

CHEMICAL SUPPLIERS - SOUTH AFRICA (CS-SA)

B-BBEE LEVEL 1 CONTRIBUTOR: 135% PROCUREMENT RECOGNITION

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CERTIFICATE OF ANALYSIS**As confirmed by Supplier Agreement****Descriptions of Goods : GLYCERINE USP****Batch No : 02124U****Manufacture Date : 13/12/2023****Expiry Date : 12/12/2025**

TEST PARAMETER	UNIT	ANALYSIS METHOD	SPECIFICATION	RESULT (S)
Assay (% Glycerine on anhydrous basis)	%	USP	≥ 99.50	99.88
Specific Gravity @ 25° C	-	DENSITOMETER	≥ 1.2608	1.2617
Moisture	%	KARL FISCHER	≤ 0.500	0.044
Colour Apha (Hazen Scale)	-	ISO 2211(1973)	≤ 10.0	<2.5
Colour (Ferric Chloride)	mL	USP	≤ 0.40	<0.40
Diethylene Glycol (Deg) Impurities	%	USP	≤ 0.10	<0.10
Identification By GC	-	USP	PASS AS GLYCERINE	Pass as Glycerine
Individual Impurities	%	USP	≤ 0.10	<0.10
Sum Of All Impurities	%	USP	≤ 1.00	<1.00
Fatty Acid And Ester (ml of 0.5N NaOH)	mL	USP	≤ 1.00	0.36
Heavy Metals, Pb	ppm	USP	≤ 5	<5
• Arsenic (as As)	ppm	IN-HOUSE METHOD	≤ 1.5	<1.5
Limit Of Chlorinated Compounds	ppm	USP	≤ 30	<30
Sulfate	ppm	USP	≤ 20	<20
Chlorides	ppm	USP	≤ 10	<10
Residue On Ignition	%	USP	≤ 0.01	<0.01
Organic Volatile Material	-	USP	PASS	Pass
• Identification A - Infrared absorption	-	USP	PASS	Pass
• Identification B - Limit of Ethylene Glycol	%	USP	≤ 0.10	<0.10

REMARKS:

- ND Not Detected
* The test parameter is under scope of SAMM accreditation.
• The test parameter is performed by third party accredited laboratory.
A Less than
≤ Less than or equal
≥ Greater than or equal

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