Technical Data Sheet

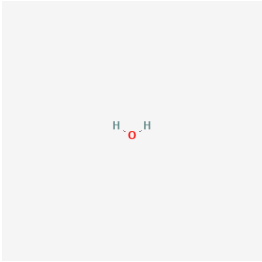
Deionized Water ACS Reagent Grade

ACS Reagent Grade

Alliance Code	Revised	Revision
deionized-water	2026-10-13	1.4

CAS number

7732-18-5



Structure · PubChem

Grade

ACS Reagent Grade

IDENTITY & COMPOSITION

PRODUCT NAME

Deionized Water ACS Reagent Grade

ALLIANCE CODE

deionized-water

GRADE

ACS Reagent Grade

CONCENTRATION

—

CAS NUMBER

7732-18-5 PubChem

FORMULA

H2O PubChem

MOLECULAR WEIGHT

18.015 PubChem

PRODUCT TYPE

Pure substance

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Ammonium (NH4)	max. 0.000001%	—	—	Interpreted
Conductivity at 25 °C (ASTM D1193 Type II)	< 1 µS/cm	—	—	Interpreted
Heavy Metals (as Pb)	<= 0.01 ppm	—	not stated	Interpreted

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Iron (Fe) by ICP	max. 0.01 mg/Kg (ppm)	—	ICP	Interpreted
Substances Reducing Permanganate	Passes Test	—	not stated	Interpreted
Residue on ignition	max. 0.0002 %	—	—	Interpreted
Resistivity at 25 °C (ASTM D1193 Type II)	> 1 MΩ-cm	—	—	Interpreted
Silicate (as SiO_2)	<= 0.01 ppm	—	not stated	Interpreted
Silicate (SiO2)	max. 0.000001%	—	—	Interpreted
Sodium (Na) by ICP	max. 0.1 mg/Kg (ppm)	—	ICP	Interpreted
Sulfate (SO_4)	<= 1.0 ppm	—	not stated	Interpreted
Total organic carbon (TOC) (ASTM D1193 Type II)	< 50 ppb	—	—	Interpreted
Ultraviolet absorbance, 1 cm, 254 nm	max. 0.01	—	—	Interpreted
Chloride (Cl)	≤ 0.4 ppm	—	not stated	Interpreted
Nitrate (NO_3)	≤ 0.4 ppm	—	not stated	Interpreted
Phosphate (PO_4)	≤ 1.0 ppm	—	not stated	Interpreted
Residue after Evaporation	≤ 0.0002 %	—	not stated	Interpreted

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Specific Conductance at 25°C	≤ 2.0 µS/cm at 25 °C	—	not stated	Interpreted
Calcium (Ca) by ICP	max. 0.1 mg/Kg (ppm)	—	ICP-OES (ASTM D1976 / EPA 200.7)	Interpreted
Magnesium (Mg) by ICP	max. 0.1 mg/Kg (ppm)	—	ICP-OES (ASTM D1976 / EPA 200.7)	Interpreted
Potassium (K) by ICP	max. 0.1 mg/Kg (ppm)	—	ICP-OES (ASTM D1976 / EPA 200.7)	Interpreted
Copper (Cu) by ICP	max. 0.01 mg/Kg (ppm)	—	ICP-OES (ASTM D1976 / EPA 200.7)	Interpreted
Nickel (Ni) by ICP	max. 0.01 mg/Kg (ppm)	—	ICP-OES (ASTM D1976 / EPA 200.7)	Interpreted
Manganese (Mn) by ICP	max. 0.01 mg/Kg (ppm)	—	ICP-OES (ASTM D1976 / EPA 200.7)	Interpreted
Zinc (Zn) by ICP	max. 0.01 mg/Kg (ppm)	—	ICP-OES (ASTM D1976 / EPA 200.7)	Interpreted
Lead (Pb) by ICP	max. 0.01 mg/Kg (ppm)	—	ICP-OES (ASTM D1976 / EPA 200.7)	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.

