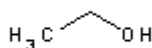
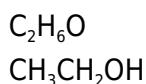


**PRODUCT CODE: 141085****Ethanol 96% v/v (USP, BP, Ph.Eur.) pure, pharma grade**

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.**2018** • USP **41** • Ph. Eur. **8.0** (2014) **9.0** (2017) • 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/m3 / (OECD 403) • VLA-ED 1.000 ppm1.920 mg/m3



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