



Material No.: 9005-68 Batch No.: 0000013274

Manufactured Date: 2012/08/14

Retest Date: 2017/08/13

Certificate of Analysis

Test	Specification	Result
Assay ((CH3)2CO) (by GC, corrected for water)	>= 99.5 %	99.8
Color (APHA)	<= 10	5
Residue after Evaporation	<= 5 ppm	2
Titrable Acid (µeq/g)	<= 0.3	0.2
Titrable Base (µeq/g)	<= 0.5	< 0.1
Water (H₂O)	<= 0.5 %	0.1
Solubility in H ₂ O	Passes Test	PT
Chloride (Cl)	<= 0.2 ppm	0.1
Phosphate (PO ₄)	<= 0.05 ppm	< 0.05
Trace Impurities – Aluminum (Al)	<= 50.0 ppb	< 5.0
Arsenic and Antimony (as As)	<= 5 ppb	< 5
Trace Impurities – Barium (Ba)	<= 20.0 ppb	< 1.0
Trace Impurities – Beryllium (Be)	<= 10.0 ppb	< 1.0
Trace Impurities – Bismuth (Bi)	<= 20.0 ppb	< 10.0
Trace Impurities – Boron (B)	<= 10.0 ppb	< 5.0
Trace Impurities – Cadmium (Cd)	<= 10.0 ppb	< 1.0
Trace Impurities – Calcium (Ca)	<= 25.0 ppb	3.4
Trace Impurities – Chromium (Cr)	<= 10.0 ppb	< 1.0
Trace Impurities – Cobalt (Co)	<= 10.0 ppb	< 1.0
Trace Impurities – Copper (Cu)	<= 10.0 ppb	< 1.0
Trace Impurities – Gallium (Ga)	<= 10.0 ppb	< 1.0
Trace Impurities – Germanium (Ge)	<= 10.0 ppb	< 10.0
Trace Impurities – Gold (Au)	<= 20.0 ppb	< 5.0
Trace Impurities – Iron (Fe)	<= 20.0 ppb	< 1.0

Material No.: 9005-68 Batch No.: 0000013274

Test	Specification	Result
Trace Impurities – Lead (Pb)	<= 10.0 ppb	< 10.0
Trace Impurities - Lithium (Li)	<= 10.0 ppb	< 1.0
Trace Impurities - Magnesium (Mg)	<= 20.0 ppb	< 1.0
Trace Impurities - Manganese (Mn)	<= 10.0 ppb	< 1.0
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 10.0 ppb	< 5.0
Trace Impurities - Niobium (Nb)	<= 50.0 ppb	< 1.0
Trace Impurities – Potassium (K)	<= 10.0 ppb	< 10.0
Trace Impurities - Silicon (Si)	<= 50.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 10.0 ppb	< 1.0
Trace Impurities - Sodium (Na)	<= 10.0 ppb	< 5.0
Trace Impurities - Strontium (Sr)	<= 10.0 ppb	< 1.0
Trace Impurities - Tantalum (Ta)	<= 50.0 ppb	< 5.0
Trace Impurities - Thallium (TI)	<= 10.0 ppb	< 5.0
Trace Impurities - Tin (Sn)	<= 20.0 ppb	< 10.0
Trace Impurities - Titanium (Ti)	<= 10.0 ppb	< 1.0
Trace Impurities - Vanadium (V)	<= 10.0 ppb	< 1.0
Trace Impurities - Zinc (Zn)	<= 20.0 ppb	< 1.0
Trace Impurities - Zirconium (Zr)	<= 10.0 ppb	< 1.0
Particle Count - 0.5 µm and greater (Rion KS42AF)	<= 100 par/ml	16
Particle Count – 1.0 µm and greater (Rion KS42AF)	<= 8 par/ml	4

For Microelectronic Use

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 Selangor, Malaysia 9001.2008 Panoli, India 9001.2008 Gliwice, Poland 9001.2008,17025.2005

Richard M Siberski

Global Director of Quality Assurance