PHYSICAL & CHEMICAL PROPERTIES

PROPERTY	VALUE	SOURCE
Appearance	Clear, colorless liquid	Adjudicated
Form	Liquid	Adjudicated
Color	Colorless	Adjudicated
Odor	Odorless	Adjudicated
pH	5.0 – 7.5	Adjudicated
Specific Gravity	0.998	Adjudicated
Density	0.998 g/cm^3 at 20 °C	Adjudicated
Boiling Point	100 °C (212 °F) at 760 mmHg	Adjudicated
Melting Point	0 °C (32 °F)	Adjudicated
Flash Point	Not applicable	Adjudicated
Vapor Pressure	17.5 mmHg at 20 °C	Adjudicated
Vapor Density	0.62 (air = 1)	Adjudicated
Solubility (water)	Not applicable	Adjudicated
Refractive Index (nD 20)	1.333	Adjudicated
Viscosity	1.002 mPa·s at 20 °C	Adjudicated

REGULATORY & TRANSPORT

DOT / 49 CFR

UN NUMBER
Not regulated Adjudicated

HAZARD CLASS
Not regulated Adjudicated

PACKING GROUP
Not regulated Adjudicated

PROPER SHIPPING NAME
Not regulated Adjudicated

GHS / OSHA HCS 2024

SIGNAL WORD
Not regulated Adjudicated

H-CODES (HAZARD STATEMENTS)
Not applicable Adjudicated

P-CODES (PRECAUTIONARY STATEMENTS)
Not applicable Adjudicated

OCCUPATIONAL EXPOSURE LIMITS

OSHA PEL (29 CFR 1910.1000)
— no canonical

ACGIH TLV
— no canonical

NIOSH REL
— no canonical

NIOSH IDLH
— no canonical

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.

APPLICATIONS

Reagent water for use in laboratory analysis, meeting ISO 3696 type 2 specifications itwreagents.com

Most widely used laboratory reagent, present in most laboratory processes and solutions itwreagents.com

General laboratory, industrial process, agricultural and utility use itwreagents.com

Chemical manufacturing: solution preparation, chemical dilution and apparatus cleaning puretecwater.com

Academic and research laboratory use in chemistry, biology and environmental science experiments puretecwater.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 the original container in a cool, dry, well-ventilated place; keep container closed when not in use.

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

Strong acids; strong bases. Adjudicated

SHELF LIFE

60 months digitalassets.avantorsciences.com

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)

```
Not regulated for transport.
```

Confirm against shipping documents and carrier requirements before tender.

NMFC CLASS

55

REVISION HISTORY

Last reviewed 2026-10-13 by Andre Taki, Chief Commercial Officer, DOT Hazmat–certified (49 CFR 172.704).

VERSION	DATE	CHANGE	TRIGGER
1.4	2026-10-13	Canonical data updated: 4 fields changed via the provenance/adjudication pipeline. • `storage_precautions` · 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)	`canonical_change`
1.3	2026-10-02	Canonical data updated: 2 fields changed via the provenance/adjudication pipeline. • `hazard_h_codes` · canonical change (coa.data_provenance / adjudication) • `hazard_p_codes` · canonical change (coa.data_provenance / adjudication)	`canonical_change`

VERSION	DATE	CHANGE	TRIGGER
1.2	2026-07-31	Canonical data updated: 15 fields changed via the provenance/adjudication pipeline. • appearance · canonical change (coa.data_provenance / adjudication) • pH · canonical change (coa.data_provenance / adjudication) • form · canonical change (coa.data_provenance / adjudication) • color · canonical change (coa.data_provenance / adjudication) • odor · canonical change (coa.data_provenance / adjudication) • specificGravity · canonical change (coa.data_provenance / adjudication) • density · canonical change (coa.data_provenance / adjudication) • boilingPoint · canonical change (coa.data_provenance / adjudication) • meltingPoint · canonical change (coa.data_provenance / adjudication) • flashPoint · canonical change (coa.data_provenance / adjudication) • vaporPressure · canonical change (coa.data_provenance / adjudication) • vaporDensity · canonical change (coa.data_provenance / adjudication) • solubility · canonical change (coa.data_provenance / adjudication) • refractiveIndex · canonical change (coa.data_provenance / adjudication) • viscosity · canonical change (coa.data_provenance / adjudication)	canonical_change
1.1	2026-06-17	Canonical data re-verified: 3 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) • dotSubsidiaryHazardClass · canonical adjudication / reground (coa.data_provenance) • hsCode · 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.