TECHNICAL DATA SHEET

Hydrochloric Acid 15% Technical Grade

Revised: 06/30/2026

PRODUCT IDENTIFICATION

Product Name: Hydrochloric Acid 15% Technical Grade
CAS Number: 7647-01-0
Molecular Formula: ClH
Molecular Weight: 36.46 g/mol
Grade: Technical Grade
Purity / Concentration: 15%
Synonyms: Hydrochloric Acid Solution, Muriatic Acid 15%

PRODUCT OVERVIEW

Alliance Chemical offers 15% Technical Grade Hydrochloric Acid, a reliable, high-purity solution essential for industrial pH control and cleaning applications. With a low iron content of 0.1 ppm and minimal residue, this solution provides consistent, professional-grade performance for sensitive chemical processes.

Grade Significance: Technical Grade signifies that this product is manufactured to meet industrial specifications suitable for general chemical processing, balancing cost-effectiveness with high-quality chemical purity.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (wt%)	%	15.1	14.5	15.5	Titration with NaOH
Color (APHA)	APHA	10	—	20	ASTM D1209
Specific Gravity (20°C)	g/mL	1.074	1.072	1.076	ASTM D891
Residue After Ignition	%	0.0010	—	0.0050	Gravimetric
Heavy Metals (as Pb)	ppm	ND	—	1	ICP-OES
Iron (Fe)	ppm	0.1	—	1	ICP-OES
Sulfate (SO_4^{2-})	ppm	1	—	5	Turbidimetry

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

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Colorless, fuming liquid	**Odor**	Pungent, irritating odor
Form	Liquid	**Boiling Point**	Not characterized for the solution
Melting / Freezing Point	Not characterized for the solution	**Specific Gravity**	1.075
Solubility	Soluble in water and alcohol	**Molecular Formula**	ClH
Molecular Weight	36.46 g/mol	**Vapor Pressure (20°C)**	20 mmHg
Viscosity (25°C)	0.89 cP	**Refractive Index (20°C)**	1.332
Density (25°C)	1.049 g/mL	**Partition Coefficient (log P)**	-3.0 (approx. for HCl aqueous; context-dependent)
Decomposition Temp.	Not applicable at room temperature; decomposes under strong oxidizing/ high temperature		

APPLICATIONS

1. **Water Treatment** — This acid is used to effectively lower the pH of water in industrial treatment processes to maintain optimal system balance.
2. **Metalworking** — It acts as a powerful agent for pickling and removing rust or scale from metal surfaces to prepare them for finishing or coating.
3. **Chemical Manufacturing** — The solution serves as a versatile reagent in the synthesis of various chemical compounds, acting as a foundational building block in industrial reactions.
4. **Food Processing** — It is utilized for precise pH control and the processing of specific food ingredients, adhering to strict quality standards for safety.

STORAGE & HANDLING

Proper storage is critical because Hydrochloric Acid is highly corrosive to metals and can cause severe skin burns or respiratory irritation. It must be stored in a cool, well-ventilated area using compatible materials to prevent hazardous leaks and the release of acidic fumes.

- Store in a cool, dry place away from incompatible materials.
- Use corrosion-resistant containers (e.g., HDPE, glass).
- Avoid contact with metals and strong bases.
- Ensure adequate ventilation in storage areas.
- Wear appropriate personal protective equipment (PPE) including gloves and goggles.

AVAILABLE PACKAGING

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

SAFETY SUMMARY (CROSS-REFERENCE TO SDS)

Signal Word: Danger

Hazard Statements:

- H290: May be corrosive to metals
- H314: Causes severe skin burns and eye damage
- H335: May cause respiratory irritation

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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