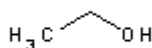
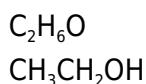


**PRODUCT CODE: 191086****Ethanol absolute (USP, BP, Ph.Eur.) pharma grade**

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 0,79 • M.P.: -114,1 °C • B.P.: 78,5 °C • n₂₀/D : 1,361 • Flash P.:13 °C • Ign. T.:425 °C • Vap. press. (20 °C) 59 hPa • Viscosity 25 °C 1,2 mPa.s • D. M. 20 °C 1,7 Debye • Dielec. constant 25 °C 24,3 • Evap. number (DIN 53170) 8,3 • Heat evap. 78 °C 855 KJ/Kg • Satur. conc. 20 °C 105 g/m³ • Expl. limit 3,5 %(V) 15 %(V) •

BIBLIOGRAPHY: Merck Index **12**, 3.806 13, 3.795 Sax **EFU300** • Ullmann **(5.)** 9 , 587 • Beilstein **1 , IV , 1289** • BRN 1718733 • ACS **XI** • ISO 6353/2-1983 R -11 , 14 • 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 • Ph. U. IX , 74, Ph.Fr. X , 15, Royal Decree 472/1990 (6/4/1990) , 2667/1998 (11 /12/1998), 1101/2011 (22/7/2011), JP XV •

HAZARDOUS: C.E: 603-002-00-5 • RTECS: KQ 6300000 • LD L0 oral hmn 1.400 mg/kg • LD50 oral rat 7.060 mg/kg • LC L0 inh gpg 21900 ppm • LC50 inh rat 20000 ppm / 10h • VLA-ED 1.000 ppm 1.910 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~0,790 kg 1kg~1,266 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:

Minimum assay (G.C.) (v/v)	99,5%
Identity :	
Identity according to Pharmacopoeias:	passes test
Density at 20/20	0,7907-0,7932
Specific gravity at 15.56° C	< 0,7962

Maximum limit of impurities

Appearance	passes test
Acidity or alkalinity	passes test
Insoluble matter in in H ₂ O	passes test
Non-volatile matter (w/v)	0,0025 %
Reducing substance to KMnO ₄	passes test
Clarity	passes test
Absorbance	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%
Butanone (G.C.)	0,02%
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 %
Water (H ₂ O)	0,5 %

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