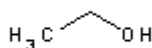
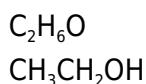


**PRODUCT CODE: 131085****Ethanol 96% v/v (Reag. USP, Ph. Eur.) for analysis, ACS**

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.**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 ppm 1.920 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	IR passes test
Identity according to Pharmacopoeias:	passes test
Density at 20/20	0,805-0,812

Maximum limit of impurities

APHA colour	10
Appearance	passes test
Appearance Clarity of solution	passes test
Acidity	0,0005 meq/g

Alkalinity	0,0002 meq/g
Insoluble matter in H ₂ O	passes test
Non-volatile matter	0,0005 %
Reducing substance to KMnO ₄	passes test
Darkened substances by H ₂ SO ₄	passes test
Carbonyl compounds (as CH ₃ CHO)	0,005%
Fusel oil	passes test
Residual solvents (Ph.Eur/USP)	passes test
Absorbance	passes test
Acetone (G.C.)	0,001%
2-Propanol (G.C.)	0,003%
Butanone (G.C.)	0,003%
2-Butanol (G.C.)	0,02%
3-Methyl-1-Butanol (G.C.)	0,05%
Volatile impurities (G.C.):	
Acetaldehyde and acetal	0,001 %
Methanol	0,02 %
Benzene	0,0002 %
Total other impurities	0,03 %

Residual metals ICP: (according to EMEA/CHMP/SWP/4446/2000)

Class 1A (Pt, Pd)	10 ppm
Class 1B (Ir, Rh, Ru, Os)	10 ppm
Class 1C (Mo, Ni, Cr, V)	25 ppm
Class 2 (Cu, Mn)	250 ppm
Class 3 (Fe, Zn)	1.300 ppm

Metals by ICP [in mg/Kg (ppm)]

Ag	0,05
Al	0,5
As	0,05
Au	0,05
B	0,02
Ba	0,1
Be	0,02
Bi	0,05
Ca	0,5
Cd	0,05
Co	0,02
Cr	0,02
Cu	0,1

Fe	0,1
Ga	0,02
Ge	0,05
Hg	0,05
In	0,05
K	0,1
Li	0,05
Mg	0,1
Mn	0,02
Mo	0,02
Na	0,5
Ni	0,02
P	0,2
Pb	0,1
Pt	0,02
S	0,2
Sb	0,02
Si	0,2
Sn	0,1
Sr	0,2
Ti	0,02
Tl	0,02
V	0,02
Zn	0,1
Zr	0,02