



Material No.: 9346-05  
Batch No.: 0000200571  
Manufactured Date: 2018/05/08  
Retest Date: 2023/05/07  
Revision No: 1

## 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        | 0.2     |
| 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     |
| Phosphate (PO <sub>4</sub> )                         | <= 2 ppm      | < 2     |
| Sulfate (SO <sub>4</sub> )                           | <= 2 ppm      | < 2     |
| Arsenic and Antimony (as As)                         | <= 0.100 ppm  | < 0.100 |
| Trace Impurities – Iron (Fe)                         | <= 0.2 ppm    | 0.1     |
| Trace Impurities – Aluminum (Al)                     | <= 100.0 ppb  | < 5.0   |
| Trace Impurities – Barium (Ba)                       | <= 100.0 ppb  | < 1.0   |
| Trace Impurities – Boron (B)                         | <= 50.0 ppb   | 5.0     |
| Trace Impurities – Calcium (Ca)                      | <= 300.0 ppb  | 30.0    |
| Trace Impurities – Chromium (Cr)                     | <= 50.0 ppb   | 1.0     |
| Trace Impurities – Copper (Cu)                       | <= 10.0 ppb   | 1.0     |
| Trace Impurities – Gold (Au)                         | <= 50.0 ppb   | 5.0     |
| Trace Impurities – Lead (Pb)                         | <= 200.0 ppb  | 10.0    |
| Trace Impurities – Lithium (Li)                      | <= 100.0 ppb  | 1.0     |
| Trace Impurities – Magnesium (Mg)                    | <= 100.0 ppb  | 1.9     |
| Trace Impurities – Manganese (Mn)                    | <= 100.0 ppb  | 1.0     |
| Trace Impurities – Nickel (Ni)                       | <= 100.0 ppb  | 5.0     |
| Trace Impurities – Potassium (K)                     | <= 300.0 ppb  | 10.7    |

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 - Sodium (Na)      | <= 300.0 ppb  | 13.0   |
| Trace Impurities - Tin (Sn)         | <= 100.0 ppb  | < 10.0 |
| Trace Impurities - Titanium (Ti)    | <= 100.0 ppb  | < 1.0  |
| Trace Impurities - Zinc (Zn)        | <= 400.0 ppb  | 36.7   |
| Particle Count - 0.5 µm and greater | <= 200 par/ml | 1      |
| Particle Count - 1.0 µm and greater | <= 10 par/ml  | < 1    |

For Microelectronic Use

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



Jamie Ethier  
Vice President Global Quality

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