NMP (1-Methyl-2-pyrrolidinone) ALEG[®]

Positive Photoresist Stripper





Material No.: 6397-05 Batch No.: 0000070181 Manufactured Date: 2014/01/29 Retest Date: 2019/01/28

Certificate of Analysis

Test	Specification	Result
Assay (C₅H∮NO)	>= 99.5 %	100.0
Color (APHA)	<= 20	<5
Water (H2O)(by Karl Fischer titrn)	<= 0.05 %	0.01
Free Amines (as CH3NH2)	<= 50 ppm	< 1
Chloride (Cl)	<= 0.5 ppm	< 0.5
Phosphate (PO4)	<= 1 ppm	< 1
Trace Impurities – Aluminum (Al)	<= 100.0 ppb	< 0.5
Arsenic and Antimony (as As)	<= 100 ppb	< 10
Trace Impurities – Barium (Ba)	<= 100.0 ppb	< 0.5
Trace Impurities – Boron (B)	<= 100.0 ppb	< 2.0
Trace Impurities – Calcium (Ca)	<= 300.0 ppb	1.0
Trace Impurities – Chromium (Cr)	<= 100.0 ppb	< 1.0
Trace Impurities – Cobalt (Co)	<= 100.0 ppb	< 1.0
Trace Impurities – Copper (Cu)	<= 100.0 ppb	< 0.5
Trace Impurities – Gold (Au)	<= 100.0 ppb	< 0.5
Trace Impurities – Iron (Fe)	<= 100.0 ppb	< 1.0
Trace Impurities – Lead (Pb)	<= 100.0 ppb	< 3.0
Trace Impurities – Lithium (Li)	<= 100.0 ppb	< 0.5
Trace Impurities – Magnesium (Mg)	<= 100.0 ppb	< 0.5
Trace Impurities – Manganese (Mn)	<= 100.0 ppb	< 1.0
Trace Impurities – Nickel (Ni)	<= 100.0 ppb	< 1.0
Trace Impurities – Potassium (K)	<= 100.0 ppb	< 4.0
Trace Impurities – Silver (Ag)	<= 100.0 ppb	< 1.0
Trace Impurities – Sodium (Na)	<= 300.0 ppb	2.0

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600 Avantor ™ Performance Materials Inc.

3477 Corporate Parkway. Suite #200. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

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Test	Specification	Result
Trace Impurities – Strontium (Sr)	<= 100.0 ppb	< 0.5
Trace Impurities – Tin (Sn)	<= 100.0 ppb	< 2.0
Trace Impurities – Titanium (Ti)	<= 100.0 ppb	< 1.0
race Impurities – Vanadium (V)	<= 100.0 ppb	< 0.5
Frace Impurities – Zinc (Zn)	<= 100.0 ppb	< 1.0
Particle Count – 1.0 µm and greater (Rion KS42AF)	<= 10 par/ml	< 1

For Microelectronic Use

Country of Origin: US Packaging Site: Phillipsburg 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

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Richard M Siberski Vice President Global Quality

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