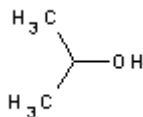
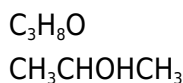


**PRODUCT CODE: 631090****2-Propanol (Ph. Eur, BP, USP-NF) GMP - IPEC grade**

M.= 60,10

CAS [67-63-0]

EINECS 200-661-7

TARIC 2905 12 00 00

SYNONYMS: Dimethylcarbinol, IPA, Isopropanol, iso-Propyl Alcohol, sec-Propyl Alcohol

PHYSICAL DATA: liquid, Clear, Colourless, Miscible with water, alcohol, ether and trichloromethane. • Hygroscopic • D 20/20 0,785 • M.P.: -88,5 °C • B.P.: 82,5 °C • n_{20/D} : 1,3772 • Flash P.: 11,7 °C • Ign. T.: 425 °C • Vap. press. (20 °C) 43 hPa • Viscosity 20 °C 2,27 mPa.s • D. M. 20 °C 1,66 Debye • Dielec. constant 25 °C 18,3 • Heat evap. 82 °C 667 KJ/Kg • Satur. conc. 20 °C 105 g/m³ • Expl. limit 2 % (V) 12 % (V) •

BIBLIOGRAPHY: Merck Index **13**, 5.228 Sax **INJ000** • Safety **2**, **2952 B** • Kühn-Birett **P 35** • Ullmann **(4.)19**, 433 • Beilstein **1**, **360 I**, **183 II**, **375 III**, **1439 IV**, **1461** • BRN 635639 • ACS **XI** • ISO 6353/3-1987R - 87, 62 • **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 • Royal Decree 472/1990 (6/4/1990), 2667/1998 (11 /12/1998), 1101/2011 (22/7/2011), JP XVI •

HAZARDOUS: C.E: 603-117-00-0 • RTECS: NT 8050000 • LD₅₀ oral rat >2.000 mg/kg • LC₅₀ rat >20 mg/l / 8h • LD₅₀ skn rbt >2.000 mg/kg • VLA-ED 200 ppm 500 mg/m³ VLA-EC (Spain) 400 ppm 1.000 mg/m³

Derived No Effect Level (DNEL)

Workers Dermal, long exposure (systemic) 888mg/kg Workers Inhalation, long term (systemic) 500 mg/m³
Population, Dermal, long exposure (systemic) 319mg/kg Population Inhalation, long term (systemic) 89 mg/m³
Population, oral, long term (systemic) 26mg/kg

Predicted No Effect Concentration (PNEC)

Freshwater 140.9mg/l Marine water 140.9mg/l Freshwater Sediment 552mg/kg Marine water Sediment 552mg/kg Soil 28mg/kg



H: H225 • H319 • H336 •
P: P243 • P261 • P271 • P303+P361+P353 • P304+P340 • P305+P351+P338 •

TRANSPORT REGULATIONS: UN: 1219 • ADR: 3/II • IMDG: 3/II • IATA: 3/II • PAX: 353 • CAO: 364 • (D/E) •

WEIGHT/VOLUME INFORMATION: 1l~0,785 kg 1kg~1,274 l

OBSERVATIONS: Storage below 20°C • Storage away from direct light. •

SPECIFICATIONS:

Minimum assay (G.C.)	99,0 %
Identity :	
Identity according to Pharmacopoeias:	
Identity USP	IR passes test
Identity C (Ph. Eur)	passes test
Density at 20/20	0,785 - 0,789
Refractive Index n ₂₀ /D	1,376 - 1,378
Specific gravity	0,783 - 0,787

Maximum limit of impurities

ABS	
at λ 230 nm	0,30 UA
at λ 250 nm	0,10 UA
at λ 270 nm	0,03 UA
at λ 290 nm	0,02 UA
at λ 310 nm	0,01 UA
Appearance	passes test
Acidity USP (< 0.70 ml NaOH 0.02N)	passes test
Acidity or alkalinity Ph. Eur (< 0.6 ml NaOH 0.01N)	passes test
Non-volatile matter	0,0020 %
Peroxides	passes test
Residual solvents (Ph.Eur/USP)	passes test
Benzene and related substances (CG):	
Benzene	0,0002 %
Total other impurities different to 2-Butanol	0,3 %
Volatile impurities (G.C.):	
Individual impurity	0,1 %
Total impurities	1,0 %
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