



Technical Data Sheet

IPA (Isopropyl Alcohol)

Product
IPA (Isopropyl Alcohol)

Sales Specification				
Property	Unit	Minimum	Maximum	Method
Appearance	Clear & Free from Suspended Matter			ASTM D4176
Density @ 20°C	g/ml	0.784	0.787	ASTM D4052
Color	Pt-Co		10	ASTM D1209
Distillation, IBP	°C	81.8		ASTM D1078
Distillation, DP	°C		83.0	ASTM D1078
Purity	% m/m	99.8		DIN 55685
Water	% m/m		0.1	ASTM D1364
Acidity as Acetic Acid	% m/m		0.002	ASTM D1613
Nonvolatile Residue	g/100ml		0.002	ASTM D1353

Typical Properties			
Property	Unit	Method	Value
Density @ 20°C	kg/l	ASTM D4052	0.785
Cubic Expansion Coefficient @ 20°C	(10 ⁻⁴)/°C	-	11
Refractive Index @ 20°C	-	ASTM D1218	1.378
Distillation, IBP	°C	ASTM D1078	81.8
Distillation, DP	°C	ASTM D1078	82.8
Refractive Evaporation Rate (nBuAc=1)	-	ASTM D3539	1.5
Antoine Constant A #	kPa, °C	-	6.86618
Antoine Constant B #	kPa, °C	-	1360.13
Antoine Constant C #	kPa, °C	-	197.592
Antoine Constants Temperature Range	°C	-	-10 to 90
Vapour Pressure @ 20°C	kPa	Calculated	4.1
Vapour Pressure @ 50°C	kPa	Calculated	24
Saturated Vapor Concentration @ 20°C	g/m ³	Calculated	101
Flash Point	°C	IP 170	12
Auto Ignition Temperature	°C	ASTM E659	425
Explosion Limit: Lower	% v/v	-	2
Explosion Limit: Upper	% v/v	-	12
Hildebrand Solubility Parameter	(cal/cm ³) ^{1/2}	-	11.5



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Typical Properties (continued)			
Hydrogen Bonding Index	-	-	-16.7
Fractional Polarity	-	-	0.178
Freezing Point	°C	-	-88
Surface Tension @ 20°C	mN/m	ASTM D971	22.8
Viscosity @ 20°C	mPa.s	ASTM D445	2.43
Dielectric Constant @ 20°C	-	-	18.6
Electrical Conductivity 20°C	pS/m	ASTM D4308	6*10^6
Heat of Combustion (Net) @ 25°C	kJ/kg	-	31000
Heat of Vaporization @ Tboil	kJ/kg	-	664
Specific Heat @ 20°C	kJ/kg/°C	-	2.56
Thermal Conductivity @ 20°C	W/m/°C	-	0.14
Azeotrope with Water: Boiling Point	°C	-	80.3
Azeotrope with Water: Solvent Content	% m/m	-	87.4
Miscibility @ 20°C: Solvent in Water	% m/m	-	Complete
Miscibility @ 20°C: Water in Solvent	% m/m	-	Complete
Molecular Weight	g/mol	-	60

In the Antoine temperature range, the vapour pressure P (kPa) at temperature T (°C) can be calculated by means of the Antoine equation: $\log P = A - B / (T + C)$



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Information	
Product Code:	S1111
CAS Registry Number:	67-63-0
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 solvents systems for nitrocellulose. It is a medium evaporating solvent and is completely miscible with most solvents.
Product Category:	Alcohols
Test Method:	Copies of copyrighted test methods can be obtained from the issuing organisations: American Society for Testing and Materials (ASTM): www.astm.org Energy Institute (IP): www.energyinst.org.uk Deutsches Institut fur Normung (DIN): www.din.de For routine quality control analyses, local test methods may be applied that are different from those mentioned in this datasheet.
Quality:	Isopropyl Alcohol (IPA) does not contain detectable quantities of polycyclic aromatics, heavy metals or chlorinated compounds.
Storage & Handling:	Provided proper storage and handling precautions are taken we would expect Isopropyl Alcohol (IPA) to be technically stable for at least 12 months. For detailed advice on Storage and Handling please refer to the Material Safety Data Sheet.
Hazard Information:	For detailed Hazard Information please refer to the Material Safety Data Sheet.
Release Date:	September 2013