

# Perchloric acid, 70%, Ultratrace®, ppb-trace analysis grade

## Identification

HClO<sub>4</sub>  
 M = 100,46 g/mol  
 CAS [7601-90-3]  
 EC number: 231-512-4  
 Taric code: 2811 19 80

## Specifications

|                          |              |                        |              |
|--------------------------|--------------|------------------------|--------------|
| assay (acidimetric)..... | 65 - 71 %    | manganese (Mn).....    | max. 1 ppb   |
| colour (Hazen).....      | max. 10      | molybdenum (Mo).....   | max. 0,5 ppb |
| aluminium (Al).....      | max. 1 ppb   | neodymium (Nd).....    | max. 0,5 ppb |
| antimony (Sb).....       | max. 0,5 ppb | nickel (Ni).....       | max. 1 ppb   |
| arsenic (As).....        | max. 0,5 ppb | palladium (Pd).....    | max. 0,5 ppb |
| barium (Ba).....         | max. 1 ppb   | platinum (Pt).....     | max. 0,5 ppb |
| beryllium (Be).....      | max. 0,5 ppb | potassium (K).....     | max. 1 ppb   |
| bismuth (Bi).....        | max. 0,5 ppb | praseodymium (Pr)..... | max. 0,5 ppb |
| cadmium (Cd).....        | max. 1 ppb   | rhodium (Rh).....      | max. 0,5 ppb |
| calcium (Ca).....        | max. 1 ppb   | rubidium (Rb).....     | max. 0,5 ppb |
| cerium (Ce).....         | max. 0,5 ppb | samarium (Sm).....     | max. 0,5 ppb |
| cesium (Cs).....         | max. 0,5 ppb | scandium (Sc).....     | max. 0,5 ppb |
| cobalt (Co).....         | max. 0,5 ppb | silver (Ag).....       | max. 1 ppb   |
| copper (Cu).....         | max. 0,5 ppb | sodium (Na).....       | max. 1 ppb   |
| dysprosium (Dy).....     | max. 0,5 ppb | strontium (Sr).....    | max. 0,5 ppb |
| erbium (Er).....         | max. 0,5 ppb | tellurium (Te).....    | max. 0,5 ppb |
| europium (Eu).....       | max. 0,5 ppb | terbium (Tb).....      | max. 0,5 ppb |
| gadolinium (Gd).....     | max. 0,5 ppb | thallium (Tl).....     | max. 0,5 ppb |
| gallium (Ga).....        | max. 0,5 ppb | thorium (Th).....      | max. 1 ppb   |
| gold (Au).....           | max. 0,5 ppb | thulium (Tm).....      | max. 0,5 ppb |
| holmium (Ho).....        | max. 0,5 ppb | tin (Sn).....          | max. 1 ppb   |
| indium (In).....         | max. 0,5 ppb | titanium (Ti).....     | max. 1 ppb   |
| iron (Fe).....           | max. 1 ppb   | uranium (U).....       | max. 0,5 ppb |
| lanthanum (La).....      | max. 0,5 ppb | vanadium (V).....      | max. 0,5 ppb |
| lead (Pb).....           | max. 1 ppb   | ytterbium (Yb).....    | max. 0,5 ppb |
| lithium (Li).....        | max. 0,5 ppb | yttrium (Y).....       | max. 0,5 ppb |
| lutetium (Lu).....       | max. 0,5 ppb | zinc (Zn).....         | max. 1 ppb   |
| magnesium (Mg).....      | max. 1 ppb   | zirconium (Zr).....    | max. 0,5 ppb |

## Physical data

- Density: 1,68 g/cm<sup>3</sup>
- Solub. in water: (20 °C): miscible
- Melting point: -18 °C
- Boiling point: 198,7 °C
- pH(H<sub>2</sub>O, 20 °C) < 1
- Hygroscopic

## Safety - GHS

Signal Word: Danger

### Hazard Statements:

- H271: May cause fire or explosion; strong oxidiser.  
 H314: Causes severe skin burns and eye damage.  
 H302: Harmful if swallowed.



### Precautionary Statements:

- P221: Take any precaution to avoid mixing with combustibles.  
 P283: Wear fire / flame resistant / retardant clothing.  
 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.  
 P310: Immediately call a POISON CENTER or doctor / physician.  
 P370+P378: In case of fire: Use ... for extinction.  
 P405: Store locked up.  
 P501a: Dispose of contents / container in accordance with local / regional / national / international regulations.

## Transport/storage

- ADR: 5.1 OC1 I • UN 1873 • PERCHLORIC ACID
- IMDG: 5.1 I • UN 1873 • PERCHLORIC ACID,
- IATA/ICAO: 5.1 I • UN 1873 • PERCHLORIC ACID,
- PAX: F
- CAO: 501
- 10°C - 30°C