

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

Hydrochloric Acid 37% Technical Grade is a high-purity, fuming liquid essential for industrial chemical processes. With a precise assay of 37.55% and extremely low trace metal concentrations, such as aluminum and calcium at or below 0.1 ppm, it ensures consistent performance in demanding applications.

Grade Significance: Technical Grade indicates that the product meets high industrial standards for purity and concentration, making it ideal for large-scale manufacturing and processing where consistency is required.

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** — Used effectively to lower the pH levels in municipal and industrial water treatment systems to maintain balance.
2. **Chemical Manufacturing** — Acts as a vital reagent in the synthesis and production of various chemical compounds.
3. **Metalworking** — Utilized for pickling and descaling processes to remove rust and oxidation from metal surfaces.
4. **Laboratory Analysis** — Serves as a reliable acidic reagent for titration and other standardized analytical procedures.

STORAGE & HANDLING

Proper storage is critical because this acid is highly corrosive to metals and can cause severe skin burns and respiratory irritation. It must be kept in a cool, well-ventilated area using compatible containment to prevent the release of toxic fumes and hazardous spills.

- 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.

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