

**Identification**

HCl  
 M = 36,46 g/mol  
 CAS [7647-01-0]  
 EC number: 231-595-7  
 Taric code: 2806 10 00

**Synonyms**

Hydrochloric acid fuming, Muriatic acid, Hydrogen chloride solution

**Applications**

laboratory reagent, acidifying agent, in the production of chlorides, synthesis of organic products.

**Specifications**

assay (acidimetric).....	36,5 - 38,0 %	heavy metals.....	max. 0,0001 %
identity.....	passes test	iron (Fe).....	max. 0,1 ppm
appearance of solution.....	clear and colourless	lead (Pb).....	max. 0,01 ppm
colour (Hazen).....	max. 10	lithium (Li).....	max. 0,01 ppm
bromides (Br).....	max. 0,005 %	magnesium (Mg).....	max. 0,05 ppm
phosphates (as PO <sub>4</sub> ).....	max. 0,00005 %	manganese (Mn).....	max. 0,01 ppm
sulfates (SO <sub>4</sub> ).....	max. 0,00005 %	mercury (Hg).....	max. 0,01 ppm
sulfites (SO <sub>3</sub> ).....	max. 0,00005 %	molybdenum (Mo).....	max. 0,01 ppm
free chlorine (as Cl).....	max. 0,00004 %	nickel (Ni).....	max. 0,02 ppm
aluminium (Al).....	max. 0,05 ppm	platinum (Pt).....	max. 0,1 ppm
ammonium (NH <sub>4</sub> ).....	max. 0,0001 %	potassium (K).....	max. 0,1 ppm
arsenic (As).....	max. 0,01 ppm	silver (Ag).....	max. 0,02 ppm
barium (Ba).....	max. 0,01 ppm	sodium (Na).....	max. 0,3 ppm
beryllium (Be).....	max. 0,01 ppm	strontium (Sr).....	max. 0,01 ppm
bismuth (Bi).....	max. 0,05 ppm	thallium (Tl).....	max. 0,02 ppm
boron (B).....	max. 0,1 ppm	tin (Sn).....	max. 0,05 ppm
cadmium (Cd).....	max. 0,01 ppm	titanium (Ti).....	max. 0,02 ppm
calcium (Ca).....	max. 0,3 ppm	vanadium (V).....	max. 0,01 ppm
chromium (Cr).....	max. 0,01 ppm	zinc (Zn).....	max. 0,05 ppm
cobalt (Co).....	max. 0,01 ppm	zirconium (Zr).....	max. 0,02 ppm
copper (Cu).....	max. 0,01 ppm	residue on ignition.....	max. 0,0003 %
gallium (Ga).....	max. 0,05 ppm	residue on evaporation.....	max. 0,001 %
germanium (Ge).....	max. 0,02 ppm		
gold (Au).....	max. 0,05 ppm		

**Physical data**

- Density: ~ 1,19 g/cm<sup>3</sup>
- Solub. in water: (20 °C): miscible
- Melting point: -28 °C
- Boiling point: ~ 50 °C
- Vapour pressure: (20 °C) 190 hPa
- pH(20 °C) < 1

**Safety - GHS**

**Signal Word:** Danger

**Hazard Statements:**

- H314: Causes severe skin burns and eye damage.  
 H335: May cause respiratory irritation.


**Precautionary Statements:**

- P260: Do not breathe dust / fume / gas / mist / vapours / spray.  
 P303+P361+P353: IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.  
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P321: Specific treatment (see on this label).  
 P405: Store locked up.  
 P501a: Dispose of contents / container in accordance with local / regional / national / international regulations.

**Toxicological data**

- MAK: 2 ml/m<sup>3</sup>, 3,0 mg/m<sup>3</sup>
- WGK: 1
- Poison class CH (Swiss): 2

**Transport/storage**

- ADR: 8 C1 II • UN 1789 • HYDROCHLORIC ACID
- IMDG: 8 II • UN 1789 • HYDROCHLORIC ACID
- IATA/ICAO: 8 II • UN 1789 • HYDROCHLORIC ACID
- PAX: 809
- CAO: 813
- Store below 25°C