TECHNICAL DATA SHEET

Battery Water

Revised: 07/22/2026

PRODUCT IDENTIFICATION

Product Name: Battery Water
CAS Number: 7732-18-5
Molecular Formula: H_2O
Molecular Weight: 18.015 g/mol
Grade: Technical Grade
Purity / Concentration: Not Available
Synonyms: Deionized Water, Distilled Water

PRODUCT OVERVIEW

Alliance Chemical provides high-quality Technical Grade battery water, a clear and colorless liquid essential for maintaining electrolyte balance. With a conductivity of just 1 µS/cm and extremely low mineral content, this product is engineered to prevent harmful deposits in sensitive equipment. It is the ideal choice for refilling lead-acid batteries and supporting precise chemical dilutions.

Grade Significance: Technical Grade ensures that the product meets high purity standards suitable for industrial and mechanical applications, offering a balance of performance and cost-effectiveness for bulk usage.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay	%	100.0	99.5	100.5	Titration/Gravimetric
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	0.05	—	0.06	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_2O	**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

1. **Automotive** — Used to top off lead-acid batteries to maintain proper electrolyte levels, which significantly extends battery lifespan and prevents internal plate damage.
2. **Industrial Manufacturing** — Serves as a reliable base for preparing specialized electrolyte solutions across various battery technologies and power storage systems.
3. **Laboratory Analysis** — Utilized as a high-purity solvent and diluent for analytical procedures where low mineral content is required to prevent contamination of test results.
4. **HVAC and Cooling** — Applied in cooling systems to prevent the buildup of mineral scale and deposits, ensuring optimal thermal efficiency and system longevity.
5. **Chemical Processing** — Acts as a consistent medium for chemical mixing and formulation, providing a controlled environment for reactive processes.

STORAGE & HANDLING

Proper storage is critical to maintaining the low conductivity and high purity levels of this water. It must be kept in a tightly sealed, non-reactive container to prevent airborne contaminants or carbon dioxide from dissolving into the liquid, which would otherwise alter its pH and conductivity specifications.

- 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: Not Classified

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.

Alliance Chemical | 204 South Edmond St, Taylor, Texas 76574 | 512-365-6838 | www.alliancechemical.com

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