



山东石大胜华化工集团股份有限公司

Shandong Shida Shenghua Chemical Group Co., Ltd.

Certificate of Analysis

Product Name: Propylene Glycol 99.9%

Grade: ULTA PURE/ USP

Batch Number: 1P11-202111248

Quantity: 23000 KGS

Manufacturing Date: NOV., 2021

Expiry Date: NOV., 2022

Item	Unit	Specification	Result
MPG content	Wt %	99.80 min	99.93
Water	ppm	1000 max	255
Color	APHA	10	5
Acidity	ml	0.01 max	0.0028
IBP	DegC	186 min	186.8
DP	DegC	189 max	188.6
Iron	ppm	0.5 max	< 0.5
Sulfate	ppm	10 max	< 10
Chloride	ppm	0.5 max	< 0.5
Heavy Metals(Pb)	ppm	5 max	< 2
Residue on Ignition	ppm	20 max	< 20
Specific Gravity	20/20degC	1.035-1.039	1.037
Refractive Index	nD20	1.431-1.435	1.432
Appearance		Colorless, Viscous, transparent liquid	Colorless, Viscous, transparent liquid

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Conclusion: The product of this batch can match the specification by analysis.

Authorized Signature