

## Certificate of Analysis

Test	Specification	Result
Assay (CH <sub>3</sub> OH) (by GC)	≥ 99.9 %	99.9 %
Color (APHA)	≤ 10	5
Acidity (µeq/g)	≤ 0.3	0.1
Alkalinity (µeq/g)	≤ 0.1	< 0.1
Residue after Evaporation	≤ 5 ppm	< 1 ppm
Water (H <sub>2</sub> O)(by Karl Fischer titrn)	≤ 0.05 %	0.01 %
Solubility in H <sub>2</sub> O	Passes Test	Passes Test
Arsenic and Antimony (as As)	≤ 10.0 ppb	< 0.1 ppb
Chloride (Cl)	≤ 0.2 ppm	< 0.1 ppm
Heavy Metals (as Pb)	≤ 100.0 ppb	< 1.0 ppb
Phosphate (PO <sub>4</sub> )	≤ 0.3 ppm	< 0.3 ppm
Trace Impurities – Aluminum (Al)	≤ 50.0 ppb	< 5.0 ppb
Trace Impurities – Barium (Ba)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	6.4 ppb
Trace Impurities – Chromium (Cr)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Cobalt (Co)	≤ 20 ppb	< 1 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 50 ppb	< 1 ppb
Trace Impurities – Germanium (Ge)	≤ 50.0 ppb	< 10.0 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 5 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	8.6 ppb
Trace Impurities – Lead (Pb)	≤ 50 ppb	< 10 ppb
Trace Impurities – Lithium (Li)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Nickel (Ni)	≤ 10.0 ppb	< 5.0 ppb

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Methanol  
VLSI



Material No.: 5370-05  
Batch No.: 22E0661028

Test	Specification	Result
Trace Impurities – Potassium (K)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 50.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Tin (Sn)	≤ 50 ppb	< 10 ppb
Trace Impurities – Titanium (Ti)	≤ 20 ppb	< 1 ppb
Trace Impurities – Zinc (Zn)	≤ 50 ppb	2 ppb
Particle Count – 0.5 µm and greater	≤ 50 par/ml	15 par/ml
Particle Count – 1.0 µm and greater	≤ 8 par/ml	7 par/ml

**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: USA

Packaging Site: Paris Mfg Ctr & DC

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Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700  
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