [Fish (Goldfish)]. 88 ppm 96 hours [Fish (fathead minnow)]. 75 ppm 96 hours [Fish (bluegill sunfish)]. >100 ppm - 96 hours [Daphnia].

### **Section 13 - Disposal Considerations**

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal 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 of Acetic acid and unused contents in accordance with local requirements.

### **Section 14 - Transport Information**

#### **DOT (USA) and ADR/RID**

UN number: 2789  
Class: 8 (3)  
Packing group: II  
Proper shipping name: Acetic acid, glacial  
Reportable Quantity (RQ): 5000 lbs  
Marine pollutant: No  
Poison Inhalation Hazard: No

#### **IMDG**



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UN number: 2789  
Class: 8 (3)  
Packing group: II  
Proper shipping name: Acetic acid, glacial  
Reportable Quantity (RQ): 5000 lbs  
Marine pollutant: No

**IATA**

UN number: 2789  
Class: 8 (3)  
Packing group: II  
Proper shipping name: Acetic acid, glacial.

**Section 15 - Regulatory Information**

**USA:**

**OSHA:** Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

**Section 313:** No chemicals are reportable under Section 313.

**SARA 311/312 Hazards:** Acute Health Hazard, Chronic Health Hazard. See section 2.

**California Prop. 65 Components:** This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**Section 16 - Additional Information**

**European Labeling in Accordance with EC Directives:**

H227 = Combustible liquid.

H314 = Causes severe skin burns and eye damage.

H402 = Harmful to aquatic life.

**Classification according to EU Directives 67/548/EEC or 1999/45/EC:**

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