

原 = 88 (韩国)
 2015-6-19
ORIGINAL

SKC CO.,LTD.
 KYOBO-TOWER, 1303-22, SEOCHO-4 DONG,
 SEOCHO-GU, SEOUL 137-070, KOREA

3

CERTIFICATE OF ANALYSIS

ISSUED MANUFACTURER

' TO WHOM IT MAY CONCERN '

JUN. 14, 2015

- L/C NO. : 1701LC15010017
- DESCRIPTION : COMMODITY:PROPYLENE GLYCOL,U.S.P.
 QUANTITY 344MTS
 MANUFACTURER:SKC CO.,LTD
- QUANTITY : 344MTS

WE, SKC CO.,LTD., AS THE MANUFACTURER HEREBY CERTIFY THAT

ANALYSIS OF QUALITY IS AS FOLLOWS,

LOT NO. : Y02481U/Y00541U/Y00571U/Y00591U
 MANUFACTURING DATE : APR.28,2015/MAY.04,2015/MAY.07,2015/MAY.09,2015
 EXPIRY DATE : APR.28,2017/MAY.04,2017/MAY.07,2017/MAY.09,2017

| Items | Specifications | Test Method | Results | | | |
|-------------------------------|----------------|-------------|---------------|---------------|---------------|---------------|
| | | | Y02481U | Y00541U | Y00571U | Y00591U |
| Identification, - | Pass | USP XXX | Pass | Pass | Pass | Pass |
| MPG Assay, wt. % | Min. 99.8 | USP XXX | 99.95 | 99.96 | 99.95 | 99.95 |
| Sp. Gr (25/25 °C) | 1.035 - 1.037 | USP XXX | 1.036 | 1.036 | 1.036 | 1.036 |
| Color, APHA | Max. 10 | ASTM D 1209 | 2.0 | 2.0 | 2.0 | 2.0 |
| Water, ppm | Max. 700 | USP XXX | 100 | 70 | 60 | 90 |
| Acidity, ml | Max. 0.05 | USP XXX | 0.02 | 0.02 | 0.02 | 0.02 |
| Iron, ppm | Max. 0.1 | ASTM E 394 | 0.02 | 0.02 | 0.02 | 0.02 |
| Chlorides, wt.ppm, | Max. 1 | USP XXX | 0.1 | 0.1 | 0.1 | 0.1 |
| Sulfate, wt.ppm | Max. 10 | USP XXX | 0.0 | 0.0 | 0.0 | 0.0 |
| Heavy metals, ppm | Max. 1 | USP XXX | LT1.0 | LT1.0 | LT1.0 | LT1.0 |
| Arsenic, wt.ppm | Max. 1 | AAS | LT0.1 | LT0.1 | LT0.1 | LT0.1 |
| Residue, ppm | Max. 20 | USP XXX | 5.0 | 5.0 | 5.0 | 5.0 |
| Residual Solvent, - | Pass | USP XXX | Pass | Pass | Pass | Pass |
| EG, wt.ppm | Max. 50 | USP XXX | 0 | 0 | 0 | 0 |
| DEG, wt.ppm | Max. 50 | USP XXX | 0 | 0 | 0 | 0 |
| Distillation Range (1atm), °C | 186 - 189 | ASTM E 202 | 186.2 - 187.4 | 186.2 - 187.4 | 186.2 - 187.4 | 186.2 - 187.4 |

J. S. Hong

SKC CO.,LTD.