

**Identification**

$C_5H_{12}O$   
 M = 88,15 g/mol  
 CAS [71-41-0]  
 EC number: 200-752-1  
 Taric code: 2905 19 00


**Synonyms**

1-Pentanol, 1-Pentyl alcohol, n-Butyl carbinol

**Applications**

analytical chemistry, laboratory reagent, synthesis of organic products, solvents.

**Specifications**

|                                 |               |  |               |
|---------------------------------|---------------|--|---------------|
| assay (G.C.).....               | min. 99 %     | copper (Cu).....                       | max. 0,02 ppm |
| identity (IR-spectrum).....     | passes test   | iron (Fe).....                         | max. 0,1 ppm  |
| density (20°/4°).....           | 0,814 - 0,816 | lead (Pb).....                         | max. 0,1 ppm  |
| free acid (as $CH_3COOH$ )..... | max. 0,005 %  | magnesium (Mg).....                    | max. 0,1 ppm  |
| aluminium (Al).....             | max. 0,5 ppm  | manganese (Mn).....                    | max. 0,02 ppm |
| barium (Ba).....                | max. 0,1 ppm  | nickel (Ni).....                       | max. 0,02 ppm |
| boron (B).....                  | max. 0,02 ppm | tin (Sn).....                          | max. 0,1 ppm  |
| cadmium (Cd).....               | max. 0,05 ppm | zinc (Zn).....                         | max. 0,1 ppm  |
| calcium (Ca).....               | max. 0,5 ppm  | valeric aldehyde (G.C.).....           | max. 0,05 %   |
| chromium (Cr).....              | max. 0,02 ppm | substances darkened by $H_2SO_4$ ..... | passes test   |
| cobalt (Co).....                | max. 0,02 ppm | residue on evaporation.....            | max. 0,002 %  |
|                                 |               | water (K.F.).....                      | max. 0,1 %    |

**Physical data**

- Density: 0,81 g/cm<sup>3</sup>
- Solub. in water: (20 °C): 27 g/l
- Melting point: -79 °C
- Boiling point: 138 °C
- Flash point: 33 °C
- Ignition temperature: 300 °C
- Vapour pressure: (20 °C) 3 hPa
- Refraction index: (n 20 °C/D) 1, 4100
- Viscosity: (20 °C) 3,68 mPas
- Dielectric const.: (25 °C) 13,9
- Evap. heat: (138 °C) 427 KJ/kg
- Saturation conc.: (20 °C) 11 g/m<sup>3</sup>
- Expl. limit (upper): 10,5 Vol %
- Expl. limit (lower): 1,3 Vol %
- pH(25 g/l H<sub>2</sub>O, 20 °C) 7

**Safety - GHS**

**Signal Word:** Danger

**Hazard Statements:**

- H318: Causes serious eye damage.  
 H226: Flammable liquid and vapour.  
 H332: Harmful if inhaled.  
 H315: Causes skin irritation.  
 H335: May cause respiratory irritation.


**Precautionary Statements:**

- P210: Keep away from heat / sparks / open flames / hot surfaces. - No smoking.  
 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: 3 F1 III • UN 1105 • PENTANOLS
- IMDG: 3 III • UN 1105 • PENTANOLS
- IATA/ICAO: 3 III • UN 1105 • PENTANOLS
- PAX: 309
- CAO: 310
- 10°C - 30°C