



CERTIFICATE OF ANALYSIS

QUANTITY/COMMODITY : 80 MT (320 DRUMS)
GLYCERINE - USP/KOSHER 99.7% MIN

PACKING : IN 250KG NEW LINED STEEL DRUMS PALLETIZED

CONTAINER / BATCH NO : TRHU 2059223 (G131221-5); MSCU 6448220 (G131222-1); MSCU 3436165 (G131224-2);
MEDU 1051730 (G131224-3).

PRODUCTION DATE : DECEMBER 21,22,24, 2013

EXPIRY DATE : DECEMBER 21,22,24, 2014

VESSEL : KARIN V.HB352R/MSC RANIA V.FG352A

BUYER PO NUMBER PD111913

A COMPOSITE SAMPLE WAS DRAWN FROM THE ABOVE-MENTIONED CONSIGNMENT FOR ANALYSIS. ON ANALYSIS THE FOLLOWING RESULTS WERE OBTAINED :

| <u>Parameter</u> | <u>Unit</u> | <u>Result</u> | <u>Specification</u> | <u>Test Method</u> |
|---|-------------|---------------|----------------------|----------------------|
| Appearance | | Transparent | Transparent | Visual |
| Identification A (IR) | | Conform | Conform | USP 36 : 2013 (197F) |
| Identification B | | | | |
| - Diethylene Glycol | % | <0.10 | 0.10 max | USP 36: 2013 |
| - Ethylene Glycol | % | <0.10 | 0.10 max | USP 36 : 2013 |
| Glycerine Content | % | 99.8 | 99.7 min | USP 36 : 2013 |
| Inorganic Impurities : | | | | |
| - Chloride | ppm | <10 | 10 max | USP 36: 2013 (221) |
| - Sulfate | ppm | <20 | 20 max | USP 36: 2013 (221) |
| - Heavy Metal as Pb | ppm | < 5 | 5 max | USP 36: 2013 (231) |
| - Residue on Ignition | % | 0.007 | 0.01 max | USP 36: 2013 (281) |
| Organic Impurities : | | | | |
| - Related Compounds | | | | |
| - Individual Impurities | % | NIL | 0.10 max | USP 36: 2013 |
| - Total Impurities | % | NIL | 1.0 max | USP 36: 2013 |
| - Chlorinated Compounds | ppm | <30 | 30 max | USP 36: 2013 |
| Fatty Acids & Esters (as mL of 0.5N NaOH/50 g) | | 0.23 | 1 max | USP 36: 2013 |
| Color | mL FeCl3 | < 0.4 | 0.4 max | USP 36: 2013 |
| Specific Gravity @ 25 | | 1.2614 | 1.2607 min | USP 36: 2013 (841) |
| Moisture Content | % | 0.10 | 0.3 max | USP 36: 2013 (921) |