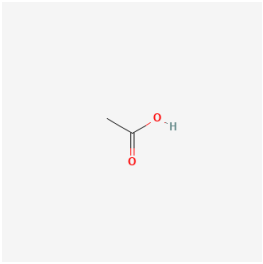
Technical Data Sheet

75% Vinegar ACS Grade

ACS Grade · 75%

Alliance Code	Revised	Revision
vinegar-75-acs-grade	2026-10-21	1.10

CAS number 64-19-7	UN number UN2790	Hazard class · packing group 8 · PG II
 Structure · PubChem	Grade ACS Grade · 75%	Signal word **Danger**

Hazards

Corrosive | Irritant / harmful | H312 H314

Proper shipping name

Acetic acid solution, not less than 50 percent but not more than 80 percent acid, by mass

IDENTITY & COMPOSITION

PRODUCT NAME
75% Vinegar ACS Grade

ALLIANCE CODE
vinegar-75-acs-grade

GRADE
ACS Grade

CONCENTRATION
75% w/w

CAS NUMBER
64-19-7 PubChem

FORMULA
CH3COOH PubChem

MOLECULAR WEIGHT
60.05 PubChem

PRODUCT TYPE
Solution

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Assay (CH3COOH)	74.5 - 75.5 % w/w	—	—	Interpreted
Weight per mL (at 20 C)	1.068 - 1.071 gm/ml	—	Digital density meter	Interpreted
Acetic Anhydride	0.0075 % max	—	GC	Interpreted
Titrable base	0.0003 meq/g max	—	—	Interpreted
Chlorides	0.85 ppm max	—	—	Interpreted
Heavy metals	0.38 ppm max	—	—	Interpreted
Iron	0.15 ppm max	—	—	Interpreted
Nonvolatile Matter	0.0008% max	—	—	Interpreted
Substances reducing dichromate (O)	0.0023 % max	—	—	Interpreted
Sulfate (SO4)	1 ppm max	—	—	Interpreted
Color (APHA)	Max 10	—	—	Interpreted
Dilution test	Passes test	—	—	Interpreted
Substances Reducing Permanganate	To pass Test	—	—	Interpreted

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Composition	75 % acetic acid in deionized water, by weight	—	By formulation; batch weights (scale ticket)	Interpreted

Values are reproduced from the current product reference. Source labels do not by themselves establish a supplier guarantee or a test result for your lot. Confirm applicable acceptance limits and request lot-specific documentation.

AVAILABLE GRADES SAME CAS, ALTERNATE GRADES AND CONCENTRATIONS

GRADE	CONCENTRATION	TYPICAL ASSAY	SKU
THIS GRADE ACS Grade	75%	—	current
Food Grade	75%	—	75-acetic-acid-food-grade
Technical	75%	—	75-vinegar

Typical assay for each grade is the average of its recent lots. Confirm a grade meets your specification before substituting it.

PHYSICAL & CHEMICAL PROPERTIES

PROPERTY	VALUE	SOURCE
Appearance	Clear colorless liquid with a vinegar odor (75% aqueous acetic acid solution).	Adjudicated
Form	Liquid	Adjudicated
Odor	Pungent, vinegar-like, sour	Adjudicated
pH	Below 3	Adjudicated
Specific Gravity	1.070 at 20/20 °C (water = 1)	Adjudicated
Density	1.0680 g/cm^3 at 20 °C	Adjudicated
Boiling Point	not characterized for the solution	Adjudicated
Melting Point	not characterized for the solution	Adjudicated
Flash Point	No flash point up to boiling (closed cup); not flammable.	Adjudicated
Vapor Pressure	Not determined for the 75% solution (pure acetic acid: 11.4 mmHg at 20 °C)	Adjudicated
Solubility (water)	Completely miscible with water	Adjudicated

MATERIALS OF CONSTRUCTION

MATERIAL	RATING	CONDITIONS	SOURCE
aluminium	Not recommended	water-diluted acetic acid; the source restricts aluminium to chemically pure (glacial) acid and warns that corrosion of metals increases with water content	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
UN2790 Manual review

HAZARD CLASS
8 Adjudicated

PACKING GROUP
II Adjudicated

PROPER SHIPPING NAME
Acetic acid solution, not less than 50 percent but not more than 80 percent acid, by mass

Adjudicated

GHS / OSHA HCS 2024

SIGNAL WORD
Danger Adjudicated

H-CODES (HAZARD STATEMENTS)
H312, H314 Adjudicated

P-CODES (PRECAUTIONARY STATEMENTS)
P260, P264, P280, P301+P330+P331, P302+P352, P303+P361+P353, P304+P340, P305+P351+P338, P310, P312, P321, P362, P363, P405, P501

Adjudicated

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)
10 ppm TWA OSHA 29 CFR 1910.1000

ACGIH TLV
10 ppm TWA / 15 ppm STEL Adjudicated

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: NIOSH Pocket Guide for REL/IDLH, OSHA Z-Tables for PEL. Always verify against the latest regulatory text before shipment-critical decisions.

