TECHNICAL DATA SHEET

Hydrochloric Acid 15% Technical Grade

Revised: 08/27/2026

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

Hydrochloric Acid 15% Technical Grade is a versatile, high-purity chemical solution widely used for industrial pH control and metal cleaning. This product maintains a precise assay of 15.13% with exceptionally low heavy metal concentrations, including iron and lead levels at 0.0405 ppm.

Grade Significance: Technical Grade ensures that the product meets reliable industrial standards for consistency and purity, making it ideal for large-scale applications where performance is critical.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Titration)	%	15.13	14.5	15.5	Titration
Color (APHA/Hazen)	APHA	2.5	0	10	Spectrophotometry
Specific Gravity (20°C)	g/mL	1.073	1.071	1.075	Hydrometer @ 20°C
Residue On Evaporation	ppm	10	0	50	Evaporation
Heavy Metals As Pb	ppm	0.0405	0	1	ICP-MS (as Pb)
Iron (Fe)	ppm	0.0405	0	1	ICP-MS
Sulfate So4	ppm	0.41	0	8.11	ICP
Sulfite So3	ppm	0.2	0	28.38	ICP

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 15% solution
Melting / Freezing Point	Not characterized for the 15% 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** — Used as an effective agent to lower the pH of water in municipal and industrial treatment processes.
2. **Metalworking** — Acts as a powerful pickling agent to efficiently remove rust, scale, and impurities from metal surfaces.
3. **Chemical Manufacturing** — Serves as a critical reagent in the synthesis of diverse chemical compounds for industrial applications.
4. **Food Processing** — Utilized under controlled conditions for pH adjustment and the processing of specific food ingredients.

STORAGE & HANDLING

Proper storage is essential because this acid is highly corrosive to metals and poses severe risks for skin and eye contact. It should be stored in a cool, well-ventilated area using compatible containment to prevent hazardous reactions and environmental exposure.

- 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.

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