

PRODUCT IDENTIFICATION



Product Name: Hydrochloric Acid 25% ACS Grade

CAS Number: 7647-01-0

Molecular Formula: ClH

Molecular Weight: 36.46 g/mol

Grade: ACS Grade

Purity / Concentration: 25%

Synonyms: Not Available

PRODUCT OVERVIEW

Alliance Chemical offers 25% Hydrochloric Acid in high-purity ACS grade, designed for rigorous laboratory and industrial applications. This clear, colorless liquid provides consistent chemical performance with a specific gravity of 1.124. It serves as a reliable reagent for precise analytical procedures and controlled industrial processes.

Grade Significance: ACS Grade signifies that the product meets the stringent purity standards set by the American Chemical Society, ensuring reliability for analytical and research-grade work. This grade provides the end user with the confidence that impurities are kept below critical detection limits.

CERTIFICATE OF ANALYSIS — TYPICAL VALUES

Certificate of Analysis data not available for this product.

PHYSICAL & CHEMICAL PROPERTIES

Appearance	Clear, colorless to slightly yellow liquid with HCl odor	Form	Liquid
Boiling Point	108°C (20.2% azeotrope)	Melting / Freezing Point	-74°C (-101°F)
Flash Point	Not applicable	Specific Gravity	1.124
Solubility	Fully soluble in water	Molecular Formula	ClH
Molecular Weight	36.46 g/mol		

APPLICATIONS

- Analytical Chemistry** — Used as a high-purity reagent for laboratory titration and standardized analytical testing where chemical consistency is critical.
- Pharmaceutical Manufacturing** — Utilized for pH adjustment and as a chemical intermediate in the synthesis of various active pharmaceutical ingredients.
- Water Treatment** — Applied for effective pH control and alkalinity reduction in municipal and industrial water treatment systems.
- Metal Processing** — Employed for pickling and surface cleaning of metals to remove oxides and scale before finishing or plating.
- Food Processing** — Used in controlled concentrations for food-grade additive production and equipment sanitation processes.

STORAGE & HANDLING

Due to its status as a corrosive substance that can cause severe skin burns and respiratory toxicity, this acid must be stored in a cool, well-ventilated area away from incompatible materials like bases and metals. Proper containment prevents the release of hazardous vapors and minimizes the risk of accidental exposure or structural damage to storage facilities.

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.

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