HEALTH & FIRE HAZARD

ACUTE TOXICOLOGY

LD_{50} ORAL (RAT)

4413 mg/kg (75% solution, calculated); 3310 mg/kg (pure acetic acid)

Adjudicated

LD_{50} DERMAL (RABBIT)

1483 mg/kg (75% solution, calculated); 1060–1112 mg/kg (pure acetic acid)

Adjudicated

Acute toxicology values from SDS Section 11 or NIOSH RTECS.

APPLICATIONS

Analytical applications, research laboratories, reagent use, biological or biochemical testing, analyzing synthetic peptides, acidifying and neutralizing, solvent use, and R&D/laboratory work

laballey.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 sealed in the original corrosion-resistant container (polyethylene, glass or stainless steel; not mild steel or aluminum) in a cool, dry, well-ventilated area out of direct sunlight, away from bases, oxidizers and foodstuffs. Protect from freezing. Avoid forming aerosols when handling.

Adjudicated

HANDLING PRECAUTIONS

Use standard chemical PPE — splash goggles, gloves, lab coat. Refer to SDS for hazard-specific PPE requirements.

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

INCOMPATIBILITIES

Oxidizing agents (peroxides, permanganates, nitric and chromic acid); hydroxides and other bases; soluble carbonates and phosphates; metals (releases hydrogen); amines; alcohols.

Adjudicated

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)

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UN2790, Acetic acid solution, not less than 50 percent but not more than 80 percent acid, by mass, 8, PG II
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Sourced from 49 CFR 172.101. Confirm against shipping documents and carrier requirements before tender.

NMFC CLASS	PLACARD	PACKING GROUP
60	Corrosive	PG II

REVISION HISTORY

Last reviewed 2026-10-21 by Andre Taki, Chief Commercial Officer, DOT Hazmat–certified (49 CFR 172.704).

VERSION	DATE	CHANGE	TRIGGER
1.10	2026-10-21	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. • pH · canonical change (coa.data_provenance / adjudication)	canonical_change
1.9	2026-10-20	Canonical data updated: 2 fields changed via the provenance/adjudication pipeline. • density · canonical change (coa.data_provenance / adjudication) • specificGravity · canonical change (coa.data_provenance / adjudication)	canonical_change
1.8	2026-10-13	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. • storage_precautions · canonical change (coa.data_provenance / adjudication)	canonical_change
1.7	2026-10-12	Canonical data updated: 4 fields changed via the provenance/adjudication pipeline. • ghsClassification · canonical change (coa.data_provenance / adjudication) • hazard_h_codes · canonical change (coa.data_provenance / adjudication) • hazard_p_codes · canonical change (coa.data_provenance / adjudication) • flashPoint · canonical change (coa.data_provenance / adjudication)	canonical_change

VERSION	DATE	CHANGE	TRIGGER
1.6	2026-10-08	Canonical data updated: 16 fields changed via the provenance/adjudication pipeline. • ghsClassification · canonical change (coa.data_provenance / adjudication) • hazard_h_codes · canonical change (coa.data_provenance / adjudication) • hazard_p_codes · canonical change (coa.data_provenance / adjudication) • vaporPressure · canonical change (coa.data_provenance / adjudication) • solubility · canonical change (coa.data_provenance / adjudication) • odor · canonical change (coa.data_provenance / adjudication) • odorThreshold · canonical change (coa.data_provenance / adjudication) • oel_acgih_tlv · canonical change (coa.data_provenance / adjudication) • cercla_rq · canonical change (coa.data_provenance / adjudication) • incompatible_materials · canonical change (coa.data_provenance / adjudication) • conditions_to_avoid · canonical change (coa.data_provenance / adjudication) • hazardous_decomposition_products · canonical change (coa.data_provenance / adjudication) • synonyms · canonical change (coa.data_provenance / adjudication) • recommended_use · canonical change (coa.data_provenance / adjudication) • restrictions_on_use · canonical change (coa.data_provenance / adjudication) • specificGravity · canonical change (coa.data_provenance / adjudication)	canonical_change
1.5	2026-10-05	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. • oel_osha_pel · canonical change (coa.data_provenance / adjudication)	canonical_change
1.4	2026-10-03	Canonical data updated: 1 field changed via the provenance/adjudication pipeline. • flashPoint · canonical change (coa.data_provenance / adjudication)	canonical_change
1.3	2026-08-04	Canonical data updated: 3 fields changed via the provenance/adjudication pipeline. • unNumber · canonical change (coa.data_provenance / adjudication) • hazardClass · canonical change (coa.data_provenance / adjudication) • packingGroup · 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: 6 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). • 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) • physicalProperties · 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.