

PRODUCT IDENTIFICATION

**Product Name:** Hydrochloric Acid 37% (HCL 37%) - Technical Grade**CAS Number:** 7647-01-0**Molecular Formula:** ClH**Molecular Weight:** 36.46 g/mol**Grade:** Technical Grade**Purity / Concentration:** 37%**Synonyms:** Muriatic Acid, Hydrochloric Acid Solution

PRODUCT OVERVIEW

Alliance Chemical offers high-purity Technical Grade Hydrochloric Acid 37%, a versatile and potent reagent essential for industrial manufacturing and water treatment. This colorless, fuming liquid is characterized by a precise assay of 37.55% and extremely low trace metal content, ensuring reliable performance in demanding chemical processes.

Grade Significance: Technical Grade indicates that this product is manufactured for industrial and manufacturing applications where consistent, high-purity chemical performance is required over food or pharmaceutical-specific certifications.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

PARAMETER	UNIT	TYPICAL	MIN	MAX	TEST METHOD
Assay (Titration)	%	37.55	36.5	38	Titration
Color (APHA/Hazen)	APHA	2	—	10	Spectrophotometry
Specific Gravity (20°C)	g/mL	1.185	1.183	1.187	Hydrometer @ 20°C
Residue On Evaporation	ppm	10	0	50	Evaporation
Aluminum Al	ppm	≤ 0.1 ppm	—	—	ICP-MS
Arsenic Antimony As As	ppm	≤ 0.005 ppm	—	—	ICP-MS
Calcium Ca	ppm	≤ 0.1 ppm	—	—	ICP-MS
Chromium Cr	ppm	≤ 0.1 ppm	—	—	ICP-MS
Cobalt Co	ppm	≤ 0.05 ppm	—	—	ICP-MS
Copper Cu	ppm	≤ 0.05 ppm	—	—	ICP-MS
Heavy Metals As Pb	ppm	0.1	0	1	ICP-MS (as Pb)
Iron (Fe)	ppm	≤ 0.1 ppm	—	—	ICP-MS
Lead Pb	ppm	≤ 0.025 ppm	—	—	ICP-MS
Magnesium Mg	ppm	≤ 0.1 ppm	—	—	ICP-MS
Manganese Mn	ppm	≤ 0.1 ppm	—	—	ICP-MS
Nickel Ni	ppm	≤ 0.05 ppm	—	—	ICP-MS
Potassium K	ppm	≤ 0.1 ppm	—	—	ICP-MS
Sodium Na	ppm	≤ 0.1 ppm	—	—	ICP-MS
Zinc Zn	ppm	≤ 0.03 ppm	—	—	ICP-MS
Phosphate Po4	ppm	0.0232	—	0.05	ICP
Sulfate So4	ppm	≤ 0.3 ppm	—	—	ICP
Barium Ba	ppm	≤ 0.1 ppm	—	—	ICP-MS
Boron B	ppm	≤ 0.05 ppm	—	—	ICP-MS
Cadmium Cd	ppm	≤ 0.1 ppm	—	—	ICP-MS
Silver Ag	ppm	≤ 0.05 ppm	—	—	ICP-MS
Strontium Sr	ppm	≤ 0.1 ppm	—	—	ICP-MS
Sulfite So3	ppm	0.5	0	70	ICP
Tin Sn	ppm	≤ 0.1 ppm	—	—	ICP-MS

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 37% solution
Melting / Freezing Point	Not characterized for the 37% solution	Specific Gravity	1.19
Solubility	Highly soluble in water and ethanol	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)	1.334
Density (25°C)	1.19 g/mL		

APPLICATIONS

1. **Water Treatment** — Utilized to effectively lower the pH of water in treatment processes to maintain optimal balance and compliance.
2. **Chemical Manufacturing** — Acts as a critical reagent in the synthesis of various industrial chemicals and organic compounds.
3. **Metalworking** — Widely employed in pickling processes to efficiently remove rust and scale from metal surfaces prior to further finishing.
4. **Laboratory Analysis** — Used as a standard reagent for titration and other precise analytical procedures requiring consistent concentration.

STORAGE & HANDLING

Due to its corrosive nature and tendency to release irritating fumes, this acid must be stored in a cool, well-ventilated area in original, compatible containers. Proper storage prevents the degradation of the product and mitigates the risk of severe skin burns, respiratory irritation, and damage to surrounding metal infrastructure.

- Store in a cool, dry, well-ventilated area away from incompatible materials.
- Use materials compatible with hydrochloric acid, such as HDPE or glass containers.
- Avoid contact with metals, bases, and organic materials to prevent hazardous reactions.
- Ensure proper personal protective equipment (PPE) is worn, including gloves and goggles.
- Keep containers tightly closed when not in use to minimize vapor release.

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

Disclaimer: The information contained herein is believed to be accurate and represents the best information currently available to us. However, Alliance Chemical makes no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.