



CERTIFICATE OF ANALYSIS

QUANTITY/COMMODITY : 20 MT (80 DRUMS)
GLYCERINE - USP/KOSHER 99.7% MIN

PACKING : IN 250KG NEW LINED STEEL DRUMS PALLETIZED

CONTAINER / BATCH NO : EMCU3835187 (G130816-2)

PRODUCTION DATE : AUGUST 16, 2013

EXPIRY DATE : AUGUST 16, 2014

VESSEL : CAPE NEGRO V.N050 / EVER SALUTE V.0684-036E

BUYER PO NUMBER : PD061413

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)		Meets Requirement	Meets Requirement	USP 36 : 2013 (197F)
Identification B				
- Diethylene Glycol	%	<0.10	0.10 max	USP 36: 2013
- Ethylene Glycol	%	<0.10	0.10 max	
Identification C		Meets Requirement	Meets Requirement	USP 36: 2013
(Confirmation of Glycerin by GC)				
Organic Volatile Impurities		Meets Requirement	Meets Requirement	
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	%	0.008	0.01 max	USP 36: 2013 (281)
Organic Impurities :				
- Individual Impurities	%	NIL	0.10 max	USP 36: 2013
- Total Impurities	%	NIL	1.0 max	USP 36: 2013
- Impurities A		<0.1	0.1 max	USP 35
- Chlorinated Compounds	ppm	<30	30 max	USP 36: 2013
Fatty Acids & Esters		0.20	1 max	USP 36: 2013
(as mL of 0.5N NaOH/50 g)				
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)
Color	APHA	5	10 max	AOCS Ea 9-65