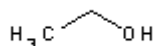


**PRODUCT CODE: 141085****Ethanol 96% v/v (USP, BP, Ph.Eur.) pure, pharma grade** C_2H_6O CH_3CH_2OH 

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_{20/D} : 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.**2025** • USP **43** • Ph. Eur. **10.0** (2019) **11.0** (2023) • F.C.C **12 13** • 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 •

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

ABS	
at λ 240 nm	0,40
at λ 250-260 nm	0,30
at λ 270-340 nm	0,10
Absorption curve, smooth at λ	passes test
Appearance	passes test
Acidity or alkalinity	passes test
Alkalinity	0,001 meq/g
Insoluble matter in H ₂ O	passes test
Non-volatile matter (w/v)	0,0025 %
Reducing substance to KMnO ₄	passes test
Clarity of solution	passes test
Fusel oil	passes test
Residual solvents (Ph.Eur/USP)	passes test
Benzene (U.V.)	0,0002%
Aldehydes (as CH ₃ 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 ₂ SO ₄	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