

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 powerful industrial reagent. With a precise assay of 37.1% and minimal trace impurities, this fuming liquid is engineered for consistent performance in demanding chemical processing and water treatment applications.

Grade Significance: Technical Grade indicates that this product is manufactured to meet rigorous industrial standards, providing a reliable balance of purity and cost-effectiveness for heavy-duty applications.

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	1.18	1.19	Hydrometer @ 25°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 effectively to lower the pH of water in large-scale treatment facilities to ensure optimal chemical balance.
2. **Chemical Manufacturing** — Acts as a primary reagent in the synthesis of diverse chemical compounds and organic intermediates.
3. **Metalworking** — Provides superior strength for removing rust and scale from metal surfaces during pickling processes.
4. **Laboratory Analysis** — Used as a standard reagent for titration and various analytical procedures requiring high-concentration acid.

STORAGE & HANDLING

Proper storage is critical to prevent the release of toxic, corrosive fumes and to maintain the integrity of the 37% concentration. Due to its classification as a severe skin and respiratory hazard, it must be kept in a cool, well-ventilated area in secondary containment to prevent dangerous reactions or accidental exposure.

- 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:

- H314: Causes severe skin burns and eye damage [Danger Skin corrosion/irritation]
- H331: Toxic if inhaled [Danger Acute toxicity, inhalation]

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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