

Identification

HClO_4
 M = 100,46 g/mol
 CAS [7601-90-3]
 EC number: 231-512-4
 Taric code: 2811 19 80

Applications

analytical chemistry, laboratory reagent, oxidizing agent, in explosive compositions.

Specifications

assay (acidimetric).....	69 - 72 %	germanium (Ge).....	max. 0,05 ppm
identity.....	passes test	heavy metals (as Pb).....	max. 1 ppm
colour (Hazen).....	max. 10	iron (Fe).....	max. 1 ppm
insoluble in $\text{C}_2\text{H}_5\text{OH}$	max. 0,001 %	lead (Pb).....	max. 0,05 ppm
free chlorine (as Cl).....	max. 0,00005 %	lithium (Li).....	max. 0,02 ppm
total nitrogen (as N).....	max. 0,001 %	magnesium (Mg).....	max. 0,5 ppm
chlorates (ClO_3).....	max. 0,001 %	manganese (Mn).....	max. 0,02 ppm
chlorides (Cl).....	max. 0,0003 %	molybdenum (Mo).....	max. 0,05 ppm
phosphates and silicates (as SiO_2).....	max. 0,0005 %	nickel (Ni).....	max. 0,1 ppm
sulfates (SO_4).....	max. 0,001 %	potassium (K).....	max. 0,1 ppm
aluminium (Al).....	max. 0,05 ppm	silver (Ag).....	max. 0,1 ppm
arsenic (As).....	max. 0,05 ppm	sodium (Na).....	max. 0,5 ppm
barium (Ba).....	max. 0,02 ppm	strontium (Sr)	max. 0,02 ppm
beryllium (Be).....	max. 0,02 ppm	thallium (Tl).....	max. 0,05 ppm
bismuth (Bi).....	max. 0,1 ppm	titanium (Ti).....	max. 0,1 ppm
cadmium (Cd).....	max. 0,05 ppm	vanadium (V).....	max. 0,05 ppm
calcium (Ca).....	max. 0,5 ppm	zinc (Zn).....	max. 0,1 ppm
cobalt (Co).....	max. 0,05 ppm	zirconium (Zr).....	max. 0,1 ppm
copper (Cu).....	max. 0,1 ppm	residue on ignition (as SO_4).....	max. 0,003 %

Physical data

- Density: 1,68 g/cm³
- Solub. in water: (20 °C): miscible
- Melting point: -18 °C
- Boiling point: 198,7 °C
- pH(H_2O , 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.
 P405: Store locked up.
 P501a: Dispose of contents / container in accordance with local / regional / national / international regulations.

Toxicological data

- LD 50 (oral, rat): 1100 mg/kg (anhydrous substance)
- WGK: 1
- Poison class CH (Swiss): 1

Transport/storage

- ADR: 5.1 OC1 | • UN 1873 • PERCHLORIC ACID
- IMDG: 5.1 | • UN 1873 • PERCHLORIC ACID,
- IATA/ICAO: 5.1 | • UN 1873 • PERCHLORIC ACID,
- PAX: F
- CAO: 501