

 DOW CHEMICAL PACIFIC (SINGAPORE) PRIVATE LIMITED		PT.LANCAR JAYA GLOBALINDO JL.MENCENG RAYA NO.33 RT 009 RW 002 TEGAL ALUR KALIDERES 11820 JAKARTA INDONESIA Ship From: Yusen Laem Chabang Sub Mft Chonburi Thailand			
Certificate of Analysis Product Number 00000114877 Product Name Propylene Glycol USP/EP Delivery No. 830866019 / 000010 Order Number 118172418 Shipping Units 80.000 DR Date Shipped 2025-12-18 (YYYY-MM-DD) Shipment No. 47394567		Customer Information Customer Name PT.LANCAR JAYA GLOBALINDO Customer PO number 000478/LJG/JKT Container ID EITU0491227 Specification Number 000000059518			
Batch Number Seal Number Expiration Date Manufacturing Date Quantity Net Weight Manufacturing Plant Manufacturer Address Manufacturer: Dow Chemical Thailand Ltd It is hereby certified that the material indicated above has been inspected and tested in accordance with the conditions and requirements of the contract or purchase order and, unless agreed otherwise conforms in all respects to the specification relevant thereto and it meets all requirements of the current United States Pharmacopoeia, current Food Chemical Codex, current European Pharmacopoeia and current Pharmacopoeia of Japan.		C815PCHA11 EMCUET7874 2027-12-17 (YYYY-MM-DD) 2025-12-17 (YYYY-MM-DD) 80.000 DR 17200.000 KG MTP AIE PG 10/4 Moo 2 ASIA IND EST BANCHANG Rayong 21130			
Test	Unit	Lower Limit	Upper Limit	Value	Method
Assay	%	99.80	-	99.99	Current USP
M Acidity	ml	-	0.20	0.02	Current USP
M Chlorides	ppm	-	70	< 70	Current USP
S Residue on Ignition USP	%	-	0.0070	0.0025	Current JP
M Specific Gravity @ 25/25degC		1.035	1.037	1.036	Current USP
M Sulfate	ppm	-	60	< 60	Current USP
Water Content	%	-	0.200	0.002	Current USP



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RW 002 TEGAL ALUR KALIDERES
11820 JAKARTA
INDONESIA

Ship From: Yusen Laem Chabang Sub Mft
Chonburi
Thailand

M ID Test A	-	-	-	Pass	Current USP
matches IR scan					
ID Test B	-	-	-	Pass	Current USP
Limit of Ethylene Glycol					
ID Test B	-	-	-	Pass	Current USP
Limit of Diethylene Glycol					
ID Test C	-	-	-	Pass	Current USP
Matches GC Scan					
M Acidity	ml	-	8.3	1.1	Current EP
M Boiling Point	°C	184	189	185	Current EP
M Clarity	-	-	-	Pass	Current EP
M Color	-	-	-	Pass	Current EP
O Melting Point	°C	121	128	125	Current EP
M Oxidizing Substances	ml	-	0.20	0.04	Current EP
0.05M sodium thiosulfate					
M Reducing Substances	-	-	-	Pass	Current EP
M Refractive Index		1.431	1.433	1.433	Current EP
@ 20degC					
M Relative Density		1.035	1.040	1.038	Current EP
@ 20/20degC					
M ID Test D	-	-	-	Pass	Current EP
M Ethylene Glycol	%	-	0.0620	< 0.0620	Current EP
M Diethylene Glycol	%	-	0.10	< 0.10	Current EP
S Sulfated ash	%	-	0.0100	0.0025	Current JP
EP					
Water Content	%	-	0.200	0.002	Current EP
Assay	%	99.80	-	99.99	Current FCC
M Acidity	-	-	-	Pass	Current FCC
M Appearance	-	-	-	Pass	Current FCC
clear & colorless					
M Distillation, IBP	°C	185.0	-	186.2	Current FCC
M Distillation, DP	°C	-	189.0	188.0	Current FCC
O Lead (Pb)	ppm	-	1.0	< 1.0	Current FCC

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M Identification	-	-	-	Pass	Current FCC
matches IR scan					
S Residue on Ignition	%	-	0.0070	0.0025	Current JP
FCC					
M Specific Gravity		1.035	1.037	1.036	Current FCC
@ 25/25degC					
Water Content	%	-	0.200	0.002	Current FCC
M Acidity	-	-	-	Pass	Current JP
M Arsenic	ppm	-	2.0	< 2.0	Current JP
M Chlorides	%	-	0.007	< 0.007	Current JP
M Distilling Range	% vol	95	-	98	Current JP
184 - 189 degC					
M Glycerine (Odor)	-	-	-	Pass	Current JP
M Heavy Metals	ppm	-	5.0	< 5.0	Current JP
O Melting Point	°C	174	178	174	Current JP
M Odor	-	-	-	Pass	Current JP
S Residue on Ignition	%	-	0.0050	0.0025	Current JP
JP					
M Specific Gravity		1.035	1.040	1.038	Current JP
@ 20/20degC					
M Sulfate	%	-	0.002	< 0.002	Current JP
Water Content	%	-	0.500	0.002	Current JP
Acidity	%	-	0.0020	0.0001	DOWM 101370
as acetic acid					
Appearance	-	-	-	Pass	Visual
clear, free of suspended matter					
Chlorides	ppm	-	1.0	< 1.0	DOWM 101867
Color, Pt-Co	-	-	10	2	ASTM D5386
Dimer, Trimer	%	-	0.100	0.011	DOWM 100687
& Higher Polymers					
Ethylene Glycol	%	-	0.0080	< 0.0080	DOWM 100687
Diethylene Glycol	%	-	0.0080	< 0.0080	DOWM 100687
Iron	ppm	-	0.30	0.01	ASTM E394

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Odor - - - Pass Olfactory practically odorless	M Spec. Grav. @ 20C 1.0376 1.0389 1.0382 ASTM D4052
Note 1: Values reported for Assay, Ethylene Glycol and Diethylene Glycol under USP and for Assay under FCC are obtained using the validated Dow GC Method DOWM 100687. Note 2: Ethylene Glycol and Diethylene Glycol under EP will be analyzed per EP method quarterly. Ethylene glycol and diethylene glycol result by DOWM100687 is compliant with European Pharmacopeia monograph. Note 3: Performance of DOWM 100687 GC method is superior to the USP, EP, FCC and JP monograph GC methods in precision and accuracy at the levels of the specification limits for Assay, Ethylene Glycol and Diethylene Glycol. DOWM 100687 results for Ethylene Glycol and Diethylene Glycol complies with Ethylene Glycol and Diethylene Glycol per the Japanese Pharmacopeia. Note 4: Values reported for Water Content under USP, FCC, EP and JP are generated using coulometric Karl-Fischer determination by ASTM E1064. ASTM E1062 conforms with USP, FCC, JP and EP requirements. Note 5: Values reported for Residue on Ignition and Sulfated Ash under USP, EP and FCC are obtained using the JP method which is allowed per the ICH Global Harmonization Q4B and General Provisions and Requirements Applying to Specifications, Tests, and Assays of the Food Chemicals Codex. M:Quarterly Sample O:Annual Sample S:Semi-annual	
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