



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 Ultra-Pure Grade

Batch Number: BN-1A1901904

Quantity: 69000KGS

Manufacturing Date: Jan. 2019

Expiry Date: Jan. 2019

Item	Unit	Specification	Result
MPG content	Wt %	99.80 min	99.92
Water	ppm	1000 max	297
Color	APHA	10	5
Acidity	ml	0.01 max	0.0030
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	< 5
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

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

PRESIDENT