

US07 PO Plant (F-5)
 Huntsman Propylene Oxide, LLC
 6501 Hogaboom Rd
 Port Neches TX 77651-6304

HUNTSMAN

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Certificate of Analysis

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Order Number 4805013952/10
 Delivery Number 0085093778/900001
 Customer Order Number
 Ship Date 04/29/2013
 Container/Compartment TRANSPORT # 3112

Product Name 246809 PROPYLENE GLYCOL USP

Seal No TOP-781893
 BOTTOM-781895

Test Details

Parameter	Results	Unit	Specification	Test Method
Batch	G23D29E			
Production Date	04/26/2013			
Expiry Date	04/26/2013			
APPEARANCE	Pass			ST-30.1
Assay, GC	99.96	A %	99.70 - 100.00	ST-35.102
Color	3	Pt-Co	0 - 10	ST-30.12
Ident B (DEG) - Not detected	Pass			USP
Ident B (EG) - Not Detected	Pass			USP
Identification C (PG)	Pass			
Sp. Grav, 25/25 Deg. C	1.0359		1.0350 - 1.0370	ST-30.31
Water	0.01	wt%	0.00 - 0.20	ST-31.53,6
Acidity, as Acetic	0.0010	wt%	0.0000 - 0.0020	ST-31.46, B
Acidity, as Sulfuric wt%	0.001		0.000 - 0.010	ST-31.46, B
Refractive Index, 20C	1.4320		1.4310 - 1.4330	D-1218
Ash, Sulfated	0.000	wt%	0.000 - 0.005	ST-31.12
Chloride, as Cl	< 0.10	ppm	0.00 - 0.50	ST-38.28
Heavy Metals	< 1.0	ppm	0.0 - 1.0	ST-31.30
Iron as Fe	< 0.02	ppm	0.00 - 0.30	ST-4.9
Sp. Grav., 20/20 Deg.C	1.0384		1.0376 - 1.0389	ST-30.31
IBP	186.9		185.0 - 999.0	ST-32.1
DP	188		0 - 189	ST-32.1
Ident A (Infrared Scan)	Pass			
Residual Solvents	Pass			USP-NF <467>
Oxidizing Substances	< 0.2000	mi	0.0000 - 0.2000	EP
Reducing Substances	Pass			EP
Arsenic, ppm	< 1.0	ppm	0.0 - 1.0	ST-31.57
Sulfate	< 60.0	ppm	0.0 - 60.0	USP

Notes

Date of Issue 04/29/2013

Mark Hays

