

TECHNICAL DATA SHEET

# Acetic Acid Glacial Technical

|            |                               |            |
|------------|-------------------------------|------------|
| CAS NUMBER | ALLIANCE CODE                 | GENERATED  |
| 64-19-7    | acetic-acid-glacial-technical | 2026-07-18 |

## 1. IDENTITY & COMPOSITION

|                                 |                                |
|---------------------------------|--------------------------------|
| PRODUCT NAME                    | ALLIANCE CODE                  |
| Acetic Acid Glacial Technical   | acetic-acid-glacial-technical  |
| GRADE                           | CONCENTRATION                  |
| —                               | —                              |
| CAS NUMBER                      | FORMULA                        |
| 64-19-7 <a href="#">PubChem</a> | C2H4O2 <a href="#">PubChem</a> |
| MOLECULAR WEIGHT                | PRODUCT TYPE                   |
| 60.05 <a href="#">PubChem</a>   | pure_substance                 |

AVAILABLE GRADES SAME CAS, ALTERNATE GRADES AND CONCENTRATIONS

| GRADE                        | CONCENTRATION | TYPICAL ASSAY | SKU                              |
|------------------------------|---------------|---------------|----------------------------------|
| <a href="#">THIS GRADE</a> — | —             | —             | current                          |
| ACS Grade                    | —             | —             | acetic-acid-glacial-99-acs-grade |

Typical assay shown is the rolling-window mean from the sibling product's most recent lots. Grade selection drives downstream end-use — verify the sibling grade matches your specification before substitution.

## PHYSICAL & CHEMICAL PROPERTIES

One or more physical-property values are temporarily suppressed pending verification against vendor COA data. For complete properties refer to the Safety Data Sheet (SDS) or contact [sales@alliancechemical.com](mailto:sales@alliancechemical.com).

### FORM

Liquid [Product record](#)

### PH

Aqueous solution 1.0 molar = 2.4; 0.1 molar = 2.9;  
0.01 molar = 3.4 [Product record](#)

### BOILING POINT

244 °F at 760 mmHg (NTP, 1992) [Product record](#)

### FLASH POINT

104 °F (NTP, 1992) [Product record](#)

### SOLUBILITY (WATER)

greater than or equal to 100 mg/mL at 73 °F  
(NTP, 1992) [Product record](#)

### ODOR

Pungent [Product record](#)

### DENSITY

1.051 at 68 °F (USCG, 1999) – Denser than water;  
will sink [Product record](#)

### MELTING POINT

61.9 °F (NTP, 1992) [Product record](#)

### VAPOR PRESSURE

11.4 mmHg at 68 °F ; 20 mmHg at 86 °F (NTP,  
1992) [Product record](#)

Strong acid — density and vapor-pressure values shown are at 20 °C; values shift markedly with concentration and temperature. Reference concentration-temperature curves before specifying equipment.

## MATERIALS OF CONSTRUCTION

| MATERIAL                      | RATING    | MAX T (°C) | NOTES                                             | SOURCE                                               |
|-------------------------------|-----------|------------|---------------------------------------------------|------------------------------------------------------|
| Buna-N (NBR)<br>Elastomer     | Poor      | —          | Swells and degrades                               | <a href="#">Cole-Parmer Chemical Compatibility</a>   |
| EPDM<br>Elastomer             | Good      | 40         | Acceptable but FKM preferred                      | <a href="#">Cole-Parmer Chemical Compatibility</a>   |
| Viton (FKM)<br>Elastomer      | Good      | 80         | Acceptable for HCl gaskets up to 37 %.            | <a href="#">Parker O-ring Chemical Compatibility</a> |
| PTFE<br>Fluoropolymer         | Excellent | 200        | Lining and gaskets                                | <a href="#">Cole-Parmer Chemical Compatibility</a>   |
| PVDF (Kynar)<br>Fluoropolymer | Excellent | 120        | Excellent for HCl piping at elevated temperature. | <a href="#">Cole-Parmer Chemical Compatibility</a>   |

