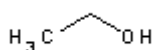


**PRODUCT CODE: 141085****Ethanol 96% v/v (USP, BP, Ph.Eur.) pure, pharma grade**C<sub>2</sub>H<sub>6</sub>OCH<sub>3</sub>CH<sub>2</sub>OH

M.= 46,07

CAS [64-17-5]

EINECS 200-578-6

TARIC 2207 10 00 90

**SYNONYMS:** Ethyl Alcohol

**PHYSICAL DATA:** liquid, Clear, Colourless, Miscible with water and most of the solvents • D 20/4 0,805 • M.P.: -114,1 °C • B.P.: 78,5 °C • n<sub>20/D</sub> : 1,361 • Flash P.:14 °C • Ign. T.:~425 °C • Vap. press. (20 °C) 57,26 hPa • Viscosity 1,2 mPa.s • Expl. limit 2,5 %(V)13,5 %(V) •

**BIBLIOGRAPHY:** Merck Index **12**, 3.806 13, 3.795 Sax **EFU300** • Ullmann **(5.)9** , 587 • Beilstein **1 , IV , 1289** • BRN 1718733 • ACS **XI** • BP.**2020** • USP **42** • Ph. Eur. **9.0** (2017) **10.0** (2020) • F.C.C **10 11** • Directive 88/344/E.C.E.92/115/E.C.E.94/52/EC97/60/EC (27/10/1997) 2009/32/CE • DAB 10, Royal Decree 472/1990 (6/4/1990) , 2667/1998 (11 /12/1998), 1101/2011 (22/7/2011), F. U. IX , 74, Ph.F. X , 15 •

**HAZARDOUS:** C.E: 603-002-00-5 • RTECS: KQ 6300000 • LD50 oral rat 6.200 - 15.000 mg/kg / (OECD 401) • LC50 rat >50mg/m<sup>3</sup> / (OECD 403) • VLA-ED 1.000 ppm1.920 mg/m<sup>3</sup>



H: H225 • H319 •

P: P210 • P233 • P240 • P241 • P242 • P501 • P243 • P280 • P303+P361+P353 • P370+P378 • P403+P235 • P264 • P305+P351+P338 • P337+P313 • P264 • P305+P351+P338 • P337+P313 •

**TRANSPORT REGULATIONS:** UN: 1170 • ADR: 3/II • IMDG: 3/II • IATA: 3/II • PAX: 353 • CAO: 364 • (D/E) •

**WEIGHT/VOLUME INFORMATION:** 1l~0,805 kg 1kg~1,242 l

**OBSERVATIONS:** May be subject to special tax. • Storage away from direct light, away from sources of ignition and heat. Storage at temperature below 25°C. •

**SPECIFICATIONS:**

|                                       |               |
|---------------------------------------|---------------|
| Assay (G.C.) (v/v)                    | 96,0-96,6 %   |
| Identity :                            |               |
| Identity according to Pharmacopoeias: | passes test   |
| Density at 20/20                      | 0,8051-0,8124 |

**Maximum limit of impurities**

|   |             |
|---|-------------|
| Appearance  | passes test |
| Acidity or alkalinity   | passes test |
| Alkalinity  | 0,001 meq/g |
| Insoluble matter in H <sub>2</sub> O  | passes test |
| Non-volatile matter (w/v)   | 0,0025 %    |
| Reducing substance to KMnO <sub>4</sub>   | passes test |
| Clarity of solution   | passes test |
| Absorbance  | passes test |
| Fusel oil   | passes test |
| Residual solvents (Ph.Eur/USP)  | passes test |
| Benzene (U.V.)  | 0,0002%     |
| Aldehydes (as CH <sub>3</sub> CHO)  | 0,001%      |
| Acetone (G.C.)  | 0,005%      |
| Butanone (G.C.)   | 0,02%       |
| 2-Propanol (G.C.)   | 0,03%       |
| 1-Pentanol, non-volatile subst. and carbonized subst. by H <sub>2</sub> SO <sub>4</sub> | passes test |
| Acetone, 2-Propanol and 2-Methyl-2-Propanol   | passes test |
| Volatile impurities (G.C.)  |             |
| Methanol  | 0,02%       |
| Acetaldehyde and acetal   | 0,001 %     |
| Benzene   | 0,0002 %    |
| Total other impurities  | 0,03 %      |
| Fe  | 0,00005 %   |

## Elemental impurities (ICH Q3D):

|          |         |
|----------|---------|
| Class 1  |         |
| Cd       | 0,5 ppm |
| Pb       | 0,5 ppm |
| As       | 1,5 ppm |
| Hg       | 1,5 ppm |
| Class 2A |         |
| Co       | 5 ppm   |
| V        | 10 ppm  |
| Ni       | 20 ppm  |

## Class 2B

|    |         |
|----|---------|
| Tl | 0,8 ppm |
| Au | 10 ppm  |
| Pd | 10 ppm  |
| Ir | 10 ppm  |
| Os | 10 ppm  |
| Rh | 10 ppm  |
| Ru | 10 ppm  |
| Se | 15 ppm  |
| Ag | 15 ppm  |
| Pt | 10 ppm  |

Class 3

|    |         |
|----|---------|
| Li | 55 ppm  |
| Sb | 120 ppm |
| Ba | 140 ppm |
| Mo | 25 ppm  |
| Cu | 250 ppm |
| Sn | 600 ppm |
| Cr | 25 ppm  |