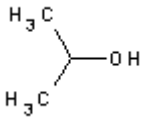
PanReac AppliChem ITW Reagents

**PRODUCT CODE: 141090**

## 2-Propanol (USP, BP, Ph. Eur.) pure, pharma grade

$C_3H_8O$

$CH_3CHOHCH_3$



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 • n20/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. constant25 °C 18,3 • Heat evap. 82 °C 667 KJ/Kg • Satur. conc. 20 °C 105 g/m3 • Expl. limit2 %(V)12 %(V) •

**BIBLIOGRAPHY:** Merck Index **13,** 5.228 Sax **INJ**000 • 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**.2021** • USP **42** • Ph. Eur. **9.0** (2017) **10.0** (2020) • F.C.C **11 12** • 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 •

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**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 ppm500 mg/m3 VLA-EC (Spain) 400 ppm1.000 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 •

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**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 25°C • Storage away from direct light. •

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**SPECIFICATIONS:**

| | |
|---|---|
| Minimum assay (G.C.) | 99,5% |
| Identity : | |
| Identity according to Pharmacopoeias: | passes test |
| Density at 25/25 | 0,783-0,787 |
| Density at 20/20 | 0,785-0,789 |
| Refractive Index n20/D | 1,376-1,378 |

**Maximum limit of impurities**

| | |
|---|---|
| ABS | |
| at λ 230 nm | 0,3 UA |
| at λ 250 nm | 0,1 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 or alkalinity | passes test |
| Non-volatile matter | 0,002 % |
| Peroxides | passes test |
| Related substances | 0,3% |
| Residual solvents (Ph.Eur/USP) | passes test |
| Benzene | 0,0002% |
| Ethanol (G.C.) | 0,05% |
| Volatile impurities (G.C.): | |
| Methanol | 0,02 % |
| Dietyl Ether | 0,1 % |
| Acetone | 0,1 % |
| di-Isopropyl Ether | 0,1 % |
| 1-Propanol | 0,1 % |
| 2-Butanol | 0,1 % |
| Individual unspecified impurity | 0,1 % |
| Total impurities | 1,0 % |
| Water (H2O) | 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 |