

TECHNICAL DATA SHEET

Acetic Acid Glacial - Food Grade

Food Grade

CAS NUMBER	ALLIANCE CODE	GENERATED
64-19-7	acetic-acid-glacial-food-grade	2026-08-31
REVISION	REVIEWED	
1.3	2026-07-17 · Andre Taki	

IDENTITY & COMPOSITION

PRODUCT NAME	ALLIANCE CODE
Acetic Acid Glacial – Food Grade	acetic-acid-glacial-food-grade
GRADE	CONCENTRATION
Food Grade	—
CAS NUMBER	FORMULA
64-19-7 PubChem	C2H4O2 PubChem
MOLECULAR WEIGHT	PRODUCT TYPE
60.05 PubChem	pure_substance

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Assay (C2H4O2)	Not less than 99.5% and not more than 100.5%, by weight	100.0 %	—	FCC
Acetic Anhydride	Max 0.01%	0.002 %	—	Supplier specification
Arsenic	Max 0.2 ppm	0.005 ppm	—	Supplier specification

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Chloride (Cl)	Pass Test (USP)	Passes test	—	USP monograph
Heavy Metals	Max 0.5 ppm	0.1 ppm	—	Supplier specification
Identification (Acetate)	A 1:3 aqueous solution gives positive tests for Acetate	Passes test	—	FCC
Lead	Not more than 0.5 mg/kg	0.01 mg/kg	—	FCC
Readily Oxidizable Substances	Passes test	Passes test	—	FCC
Non-Volatile Residue	max. 0.005 wt.%	0.0003 wt.%	FCC	FCC
Solidification Point	Not cooler than 15.6C	Passes test	—	FCC
Water	Max 0.5 %	0.06 %	Karl Fischer, USP <921> Method Ic	Interpreted
aldehydes	0.005 WT_PCT max	0.002	—	Supplier specification
formic acid	0.05 WT_PCT max	0.003	—	Supplier specification
freeze point	16.35 C min	16.50 C	—	Supplier specification
iron	0.5 PPMW max	0.05 PPMW	—	Supplier specification

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
sulfates	1 PPMW max	0.3 PPMW	—	Supplier specification

Specification values are guaranteed limits. Typical values are representative of production lots and are not guaranteed. Lot-specific certificates of analysis ship with every order.

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.

PROPERTY	VALUE	SOURCE
Form	Liquid	Published reference
Color	Max 10	Interpreted
Odor	Pungent	Published reference
pH	Aqueous solution 1.0 molar = 2.4; 0.1 molar = 2.9; 0.01 molar = 3.4	Published reference
Specific Gravity (20 °C)	1.049 – 1.051	Interpreted
Density	1.051 at 68 °F (USCG, 1999) – Denser than water; will sink	Published reference
Boiling Point	244 °F at 760 mmHg (NTP, 1992)	Published reference
Melting Point	61.9 °F (NTP, 1992)	Published reference
Flash Point	104 °F (NTP, 1992)	Published reference
Vapor Pressure	11.4 mmHg at 68 °F ; 20 mmHg at 86 °F (NTP, 1992)	Published reference
Solubility (water)	greater than or equal to 100 mg/mL at 73 °F (NTP, 1992)	Published reference

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	CONDITIONS	SOURCE
stainless steel	Compatible	chemically pure acetic acid (99.85% mass min. per the same sheet) and 80% acetic acid	ingredi.com
high density polyethylene (HDPE)	Compatible	chemically pure acetic acid (99.85% mass min. per the same sheet) and 80% acetic acid	ingredi.com
glass	Compatible	chemically pure acetic acid (99.85% mass min. per the same sheet) and 80% acetic acid	ingredi.com
aluminium	Limited	chemically pure (glacial) acetic acid only; not suitable for water-containing/dilute acid	ingredi.com
high density polyethylene	Compatible	Chemically pure acetic acid; no temperature stated	ingredi.com

Compatibility is drawn from published manufacturer and supplier documentation for this product; each rating is sourced. Confirm against your specific duty cycle before equipment selection.

