MABAYCO
Industrial Products & Chemicals

Isopropyl Alcohol

Product Category	Alcohols
CAS Registry Number	67-63-0
Synonym(s)	2-propanol, IPA
Description	Isopropyl Alcohol (IPA) is a solvent for epoxy and acrylic resins. ethyl cellulose, polyvinyl butyral, alkaloids, gums, shellac, natural resins, and many essential oils. It functions as a latent solvent in solvent systems for nitrocellulose. It is a medium evaporating solvent and is completely miscible with most solvents.

Typical Properties

Property	Unit	Method	Value
Purity, min.	%m/m	GC	99.8
Water	%m/m	ASTM D1364	0.03
Acidity (as Acetic Acid)	%m/m	ASTM D1613	0.001
Density at 20°C	kg/l	ASTM D4052	0.785
Specific Gravity at 20°C/20°C	-	ASTM D4052	0.786
Specific Gravity at 25°C/25°C	-	ASTM D4052	0.783
Coefficient of Cubic Expansion at 20°C	10^{-4}/°C	Calculated	11
Refractive Index at 20°C	-	ASTM D1218	1.377
Color	Pt-Co	ASTM D1209	< 5
Boiling Point	°C	-	82
Relative Evaporation Rate (nBuAc=1)	-	ASTM D3539	1.5
Relative Evaporation Rate (Ether=1)	-	DIN 53170	11
Antoine Constant A #	kPa. °C	-	6.86618
Antoine Constant B #	kPa. °C	-	1360.13
Antoine Constant C #	kPa. °C	-	197.592
Temperature Limits for Antoine Equation #	°C	-	-10 to +90

Vapor Pressure at 20°C	kPa	Calculated	4.1
Vapor Pressure at 50°C	kPa	Calculated	24
Saturated Vapor Concentration at 20°C	g/m^3	Calculated	102
Volatile Organic Compound (VOC)	g/l	EU / EPA	785
Flash Point (Abel)	°C	IP 170	12
Auto Ignition Temperature	°C	ASTM E659	425
Lower Explosion Limit	%v/v	-	2.0
Upper Explosion Limit	%v/v	-	12
Electrical Conductivity at 20°C	pS/m	ASTM D4308	$6*10^6$
Dielectric Constant at 20°C	-	-	18.6
Freezing Point	°C	-	-88
Surface Tension at 20°C	mN/m	-	23
Viscosity at 20°C	mPa.s	-	2.4
Hildebrand Solubility Parameter	$(cal/cm^3)^{1/2}$	-	11.5
Hydrogen Bonding Index	-	-	-16.7
Fractional Polarity	-	-	0.178
Heat of Vaporization at T_{boil}	kJ/kg	-	664
Heat of Combustion (Net) at 25°C	kJ/kg	-	31000
Specific Heat at 20°C	kJ/kg/°C	-	2.56
Thermal Conductivity at 20°C	W/m/°C	-	0.14
Miscibility at 20°C: Solvent in water	%m/m	-	complete
Miscibility at 20°C: Water in solvent	%m/m	-	complete
Azeotrope with Water: Boiling Point	°C	-	80.3
Azeotrope with Water: Solvent Content	%m/m	-	87.4
Molecular Weight	g/mol	-	60

Quality

Isopropyl Alcohol as produced and delivered complies with ACS 10th Edition Reagent Grade (General Use), ASTM D770, DIN 53245 and FED MIL Spec TT-I-735A.
Isopropyl Alcohol does not contain detectable quantities of polycyclic aromatics, heavy metals or compounds.