

Methanol
VLSI



Material No.: 5370-05
Batch No.: 0000167648
Manufactured Date: 2017/03/03
Retest Date: 2022/03/02

Certificate of Analysis

| Test | Specification | Result |
|---|---------------|--------|
| Assay (CH ₃ OH) (by GC) | >= 99.9 % | 100.0 |
| Color (APHA) | <= 10 | 5 |
| Acidity (µeq/g) | <= 0.3 | 0.2 |
| Alkalinity (µeq/g) | <= 0.1 | 0.1 |
| Residue after Evaporation | <= 5 ppm | < 1 |
| Water (H ₂ O)(by Karl Fischer titrn) | <= 0.05 % | 0.01 |
| Solubility in H ₂ O | Passes Test | PT |
| Arsenic and Antimony (as As) | <= 10 ppb | < 10 |
| Chloride (Cl) | <= 0.2 ppm | < 0.1 |
| Heavy Metals (as Pb) | <= 100 ppb | < 100 |
| Phosphate (PO ₄) | <= 0.3 ppm | < 0.3 |
| Trace Impurities – Aluminum (Al) | <= 50.0 ppb | < 5.0 |
| Trace Impurities – Barium (Ba) | <= 20.0 ppb | < 1.0 |
| 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 | 4.8 |
| 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 |
| Trace Impurities – Iron (Fe) | <= 50.0 ppb | 26.0 |
| Trace Impurities – Lead (Pb) | <= 50.0 ppb | < 10.0 |

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 |
|--|---------------|--------|
| Trace Impurities – Lithium (Li) | <= 50.0 ppb | < 1.0 |
| Trace Impurities – Magnesium (Mg) | <= 50.0 ppb | 1.0 |
| Trace Impurities – Manganese (Mn) | <= 10.0 ppb | < 1.0 |
| Trace Impurities – Nickel (Ni) | <= 10.0 ppb | < 5.0 |
| Trace Impurities – Potassium (K) | <= 50.0 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) | <= 50.0 ppb | 8.5 |
| Trace Impurities – Strontium (Sr) | <= 10.0 ppb | < 1.0 |
| Trace Impurities – Tin (Sn) | <= 50.0 ppb | < 10.0 |
| Trace Impurities – Titanium (Ti) | <= 20.0 ppb | < 1.0 |
| Trace Impurities – Zinc (Zn) | <= 50.0 ppb | 1.0 |
| Particle Count – 0.5 μ m and greater | <= 50 par/ml | 2 |
| Particle Count – 1.0 μ m and greater | <= 8 par/ml | 1 |

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: US
Packaging Site: Paris Mfg Ctr & DC



Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
 Paris, KY 9001:2008
 Mexico City, Mexico 9001:2008
 Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
 Gliwice, Poland 9001:2008, 13485:2012
 Selangor, Malaysia 9001:2008
 Dehradun, India, 9001:2008, 14001:2004, 13485:2003
 Mumbai, India, 9001:2008
 Panoli, India 9001:2008



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 Vice President Global Quality

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