

2-Propanol

VLSI

(iso-propyl alcohol)



Material No.: 5373-05  
Batch No.: 0000088908  
Manufactured Date: 2014/07/28  
Retest Date: 2019/07/27

## Certificate of Analysis

| Test  | Specification | Result |
|---|---------------|--------|
| Assay (CH <sub>3</sub> CHOHCH <sub>3</sub> )    | >= 99.5 %     | 100.0  |
| Color (APHA)                                    | <= 10         | 5      |
| Residue after Evaporation                       | <= 4 ppm      | 1      |
| Solubility in H <sub>2</sub> O                  | Passes Test   | PT     |
| Water (H <sub>2</sub> O)(by Karl Fischer titrn) | <= 0.05 %     | 0.02   |
| Acidity (µeq/g)                                 | <= 0.2        | 0.1    |
| Alkalinity (µeq/g)                              | <= 0.1        | < 0.1  |
| Chloride (Cl)                                   | <= 0.1 ppm    | < 0.1  |
| Phosphate (PO <sub>4</sub> )                    | <= 0.3 ppm    | < 0.3  |
| Trace Impurities – Aluminum (Al)                | <= 50.0 ppb   | < 5.0  |
| Arsenic and Antimony (as As)                    | <= 10 ppb     | < 10   |
| 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   | 3.9    |
| 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  |
| Heavy Metals (as Pb)                            | <= 200 ppb    | < 100  |
| Trace Impurities – Iron (Fe)                    | <= 50.0 ppb   | < 1.0  |
| Trace Impurities – Lead (Pb)                    | <= 20.0 ppb   | < 10.0 |

| Test                                | Specification | Result |
|-------------------------------------|---------------|--------|
| Trace Impurities – Lithium (Li)     | <= 50.0 ppb   | < 1.0  |
| Trace Impurities – Magnesium (Mg)   | <= 20.0 ppb   | < 1.0  |
| Trace Impurities – Manganese (Mn)   | <= 20.0 ppb   | < 1.0  |
| Trace Impurities – Nickel (Ni)      | <= 10.0 ppb   | < 5.0  |
| Trace Impurities – Potassium (K)    | <= 100.0 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)      | <= 100.0 ppb  | < 5.0  |
| Trace Impurities – Strontium (Sr)   | <= 20.0 ppb   | < 1.0  |
| Trace Impurities – Tin (Sn)         | <= 100.0 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 µm and greater | <= 100 par/ml | 24     |
| Particle Count – 1.0 µm and greater | <= 8 par/ml   | 6      |

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  
Paris, KY 9001:2008  
Mexico City, Mexico 9001:2008  
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003  
Gliwice, Poland 9001:2008, 17025:2005  
Selangor, Malaysia 9001:2008  
Dehradun, India, 9001:2008, 14001:2004, 13485:2003  
Mumbai, India, 9001:2008, 17025:2005  
Panoli, India 9001:2008



Richard M Siberski  
Vice President Global Quality