

PRODUCT IDENTIFICATION



Product Name: Battery Water ACS Reagent Grade

CAS Number: 7732-18-5

Molecular Formula: H₂O

Molecular Weight: 18.015 g/mol

Grade: Reagent Grade

Purity / Concentration: Not Available

Synonyms: Deionized Water, Distilled Water

PRODUCT OVERVIEW

Alliance Chemical offers high-purity Battery Water, which meets ACS Reagent Grade standards for maximum reliability. With a conductivity of 2 µS/cm and undetectable levels of heavy metals like lead and iron, this product is ideal for maintaining electrolyte integrity in sensitive systems.

Grade Significance: Reagent Grade signifies that this water has been rigorously tested to meet or exceed ACS specifications, ensuring it is free from impurities that could cause performance failures or chemical interference. For the end user, this grade guarantees a consistent, baseline purity necessary for critical technical applications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
pH	—	6.25	5	7.5	pH Meter
Non Volatile Residue	mg/100mL	18	0	35	Evaporation
Aluminum Al	ppm	ND	0	—	ICP-MS
Calcium Oxide Cao	%	ND	0	—	ICP
Chromium Cr	ppm	ND	0	—	ICP-OES
Copper Cu	ppm	ND	0	—	ICP-OES
Heavy Metals	ppm	≤ 1 ppm	—	—	ICP
Iron	ppm	ND	0	—	ICP
Lead Pb	ppm	ND	0	—	ICP-MS
Magnesium	%	ND	0	—	Per specification
Nickel Ni	ppm	ND	0	—	ICP-OES
Zinc Zn	ppm	ND	0	—	ICP-MS
Nitrate (NO ₃ ⁻)	ppm	≤ 0.4 ppm	—	—	Per specification
Phosphate	ppm	≤ 1 ppm	—	—	Per specification
Sulfate (SO ₄ ²⁻)	ppm	≤ 1 ppm	—	—	Ion chromatography
Conductivity 25C	µS/cm	2	—	10	Conductivity Meter
Tin Sn	ppm	ND	0	—	ICP-MS
Total Solids	ppm	0.3	—	1	Per specification

ND = Not Detected. Values are typical and may vary by lot.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless liquid	Odor	Odorless
Form	Liquid	Boiling Point	212 °F at 760 mmHg
Melting / Freezing Point	32°C (90°F)	Flash Point	Not applicable
Specific Gravity	1.0	Solubility	Soluble in water
Molecular Formula	H ₂ O	Molecular Weight	18.015 g/mol
Vapor Pressure (20°C)	23.8 mmHg	Viscosity (25°C)	0.89 cP
Refractive Index (20°C)	1.333	Density (25°C)	1.000 g/mL
Decomposition Temp.	Not applicable (water decomposes at 100°C/373 K)		

APPLICATIONS

- Automotive and Industrial** — Used to refill lead-acid batteries to maintain precise electrolyte levels and prevent internal plate damage.
- Battery Manufacturing** — Serves as a high-purity base for preparing custom electrolyte solutions in various advanced battery technologies.
- Laboratory and Analytical** — Utilized as a high-quality solvent and diluent for sensitive analytical procedures and chemical testing.
- HVAC and Cooling** — Used in specialized cooling systems to prevent mineral deposits and maintain long-term thermal efficiency.

STORAGE & HANDLING

Proper storage is critical to prevent the re-introduction of airborne contaminants or mineral leaching from container materials, which would compromise its high purity. While the product is not classified as hazardous, it should be kept in a tightly sealed, non-reactive container to maintain its low conductivity and reagent-grade status.

- Store in a cool, dry place away from direct sunlight.
- Use HDPE containers to prevent leaching of contaminants.
- Avoid contact with strong acids or bases to prevent chemical reactions.
- Ensure containers are tightly sealed to prevent evaporation and contamination.
- Wear appropriate PPE such as gloves and goggles when handling.

AVAILABLE PACKAGING

- 1 Quart
- 1 Gallon
- 5 Gallon
- 15 Gallon
- 55 Gallon
- 275 Gallon
- 330 Gallon

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: Warning

No GHS pictograms assigned.

Hazard Statements:

- Not Classified
- Reported as not meeting GHS hazard criteria by 1866 of 1876 companies (only 0.5% companies provided GHS information). For more detailed information, please visit ECHA C&L website.

Emergency Contact: CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

For complete safety information, refer to the Safety Data Sheet (SDS) for this product.

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