

# CERTIFICATE OF ANALYSIS ISSUED BY MANUFACTURER

**No. & Date of L/C**  
0624523FL0000249 Mar. 28, 2023

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**Product Name : PROPYLENE GLYCOL USP GRADE**

**Lot No : G02391UG**

**Manufacturing Date : 2023-03-29**

**Expiry Date : 2025-03-28**

Property	Specification	Test Result	Test Method
Identification , -	Pass	Pass	Current USP
Appearance , -	Clear	Clear,Colorless	Visible
MPG , wt.%	Min. 99.8	99.99	Current USP/ASTM E 202
EG , wt.%	Max. 0.005	0	Current USP
DEG , wt.%	Max. 0.005	0	Current USP
Residue on Ignition , ppm	Max. 20	5.0	Current USP
Chloride , ppm	Max. 1	LT 0.1	Current USP
Sulfate , ppm	Max. 10	0.0	Current USP
Elemental Impurity , ppm	Max. 1	LT1.0	Current USP
Sp.Gr , 20/20 c	1.037 - 1.039	1.038	Current USP/ASTM D 4052
Sp.Gr(USP) , 25/25 c	1.035 - 1.037	1.036	Current USP/ASTM D 4052
Acidity , ml	Max. 0.05	0.02	Current USP/ASTM D 1613
Water , wt.%	Max. 0.07	0.0060	Current USP/ASTM E 203
Fe , ppm	Max. 0.1	0.02	ASTM E 394
Color , APHA	Max. 10	2.0	ASTM D 1209
IBP , DegC	Min. 186	186.2	ASTM D 1078
DP , DegC	Max. 189	187.4	ASTM D 1078

I certify the above statements are true and correct.