

Ethylene Glycol  
CMOS



Material No.: 9346-05  
Batch No.: 2110961047  
Manufactured Date: 2021-08-20  
Retest Date: 2026-08-19  
Revision No.: 0

# Certificate of Analysis

Test	Specification	Result
Assay (HOCH <sub>2</sub> CH <sub>2</sub> OH) (by GC)	≥ 99.0 %	99.9 %
Color (APHA)	≤ 10	5
Acidity (µeq/g)	≤ 0.8	0.1
Acidity (as CH <sub>3</sub> COOH)(by wt)	≤ 0.01 %	< 0.01 %
Residue after Ignition	≤ 0.005 %	< 0.001 %
Water (H <sub>2</sub> O)(by Karl Fischer titrn)	≤ 0.2 %	< 0.1 %
Chloride (Cl)	≤ 1 ppm	< 1 ppm
Phosphate (PO <sub>4</sub> )	≤ 2 ppm	< 2 ppm
Sulfate (SO <sub>4</sub> )	≤ 2 ppm	< 2 ppm
Arsenic and Antimony (as As)	≤ 0.100 ppm	< 0.100 ppm
Trace Impurities - Iron (Fe)	≤ 0.2 ppm	< 0.1 ppm
Trace Impurities - Aluminum (Al)	≤ 100.0 ppb	< 5.0 ppb
Trace Impurities - Barium (Ba)	≤ 100.0 ppb	< 1.0 ppb
Trace Impurities - Boron (B)	≤ 50 ppb	< 5 ppb
Trace Impurities - Calcium (Ca)	≤ 300 ppb	15 ppb
Trace Impurities - Chromium (Cr)	≤ 50 ppb	1 ppb
Trace Impurities - Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Gold (Au)	≤ 50 ppb	< 5 ppb
Trace Impurities - Lead (Pb)	≤ 200.0 ppb	< 10.0 ppb
Trace Impurities - Lithium (Li)	≤ 100.0 ppb	< 1.0 ppb
Trace Impurities - Magnesium (Mg)	≤ 100.0 ppb	2.3 ppb
Trace Impurities - Manganese (Mn)	≤ 100.0 ppb	< 1.0 ppb
Trace Impurities - Nickel (Ni)	≤ 100.0 ppb	< 5.0 ppb
Trace Impurities - Potassium (K)	≤ 300.0 ppb	< 10.0 ppb
Trace Impurities - Sodium (Na)	≤ 300 ppb	8 ppb
Trace Impurities - Tin (Sn)	≤ 100 ppb	< 10 ppb
Trace Impurities - Titanium (Ti)	≤ 100.0 ppb	< 1.0 ppb
Trace Impurities - Zinc (Zn)	≤ 400.0 ppb	140.9 ppb

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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

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Test	Specification	Result
Particle Count - 0.5 $\mu\text{m}$ and greater	$\leq 200$ par/ml	8 par/ml
Particle Count - 1.0 $\mu\text{m}$ and greater	$\leq 10$ par/ml	4 par/ml

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

  
Jamie Ethier  
Vice President Global Quality

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