

Certificate of Analysis

Test	Specification	Result
Assay (CH ₃ OH) (by GC)	≥ 99.9 %	99.9 %
Color (APHA)	≤ 10	< 5
Acidity (µeq/g)	≤ 0.3	0.2
Alkalinity (µeq/g)	≤ 0.1	< 0.1
Heavy Metals (as Pb)	≤ 100.0 ppb	< 50.0 ppb
Residue after Evaporation	≤ 5 ppm	< 1 ppm
Water (H ₂ O)(by Karl Fischer titrn)	≤ 0.05 %	0.02 %
Solubility in H ₂ O	Passes Test	Passes Test
Chloride (Cl)	≤ 0.2 ppm	< 0.2 ppm
Phosphate (PO ₄)	≤ 0.3 ppm	< 0.3 ppm
Sulfate (SO ₄)	≤ 0.5 ppm	< 0.5 ppm
Trace Impurities – Aluminum (Al)	≤ 50.0 ppb	< 5.0 ppb
Trace Impurities – Arsenic (As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Antimony (Sb)	≤ 5.0 ppb	< 1.0 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	16.0 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	2.2 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	12.8 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

>>> Continued on page 2 >>>

Test	Specification	Result
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Molybdenum (Mo)	≤ 300.0 ppb	< 5.0 ppb
Trace Impurities – Nickel (Ni)	≤ 10.0 ppb	< 5.0 ppb
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 – Vanadium (V)	≤ 300.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 50 ppb	8 ppb
Trace Impurities – Zirconium (Zr)	≤ 300.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 100 par/ml	11 par/ml
Particle Count – 1.0 µm and greater	≤ 8 par/ml	5 par/ml

>>> Continued on page 3 >>>

Methanol
CMOS



Material No.: 9073-05
Batch No.: 22H1761047

Test	Specification	Result
------	---------------	--------

For Microelectronic Use

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

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700