



ARROWCHEM

## QINGDAO DERUN CHEMICAL CO., LTD

5D INTERROYAL MANSION, NO.15 DONGHAI WEST ROAD  
QINGDAO CHINA.

TEL: 008615315003207 FAX: 0086-532 89072272

### Certificate of Analysis

Invoice no.: 25139  
Date of Issue: JUL.8,2019

Derun Material: MONOPROPYLENE GLYCOL INDUSTRIAL GRADE  
Batch Number: ACG/QD-190626B  
Production Date: JUN.26,2019  
Expiry Date: DEC.25,2020

Test Description	Unit of Measure	Specifications		Test Result
		Minimum	Maximum	
Assay as PG on a dry basis	weight %	99.5		99.6
Water	weight %		0.2	0.1
Color, Pt-Co	APHA Color		10	5
Specific Gravity @20/20°C	-	1.0370	1.0390	1.0380
Refractive Index @25C	-	1.4310	1.4350	1.4330
Free acid, (CH3COOH)	weight ppm		75	26
Residue on Ignition	weight ppm		80	20
Distillation range (L),	degrees C	184	189	pass
Distillation range (U),	degrees C	184	189	pass
Distillation volume, Vol%	vol%	95		pass

\*\*\*End of Test Data\*\*\*

Specification Version: 20150610

For Further Questions, Please Contact QINGDAO DERUN CHEMICAL CO., LTD.  
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