

2-Propanol  
CMOS

(iso-propyl alcohol)



Material No.: 9079-05  
Batch No.: 0000053711  
Manufactured Date: 2013/07/30  
Retest Date: 2018/07/29

## Certificate of Analysis

| Test  | Specification | Result |
|---|---------------|--------|
| Assay (CH <sub>3</sub> CHOHCH <sub>3</sub> )    | >= 99.5 %     | 99.9   |
| 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 %     | 0.05   |
| 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 – Beryllium (Be)               | <= 100.0 ppb  | < 1.0  |
| Trace Impurities – Bismuth (Bi)                 | <= 100.0 ppb  | < 10.0 |
| 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   | 8.0    |
| 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  |

| Test                                | Specification  | Result |
|-------------------------------------|----------------|--------|
| Trace Impurities – Iron (Fe)        | <= 50.0 ppb    | 1.5    |
| Trace Impurities – Lead (Pb)        | <= 20.0 ppb    | < 10.0 |
| Trace Impurities – Lithium (Li)     | <= 50.0 ppb    | < 1.0  |
| Trace Impurities – Magnesium (Mg)   | <= 20.0 ppb    | < 1.0  |
| Trace Impurities – Manganese (Mn)   | <= 15.0 ppb    | < 10.0 |
| Trace Impurities – Molybdenum (Mo)  | <= 100.0 ppb   | < 5.0  |
| Trace Impurities – Nickel (Ni)      | <= 10.0 ppb    | < 5.0  |
| Trace Impurities – Niobium (Nb)     | <= 100.0 ppb   | < 1.0  |
| 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    | < 5.0  |
| Trace Impurities – Tantalum (Ta)    | <= 100.0 ppb   | < 10.0 |
| Trace Impurities – Thallium (Tl)    | <= 10.0 ppb    | < 1.0  |
| Trace Impurities – Tin (Sn)         | <= 100.0 ppb   | < 1.0  |
| Trace Impurities – Titanium (Ti)    | <= 20.0 ppb    | 1.0    |
| Trace Impurities – Vanadium (V)     | <= 100.0 ppb   | < 1.0  |
| Trace Impurities – Zinc (Zn)        | <= 50.0 ppb    | 1.0    |
| Trace Impurities – Zirconium (Zr)   | <= 100.0 ppb   | < 1.0  |
| Particle Count – 0.2 µm and greater | <= 5000 par/ml | 28     |
| Particle Count – 0.3 µm and greater | <= 5000 par/ml | 7      |
| Particle Count – 0.5 µm and greater | <= 50 par/ml   | 3      |
| Particle Count – 1.0 µm and greater | <= 8 par/ml    | 1      |

For Microelectronic Use

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

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