| MATERIAL                                     | RATING          | MAX T<br>(°C) | NOTES                                    | SOURCE                                             |
|----------------------------------------------|-----------------|---------------|------------------------------------------|----------------------------------------------------|
| <b>Borosilicate Glass</b><br>Glass Ceramic   | Excellent       | 100           | Inert to most strong acids (avoid HF).   | <a href="#">Cole-Parmer Chemical Compatibility</a> |
| <b>Glass (borosilicate)</b><br>Glass Ceramic | Excellent       | 100           | Inert under all conditions               | <a href="#">Cole-Parmer Chemical Compatibility</a> |
| <b>316 stainless steel</b><br>Metal          | Poor            | 25            | Severe pitting; use only for vapors      | <a href="#">Cole-Parmer Chemical Compatibility</a> |
| <b>316L Stainless Steel</b><br>Metal         | Fair            | 25            | Limited HCl service; pitting above 10 %. | <a href="#">NACE TM0177</a>                        |
| <b>Aluminium</b><br>Metal                    | Not recommended | —             | Reacts to form H <sub>2</sub> gas        | <a href="#">Cole-Parmer Chemical Compatibility</a> |
| <b>Carbon steel</b><br>Metal                 | Not recommended | —             | Aggressive corrosion                     | <a href="#">Cole-Parmer Chemical Compatibility</a> |
| <b>Carbon Steel</b><br>Metal                 | Not recommended | —             | Catastrophic corrosion; never use.       | <a href="#">Cole-Parmer Chemical Compatibility</a> |
| <b>Hastelloy C-276</b><br>Metal              | Excellent       | 90            | Premium HCl alloy                        | <a href="#">Cole-Parmer Chemical Compatibility</a> |
| <b>Inconel 625</b><br>Metal                  | Good            | 60            | Acceptable for dilute service            | <a href="#">Cole-Parmer Chemical Compatibility</a> |
| <b>Tantalum</b><br>Metal                     | Excellent       | 100           | Best-in-class but expensive              | <a href="#">Cole-Parmer Chemical Compatibility</a> |
| <b>CPVC</b><br>Thermoplastic                 | Excellent       | 90            | Preferred for elevated temperature       | <a href="#">Cole-Parmer Chemical Compatibility</a> |

| MATERIAL                           | RATING    | MAX T (°C) | NOTES                               | SOURCE                                             |
|------------------------------------|-----------|------------|-------------------------------------|----------------------------------------------------|
| FRP (vinyl ester)<br>Thermoplastic | Good      | 60         | Common bulk-storage tank material   | <a href="#">Cole-Parmer Chemical Compatibility</a> |
| HDPE<br>Thermoplastic              | Excellent | 60         | Standard drum / IBC material        | <a href="#">Cole-Parmer Chemical Compatibility</a> |
| PVC<br>Thermoplastic               | Excellent | 60         | Standard piping for ambient service | <a href="#">Cole-Parmer Chemical Compatibility</a> |

Ratings reflect the service envelope (concentration × temperature) shown. Always confirm against your specific duty cycle and contact-time before equipment selection. The most cautious rating across overlapping references is shown.

## REGULATORY & TRANSPORT

### DOT / 49 CFR

UN NUMBER

UN2789 **Adjudicated**

PACKING GROUP

II **Adjudicated**

HAZARD CLASS

8 **Adjudicated**

PROPER SHIPPING NAME

Acetic acid, glacial **Adjudicated**

### GHS / OSHA HAZCOM 2012

SIGNAL WORD

Danger **Adjudicated**

H-CODES (HAZARD STATEMENTS)

H226, H314 **Adjudicated**

P-CODES (PRECAUTIONARY STATEMENTS)

P210, P233, P240, P241, P242, P243, P260, P264, P280, P301+P330+P331, P303+P361+P353, P304+P340, P305+P351+P338, P310, P321, P363,...

### OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

10 ppm TWA **OSHA 29 CFR 1910.1000**

ACGIH TLV

— **unknown**

NIOSH REL

10 ppm TWA / 15 ppm STEL **NIOSH Pocket Guide**

NIOSH IDLH

50 ppm **NIOSH Pocket Guide**

Transport descriptions reflect 49 CFR 172.101 lookup at time of publication. Sourced data: ECHA CLP Annex VI for harmonised classifications, NIOSH Pocket Guide for REL/IDLH, OSHA Z-Tables for PEL. Always verify against the latest regulatory text before shipment-critical decisions.

