

TECHNICAL DATA SHEET

Battery Water ACS Reagent Grade

Technical

CAS NUMBER	ALLIANCE CODE	GENERATED
7732-18-5	battery-water	2026-08-31
REVISION	REVIEWED	
1.1	2026-06-17 · Andre Taki	

IDENTITY & COMPOSITION

PRODUCT NAME	ALLIANCE CODE
Battery Water ACS Reagent Grade	battery-water
GRADE	CONCENTRATION
Technical	—
CAS NUMBER	FORMULA
7732-18-5 PubChem	H2O PubChem
MOLECULAR WEIGHT	PRODUCT TYPE
18.015 PubChem	pure_substance

SPECIFICATIONS

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Ammonium (NH4)	max. 0.000001%	0.0000002 %	—	Supplier specification
Calcium (Ca) by ICP	max. 0.1 mg/Kg (ppm)	0.005 mg/Kg (ppm)	ICP	Supplier specification
Conductivity at 25 °C (ASTM D1193 Type II)	< 1 µS/cm	0.4	—	Supplier specification

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Copper (Cu) by ICP	max. 0.01 mg/Kg (ppm)	0.002 mg/Kg (ppm)	ICP	Supplier specification
Heavy Metals (as Pb)	<= 0.01 ppm	0.002 ppm	not stated	ACS Reagent Chemicals
Iron (Fe) by ICP	max. 0.01 mg/Kg (ppm)	0.003 mg/Kg (ppm)	ICP	Supplier specification
Nickel (Ni) by ICP	max. 0.01 mg/Kg (ppm)	0.001 mg/Kg (ppm)	ICP	Supplier specification
Substances Reducing Permanganate	Passes Test	Passes test	not stated	ACS Reagent Chemicals
Phosphate (PO ₄)	<= 1.0 ppm	0.01 ppm	not stated	ACS Reagent Chemicals
Residue on ignition	max. 0.0002 %	0.00002 %	—	Supplier specification
Resistivity at 25 °C (ASTM D1193 Type II)	> 1 MΩ-cm	2.5	—	Supplier specification
Silicate (as SiO ₂)	<= 0.01 ppm	0.005 ppm	not stated	ACS Reagent Chemicals
Sodium (Na) by ICP	max. 0.1 mg/Kg (ppm)	0.02 mg/Kg (ppm)	ICP	Supplier specification
Sulfate (SO ₄)	<= 1.0 ppm	0.02 ppm	not stated	ACS Reagent Chemicals

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Chloride (Cl)	≤ 0.4 ppm	0.05 ppm	not stated	ACS Reagent Chemicals
Nitrate (NO ₃)	≤ 0.4 ppm	0.03 ppm	not stated	ACS Reagent Chemicals
Residue after Evaporation	≤ 0.0002 %	0.00002 %	not stated	ACS Reagent Chemicals
Specific Conductance at 25°C	≤ 2.0 µS/cm at 25 °C	0.4	not stated	ACS Reagent Chemicals
Potassium (K) by ICP	max. 0.1 mg/Kg (ppm)	0.01 mg/Kg (ppm)	ICP-OES (ASTM D1976 / EPA 200.7)	Interpreted
Magnesium (Mg) by ICP	max. 0.1 mg/Kg (ppm)	0.003 mg/Kg (ppm)	ICP-OES (ASTM D1976 / EPA 200.7)	Interpreted
Manganese (Mn) by ICP	max. 0.01 mg/Kg (ppm)	0.0005 mg/Kg (ppm)	ICP-OES (ASTM D1976 / EPA 200.7)	Interpreted
Zinc (Zn) by ICP	max. 0.01 mg/Kg (ppm)	0.002 mg/Kg (ppm)	ICP-OES (ASTM D1976 / EPA 200.7)	Interpreted
Lead (Pb) by ICP	max. 0.01 mg/Kg (ppm)	0.0005 mg/Kg (ppm)	ICP-OES (ASTM D1976 / EPA 200.7)	Interpreted
Total organic carbon (TOC) (ASTM D1193 Type II)	< 50 ppb	15 ppb	UV-persulfate oxidation / NDIR (ASTM D5173)	Interpreted

TEST	SPECIFICATION	TYPICAL	METHOD	SOURCE
Ultraviolet absorbance, 1 cm, 254 nm	max. 0.01	0.001	UV-Vis spectrophotometry, 1 cm cell vs. air reference	Interpreted

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
Odor	Odorless	Published reference
pH	5 – 8	Supplier specification
Density	1	Published reference
Boiling Point	212 °F at 760 mmHg	Published reference
Melting Point	32 °F	Published reference
Flash Point	Not applicable	Published reference
Vapor Pressure	23.75 [mmHg]	Published reference
Solubility (water)	Completely miscible	Published reference

REGULATORY & TRANSPORT

DOT / 49 CFR

UN NUMBER

Not regulated **Adjudicated**

PACKING GROUP

Not regulated **Adjudicated**

HAZARD CLASS

Not regulated **Adjudicated**

PROPER SHIPPING NAME

Not regulated **Adjudicated**

GHS / OSHA HAZCOM 2012

SIGNAL WORD

Not regulated **Adjudicated**

H-CODES (HAZARD STATEMENTS)

— **no canonical**

P-CODES (PRECAUTIONARY STATEMENTS)

— **no canonical**

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: 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.

APPLICATIONS

Supplied for laboratory, research or manufacturing use as an ACS reagent-grade water

digitalassets.avantorsciences.com

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

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

Solvent for a wide variety of mineral and organic substances itwreagents.com

Chemical manufacturing: solution preparation, chemical dilution and apparatus cleaning

puretecwater.com

Laboratory reagent used in laboratory processes and solutions. itwreagents.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

Storage: Room Temperature. [itwreagents.com](https://www.itwreagents.com)

INCOMPATIBILITIES

Consult the SDS for material-specific incompatibilities.

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 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.

SHELF LIFE

60 months digitalassets.avantorsciences.com

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 2026-06-17 by Andre Taki, DOT Hazmat Specialist.

VERSION	DATE	CHANGE	TRIGGER
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

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.