

TECHNICAL DATA SHEET

60/40 Methanol/DI Water Solution ACS Grade

ACS Grade · 60/40

CAS NUMBER

67-56-1

ALLIANCE CODE

60-40-methanol-di-water-solution-acs-grade

GENERATED

2026-08-31

REVISION

1.3

REVIEWED

2026-06-30 · Andre Taki

IDENTITY & COMPOSITION

PRODUCT NAME

60/40 Methanol/DI Water Solution ACS Grade

ALLIANCE CODE

60-40-methanol-di-water-solution-acs-grade

GRADE

ACS Grade

CONCENTRATION

60/40

CAS NUMBER

67-56-1 [PubChem](#)

FORMULA

CH4O [PubChem](#)

MOLECULAR WEIGHT

32.042 [PubChem](#)

PRODUCT TYPE

solution

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Assay (CH3OH)	59.5 – 60.5 %	60.0 %	—	Commercial practice
Titration Acid	max 0.00018 meq/g	0.00004 meq/g	—	Derived by dilution
Titration Base	max 0.00012 meq/g	0.00003 meq/g	—	Derived by dilution

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Carbonyl compounds (acetone, formaldehyde, acetaldehyde, each)	≤ 0.0006 %	0.00012 %	—	Derived by dilution
Composition	60% Methanol / 40% Water (v/v)	Passes test	—	Supplier specificat ion
Residue After Evaporation	max 0.0006%	0.00014 %	—	Derived by dilution
Identification	To pass test	Passes test	FTIR (ATR) against reference spectrum	Interprete d
Benzene	0.0001 % max	0.00001 %	GC-FID	Interprete d

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.

AVAILABLE GRADES SAME CAS, ALTERNATE GRADES AND CONCENTRATIONS

GRADE	CONCENTRATION	TYPICAL ASSAY	SKU
THIS GRADE ACS Grade	60/40	—	current
Reagent	60/40	—	60-40-methanol-di-water- solution

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.

PROPERTY	VALUE	SOURCE
Form	Liquid	Published reference
Color	≤ 6	Derived by dilution
Odor	Slight alcoholic odor when pure; repulsive, pungent odor when crude	Published reference
Density	0.8945 – 0.8980	Interpreted
Boiling Point	not characterized for the solution (methanol/water boils ~65–100 °C)	Published reference
Melting Point	–144 °F (NTP, 1992)	Published reference
Vapor Pressure	100 mmHg at 70.2 °F ; 237.87 mmHg at 100 °F (NTP, 1992)	Published reference
Solubility (water)	greater than or equal to 100 mg/mL at 70 °F (NTP, 1992)	Published reference

Polar solvent — purity vs. intended end-use (electronics, pharma, general industrial) is the dominant grade consideration. See application guidance for grade selection.

MATERIALS OF CONSTRUCTION

MATERIAL	RATING	CONDITIONS	SOURCE
HDPE	Compatible	Methanol ACS/HPLC grade, assay min. 99.8% (typical 99.99%), supplied in 20 liter HDPE packaging; source states no upper temperature or exposure-time bound	nwsci.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

UN1230 **49 CFR 172.101**

PACKING GROUP

II **Adjudicated**

HAZARD CLASS

3 **Adjudicated**

PROPER SHIPPING NAME

Methanol **Adjudicated**

GHS / OSHA HAZCOM 2012

SIGNAL WORD

Danger **Adjudicated**

H-CODES (HAZARD STATEMENTS)

H225, H301, H311, H331, H370

ECHA CLP Annex VI

P-CODES (PRECAUTIONARY STATEMENTS)

P210, P233, P240, P241, P242, P243, P260,
P264, P270, P271, P280, P301+P310,
P302+P352, P303+P361+P353, P304+P340,
P307+P311, P308+P311, P312, P321, P330,
P361, P370+P378, P403+P233, P403+P235,
P405, P501

ECHA CLP Annex VI

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)

200 ppm TWA **OSHA 29 CFR 1910.1000**

NIOSH REL

200 ppm TWA / 250 ppm STEL

NIOSH Pocket Guide

ACGIH TLV

— **no canonical**

NIOSH IDLH

6000 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.

CATALOG EQUIVALENTS CROSS-REFERENCE VS MAJOR CHEMICAL SUPPLIERS

SIGMA-ALDRICH

SKU	GRADE	CONC.	MATCH	NOTES
179337	ACS Reagent	99.9%	Exact	ACS Reagent ≥99.9%

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

APPLICATION GUIDANCE

60/40 Methanol/DI Water Solution ACS Grade (ACS Grade) is a polar solvent. Grade selection (technical, ACS, electronics, USP) determines acceptable residue and impurity levels for the intended end-use.

- Cleaning and degreasing (technical-grade)
- Coatings, inks, and adhesives formulation
- Reaction solvent for chemical synthesis
- Pharmaceutical manufacturing (USP-grade)
- Electronics-grade cleaning and rinse applications

Flammable. Bond and ground equipment during transfer. Verify grade matches end-use specification before substitution.

STORAGE & HANDLING

RECOMMENDED STORAGE

Cool, well-ventilated flammable-liquid storage area. Tightly sealed original containers. Segregate from oxidizers and acids. Bond and ground bulk storage.

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

INCOMPATIBILITIES

Strong oxidizers, strong acids, isocyanates, anhydrides. Hygroscopic — protect from atmospheric moisture for water-sensitive end uses.

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

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 chemical-resistant gloves and splash goggles. Bond and ground during transfer to prevent static accumulation. Eliminate ignition sources within vapor envelope.

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

SHELF LIFE

Consult Technical Services for product-specific shelf life

PACKAGING & LOGISTICS

SHIPPING DESCRIPTION (US DOT)

UN1230, Methanol, 3, PG II

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

NMFC CLASS
70

PLACARD
Flammable Liquid

PACKING GROUP
PG II

REVISION HISTORY

Last reviewed 2026-06-30 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: 1 field changed via the provenance/adjudication pipeline. dotSubsidiaryHazardClass · canonical change (coa.data_provenance / adjudication)	canonical_change
1.1	2026-06-30	Canonical data re-verified: 4 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) - 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.