

CERTIFICATE OF ANALYSIS

Product : N – Methyl pyrrolidone
Batch no. : 0320001 + 0320002
Manufacturing date : Mar, 2017

Items	Standards	Batch no.:0320001	0320002
Purity (wt %, GC)	99.90 % min	99.92 %	99.91 %
Water (wt%, K.F.)	0.02 % max	0.007 %	0.007 %
Color (Hazen)	20 max	5	5
Density	1.029 – 1.033	1.032	1.032
Refractivity	1.467 – 1.471	1.4692	1.4692
Ph	7.0 – 9.0	7.67	7.67
C-Mo. NMP (wt%, GC)	0.05 % max	0.03 %	0.03 %
Free amine wt %	0.003 % max	0.0014 %	0.0014%