

Methanol
CMOS



Material No.: 9073-05
Batch No.: 0000012936
Manufactured Date: 2012/08/13
Retest Date: 2017/08/12

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 | 0.3 |
| Alkalinity (µeq/g) | <= 0.1 | < 0.1 |
| Heavy Metals (as Pb) | <= 100 ppb | < 50 |
| 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 |
| Chloride (Cl) | <= 0.2 ppm | 0.1 |
| Phosphate (PO ₄) | <= 0.3 ppm | < 0.3 |
| Sulfate (SO ₄) | <= 0.5 ppm | < 0.1 |
| Trace Impurities – Aluminum (Al) | <= 50.0 ppb | < 5.0 |
| Trace Impurities – Arsenic (As) | <= 5.0 ppb | < 2.0 |
| Trace Impurities – Antimony (Sb) | <= 5.0 ppb | < 1.0 |
| 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 | 2.3 |
| 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 |

| Test | Specification | Result |
|-------------------------------------|---------------|--------|
| Trace Impurities – Iron (Fe) | <= 50.0 ppb | 2.9 |
| Trace Impurities – Lead (Pb) | <= 50.0 ppb | < 10.0 |
| 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 – Molybdenum (Mo) | <= 300.0 ppb | < 5.0 |
| 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 | < 5.0 |
| 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 – Vanadium (V) | <= 300.0 ppb | < 1.0 |
| Trace Impurities – Zinc (Zn) | <= 50.0 ppb | 1.0 |
| Trace Impurities – Zirconium (Zr) | <= 300.0 ppb | < 1.0 |
| Particle Count – 0.5 µm and greater | <= 100 par/ml | 1 |
| Particle Count – 1.0 µm and greater | <= 8 par/ml | < 1 |

For Microelectronic Use

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

ISO

Phillipsburg, NJ 9001.2008, 14001.2004
Paris, KY 9001.2008
Mexico city, Mexico 9001.2008
Deventer, The Netherlands 9001.2008, 14001.2004
Selangor, Malaysia 9001.2008
Panoli, India 9001.2008
Gliwice, Poland 9001.2008, 17025.2005

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