REGULATORY & TRANSPORT

DOT / 49 CFR

UN NUMBER

UN2789 [49 CFR 172.101](#)

PACKING GROUP

II [Adjudicated](#)

HAZARD CLASS

8 [Adjudicated](#)

PROPER SHIPPING NAME

Acetic acid, glacial or acetic acid solution, with more than 80 percent acid, by mass

[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, P370+P378, P403+P235, P405, P501

[Adjudicated](#)

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

10 ppm TWA [OSHA 29 CFR 1910.1000](#)

ACGIH TLV

— [no canonical](#)

NIOSH REL

10 ppm TWA / 15 ppm STEL

NIOSH IDLH

50 ppm [NIOSH Pocket Guide](#)

[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.

CATALOG EQUIVALENTS CROSS-REFERENCE VS MAJOR CHEMICAL SUPPLIERS

HONEYWELL

SKU	GRADE	CONC.	MATCH	NOTES
33209	ACS	99.8%	Exact	Fluka ACS grade

SIGMA-ALDRICH

SKU	GRADE	CONC.	MATCH	NOTES
320099	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.

APPLICATIONS

Direct food ingredient used as a curing and pickling agent and as a flavor enhancer [govinfo.gov](#)

Flavoring agent and adjuvant, and pH control agent, in food [govinfo.gov](#)

Solvent and vehicle in food, and boiler water additive complying with 21 CFR 173.310 [govinfo.gov](#)

Industrial manufacturing (relevant use identified on the glacial acetic acid safety data sheet)

[mubychem.com](#)

Applications are drawn from published manufacturer and supplier documentation; each is sourced. Suitability for a specific use is the buyer's to confirm.

STORAGE & HANDLING

RECOMMENDED STORAGE

Store in a well-ventilated place, keep cool, keep locked up, and avoid release to the environment; the same sheet states the material is flammable and explosive in the presence of oxidizing materials

[mubychem.com](#)

INCOMPATIBILITIES

oxidizing materials [mubychem.com](#)

HANDLING PRECAUTIONS

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

Class-level guidance — not product-specific; the SDS controls.

SHELF LIFE

Consult Technical Services for product-specific shelf life

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.

PACKAGING & LOGISTICS

SHIPPING DESCRIPTION (US DOT)

UN2789, Acetic acid, glacial or acetic acid solution, with more than 80 percent acid, by mass, 8, PG II

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

NMFC CLASS 60	PLACARD Corrosive	PACKING GROUP PG II
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REVISION HISTORY

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

VERSION	DATE	CHANGE	TRIGGER
1.3	2026-08-05	Canonical data updated: 3 fields changed via the provenance/adjudication pipeline. - hazardClass · canonical change (coa.data_provenance / adjudication) - packingGroup · canonical change (coa.data_provenance / adjudication) - unNumber · canonical change (coa.data_provenance / adjudication)	canonical_change
1.2	2026-07-22	Canonical data updated: 2 fields changed via the provenance/adjudication pipeline. - dotSubsidiaryHazardClass · canonical change (coa.data_provenance / adjudication) - dotProperShippingName · canonical change (coa.data_provenance / adjudication)	canonical_change

VERSION	DATE	CHANGE	TRIGGER
1.1	2026-07-17	Canonical data re-verified: 7 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). • color · canonical adjudication / reground (coa.data_provenance) • countryOfOrigin · canonical adjudication / reground (coa.data_provenance) • ghsClassification · canonical adjudication / reground (coa.data_provenance) • hazard_h_codes · canonical adjudication / reground (coa.data_provenance) • hazard_p_codes · canonical adjudication / reground (coa.data_provenance) • hsCode · canonical adjudication / reground (coa.data_provenance) • specificGravity · canonical adjudication / reground (coa.data_provenance)	canonical_change
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.