2-Propanol VLSI

(iso-propyl alcohol)





Material No.: 5373-05 Batch No.: 0000135182 Manufactured Date: 2016/01/11 Retest Date: 2021/01/09

Certificate of Analysis

Test	Specification	Result
Assay (CH3CHOHCH3)	>= 99.5 %	100.0
Color (APHA)	<= 10	5
Residue after Evaporation	<= 4 ppm	1
Solubility in H2O	Passes Test	РТ
Water (H₂O)(by Karl Fischer titrn)	<= 0.05 %	0.01
Acidity (μeq/g)	<= 0.2	0.1
Alkalinity (µeq/g)	<= 0.1	< 0.1
Chloride (Cl)	<= 0.1 ppm	< 0.1
Phosphate (PO4)	<= 0.3 ppm	< 0.3
Trace Impurities – Aluminum (Al)	<= 50.0 ppb	< 5.0
Arsenic and Antimony (as As)	<= 10 ppb	< 10
Frace Impurities – Barium (Ba)	<= 20.0 ppb	< 1.0
Trace Impurities – Boron (B)	<= 10.0 ppb	< 5.0
Frace Impurities – Cadmium (Cd)	<= 20.0 ppb	< 1.0
Trace Impurities – Calcium (Ca)	<= 50.0 ppb	2.9
Trace Impurities – Chromium (Cr)	<= 20.0 ppb	< 1.0
Trace Impurities – Cobalt (Co)	<= 20.0 ppb	< 1.0
Trace Impurities – Copper (Cu)	<= 10.0 ppb	< 1.0
Trace Impurities – Gallium (Ga)	<= 50.0 ppb	< 1.0
Trace Impurities – Germanium (Ge)	<= 50.0 ppb	< 10.0
Trace Impurities – Gold (Au)	<= 20.0 ppb	< 5.0
Heavy Metals (as Pb)	<= 200 ppb	< 100
Trace Impurities – Iron (Fe)	<= 50.0 ppb	< 1.0
Trace Impurities – Lead (Pb)	<= 20.0 ppb	< 10.0

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600 Avantor ™ Performance Materials Inc.

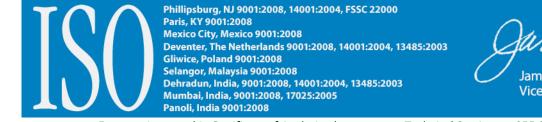
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Test	Specification	Result
Frace Impurities – Lithium (Li)	<= 50.0 ppb	< 1.0
Frace Impurities – Magnesium (Mg)	<= 20.0 ppb	< 1.0
Frace Impurities – Manganese (Mn)	<= 20.0 ppb	< 1.0
Frace Impurities – Nickel (Ni)	<= 10.0 ppb	< 5.0
Frace Impurities – Potassium (K)	<= 100.0 ppb	< 10.0
race Impurities – Silicon (Si)	<= 50.0 ppb	< 10.0
Frace Impurities – Silver (Ag)	<= 20.0 ppb	< 1.0
race Impurities – Sodium (Na)	<= 100.0 ppb	21.3
Frace Impurities – Strontium (Sr)	<= 20.0 ppb	< 1.0
race Impurities – Tin (Sn)	<= 100.0 ppb	< 10.0
Frace Impurities – Titanium (Ti)	<= 20.0 ppb	< 1.0
race Impurities – Zinc (Zn)	<= 50.0 ppb	< 1.0
Particle Count - 0.5 µm and greater	<= 100 par/ml	5
Particle Count - 1.0 µm and greater	<= 8 par/ml	1

For Microelectronic Use

Reported value is the average of all samples counted for this lot number, with no individual sample value exceeding the specification.

Country of Origin:	US
Packaging Site:	Paris Mfg Ctr & DC



James Techie

Jamie Ethier Vice President Global Quality

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