### Supplier Qualification Packet

One zipped download containing the TDS, SDS, latest lot COA (when available), and a fresh Letter of Continuing Guaranty for Acetic Acid Glacial Technical. Every file included is SHA-256 hashed and listed in a manifest your QA team can audit.

### CATALOG EQUIVALENTS CROSS-REFERENCE VS MAJOR CHEMICAL SUPPLIERS

#### HONEYWELL

| SKU                   | GRADE | CONC. | MATCH | NOTES           |
|-----------------------|-------|-------|-------|-----------------|
| <a href="#">33209</a> | ACS   | 99.8% | Exact | Fluka ACS grade |

#### SIGMA-ALDRICH

| SKU                    | GRADE       | CONC. | MATCH | NOTES              |
|------------------------|-------------|-------|-------|--------------------|
| <a href="#">320099</a> | ACS Reagent | 99.7% | Exact | ACS Reagent ≥99.7% |

Cross-references are informational. Confirm against the manufacturer's current specification before substitution. Competitor trademarks are property of their respective owners.

### APPLICATION GUIDANCE

Acetic Acid Glacial Technical is a strong mineral acid used across pH control, metal pickling, food and beverage processing, and chemical synthesis. Grade and concentration determine the appropriate end-use and materials.

- Metal pickling, etching, and surface preparation
- pH adjustment in water and wastewater treatment
- Regeneration of ion-exchange resins
- Chemical manufacturing and synthesis
- Food and beverage processing (food-grade only)

Always add acid to water, never water to acid. Use lined or fluoropolymer piping rated for the concentration; carbon steel is not suitable for dilute acid service.

## STORAGE & HANDLING

### RECOMMENDED STORAGE

Cool, dry, well-ventilated area in compatible containers (lined steel, HDPE, FRP — verify per concentration). Segregate from bases, oxidizers,...

### INCOMPATIBILITIES

Bases, active metals (aluminium, zinc), cyanides, sulfides, oxidizing agents. Reacts violently with organic anhydrides.

For full hazard, PPE, and emergency response guidance, refer to the Safety Data Sheet (SDS) for this product. The SDS controls in all cases where guidance differs.

### HANDLING PRECAUTIONS

Use full PPE including face shield, acid-resistant gloves and apron. Add acid to water slowly with stirring; never reverse. Ventilation required.

### SHELF LIFE

24 months from date of manufacture in sealed, original packaging

## PACKAGING & LOGISTICS

### SHIPPING DESCRIPTION (US DOT)

UN2789, Acetic acid, glacial, 8, PG II

Sourced from 49 CFR 172.101. Confirm against shipping documents and carrier requirements before tender.

|                  |                      |                        |
|------------------|----------------------|------------------------|
| NMFC CLASS<br>60 | PLACARD<br>Corrosive | PACKING GROUP<br>PG II |
|------------------|----------------------|------------------------|

## REVISION HISTORY

Last reviewed 2026-07-17 by Andre Taki, DOT Hazmat Specialist.

| VERSION | DATE       | CHANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | TRIGGER          |
|---------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| 1.1     | 2026-07-17 | <p>Canonical data re-verified: 5 fields updated against independent vendor SDSs, CLP Annex VI, 49 CFR, and OSHA HazCom 2024 (GHS classification, hazard/precautionary codes, signal word, physical properties as applicable).</p> <ul style="list-style-type: none"><li>countryOfOrigin · canonical adjudication / reground (coa.data_provenance)</li><li>ghsClassification · canonical adjudication / reground (coa.data_provenance)</li><li>hazard_h_codes · canonical adjudication / reground (coa.data_provenance)</li><li>hazard_p_codes · canonical adjudication / reground (coa.data_provenance)</li><li>hsCode · canonical adjudication / reground (coa.data_provenance)</li></ul> | canonical_change |

| VERSION | DATE       | CHANGE                                                             | TRIGGER |
|---------|------------|--------------------------------------------------------------------|---------|
| 1.0     | 2026-05-20 | Initial URL-first TDS published from canonical chemistry registry. | initial |

This Technical Data Sheet is provided for technical reference. The Safety Data Sheet (SDS) controls in all cases where guidance differs. Values reflect Alliance Chemical canonical data at time of generation; subsequent revisions are recorded in the Revision History above.

**ALLIANCE CHEMICAL**

## Order Acetic Acid Glacial Technical

Bulk & packaged sizes · COA/SDS ships with every order