## 2-Propanol CMOS

(iso-propyl alcohol)





Material No.: 9079-05 Batch No.: 0000028548

Manufactured Date: 2012/12/12

Retest Date: 2017/12/11

## Certificate of Analysis

Test	Specification	Result
Assay (CH3CHOHCH3)	>= 99.5 %	100.0
Color (APHA)	<= 10	<5
Residue after Evaporation	<= 4 ppm	<1
Solubility in H <sub>2</sub> O	Passes Test	PT
Water (H2O)(by Karl Fischer titrn)	<= 0.05 %	0.02
Acidity (µeq/g)	<= 0.2	<0.1
Alkalinity (µeq/g)	<= 0.1	<0.1
Chloride (Cl)	<= 0.1 ppm	<0.1
Phosphate (PO <sub>4</sub> )	<= 0.3 ppm	< 0.3
Trace Impurities – Aluminum (AI)	<= 50.0 ppb	< 5.0
Arsenic and Antimony (as As)	<= 10 ppb	< 10
Trace Impurities – Barium (Ba)	<= 20.0 ppb	< 1.0
Trace Impurities – Beryllium (Be)	<= 100.0 ppb	< 1.0
Trace Impurities – Bismuth (Bi)	<= 100.0 ppb	< 10.0
Trace Impurities - Boron (B)	<= 10.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 20.0 ppb	< 1.0
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	13.7
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

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Test	Specification	Result
Trace Impurities – Iron (Fe)	<= 50.0 ppb	3.4
Trace Impurities - Lead (Pb)	<= 20.0 ppb	< 10.0
Trace Impurities – Lithium (Li)	<= 50.0 ppb	< 1.0
Trace Impurities – Magnesium (Mg)	<= 20.0 ppb	3.0
Trace Impurities – Manganese (Mn)	<= 15.0 ppb	< 1.0
Trace Impurities - Molybdenum (Mo)	<= 100.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 10.0 ppb	< 5.0
Trace Impurities - Niobium (Nb)	<= 100.0 ppb	< 1.0
Trace Impurities - Potassium (K)	<= 100.0 ppb	< 10.0
Trace Impurities - Silicon (Si)	<= 50.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 20.0 ppb	< 1.0
Trace Impurities - Sodium (Na)	<= 100.0 ppb	13.1
Trace Impurities - Strontium (Sr)	<= 20.0 ppb	< 1.0
Trace Impurities – Tantalum (Ta)	<= 100.0 ppb	< 5.0
Trace Impurities - Thallium (Tl)	<= 10.0 ppb	< 5.0
Trace Impurities - Tin (Sn)	<= 100.0 ppb	< 10.0
Trace Impurities - Titanium (Ti)	<= 20.0 ppb	1.0
Trace Impurities - Vanadium (V)	<= 100.0 ppb	< 1.0
Trace Impurities - Zinc (Zn)	<= 50.0 ppb	1.0
Trace Impurities - Zirconium (Zr)	<= 100.0 ppb	< 1.0
Particle Count - 0.2 µm and greater	<= 5000 par/ml	226
Particle Count - 0.3 µm and greater	<= 5000 par/ml	30
Particle Count - 0.5 µm and greater	<= 50 par/ml	4
Particle Count – 1.0 µm and greater	<= 8 par/ml	<1

For Microelectronic Use

Country of Origin: US

Packaging Site: Paris Mfg Ctr & DC



Phillipsburg, NJ 9001:2008, 14001:2004
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008, 17025:2005
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008, 17025:2005
Panoli, India 9001:2008

MUM Siberski

Global Director of Quality Assurance