Methanol CMOS





Material No.: 9073-05 Batch No.: 0000192471 Manufactured Date: 2018/01/18 Retest Date: 2023/01/17 Revision No: 1

Certificate of Analysis

Test	Specification	Result
Assay (CH₃OH) (by GC)	>= 99.9 %	100.0
Color (APHA)	<= 10	5
Acidity (µeq/g)	<= 0.3	0.1
Alkalinity (µeq/g)	<= 0.1	< 0.1
Heavy Metals (as Pb)	<= 100 ppb	< 50
Residue after Evaporation	<= 5 ppm	2
Vater (H2O)(by Karl Fischer titrn)	<= 0.05 %	0.01
olubility in H2O	Passes Test	PT
Chloride (Cl)	<= 0.2 ppm	< 0.1
Phosphate (PO4)	<= 0.3 ppm	< 0.3
Sulfate (SO4)	<= 0.5 ppm	< 0.5
Frace Impurities – Aluminum (Al)	<= 50.0 ppb	< 5.0
Frace Impurities – Arsenic (As)	<= 5.0 ppb	< 2.0
Frace Impurities – Antimony (Sb)	<= 5.0 ppb	< 1.0
Frace Impurities – Barium (Ba)	<= 20.0 ppb	< 1.0
Frace Impurities – Boron (B)	<= 10.0 ppb	< 5.0
Frace Impurities – Cadmium (Cd)	<= 20.0 ppb	< 1.0
Frace Impurities – Calcium (Ca)	<= 50.0 ppb	6.0
Frace Impurities – Chromium (Cr)	<= 20.0 ppb	< 1.0
Frace Impurities – Cobalt (Co)	<= 20.0 ppb	< 1.0
Frace Impurities – Copper (Cu)	<= 10.0 ppb	< 1.0
Frace Impurities – Gallium (Ga)	<= 50.0 ppb	< 1.0
Frace Impurities – Germanium (Ge)	<= 50.0 ppb	< 10.0
Frace Impurities – Gold (Au)	<= 20.0 ppb	< 5.0

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

3477 Corporate Parkway. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Test	Specification	Result
Frace Impurities – Iron (Fe)	<= 50.0 ppb	< 1.0
Frace Impurities – Lead (Pb)	<= 50.0 ppb	< 10.0
Frace Impurities – Lithium (Li)	<= 50.0 ppb	< 1.0
Frace Impurities – Magnesium (Mg)	<= 50.0 ppb	< 1.0
Frace Impurities – Manganese (Mn)	<= 10.0 ppb	< 1.0
Frace Impurities – Molybdenum (Mo)	<= 300.0 ppb	< 5.0
Frace Impurities – Nickel (Ni)	<= 10.0 ppb	< 5.0
Frace Impurities – Potassium (K)	<= 50.0 ppb	< 10.0
Frace Impurities – Silicon (Si)	<= 50.0 ppb	< 10.0
Frace Impurities – Silver (Ag)	<= 20.0 ppb	< 1.0
Frace Impurities – Sodium (Na)	<= 50.0 ppb	8.0
Frace Impurities – Strontium (Sr)	<= 10.0 ppb	< 1.0
Frace Impurities – Tin (Sn)	<= 50.0 ppb	< 10.0
Frace Impurities – Titanium (Ti)	<= 20.0 ppb	< 1.0
Frace Impurities – Vanadium (V)	<= 300.0 ppb	< 1.0
Frace Impurities – Zinc (Zn)	<= 50.0 ppb	30.0
Frace Impurities – Zirconium (Zr)	<= 300.0 ppb	< 1.0
Particle Count - 0.5 µm and greater	<= 100 par/ml	3
Particle Count - 1.0 µm and greater	<= 8 par/ml	2

For Microelectronic Use

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



James Techie

Jamie Ethier Vice President Global Quality

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