

Fax No 00704952025934

2018-12-04 ENT/OQA

Hr. Dr. Florian Wildschek florian.wildschek@basf.com Certificate No 6221

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Russian Fed.

Certificate of Analysis according to DIN 55350-18-4.1.2

52705412 1,2-PROPYLENE GLYCOL USP Material Order 3015198343 000010 220KG Plastic drums 3191115708 000010 Delivery Purchase Order/Customer Product# Lot 87051756P0 app.79 Lot/Qty 17600.000 KG Total 17600.000 KG Transport YMMU1060260

Test Parameter	Requirements	UoM	Results
Appearance	clear and colorless liquid		conforms
Identification (IR)	must conform		conforms
Purity (CGC)	Min.: 99.8	g/100g	>99.9
Relative density d(20/20)	Min.: 1.035 Max.: 1.040		1.038
Relative Density d(25/25)	Min.: 1.035 Max.: 1.037		1.036
Refractive Index n(20/D)	Min.: 1.431 Max.: 1.433		1.433
Water (Karl Fischer-Titration)	Max.: 0.2	g/100g	<0.1
Sulfated Ash / Residue on ignition	Max.: 70	mg/kg	<10
Chloride	Max.: 70	mg/kg	<1
Gulfate	Max.: 60	mg/kg	<1
Arsenic *	must conform (max.2mg/kg)		conforms



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Test Parameter	Requirements	UoM	Results
Lead *	must conform (max.1mg/kg)		conforms
Heavy metals *	must conform (max.5mg/kg)		conforms
Dimers and Polymers (CGC)	Max.: 0.1	g/100g	<0.1
1, 3-Propanediol (CGC)	Max.: 100	mg/kg	<50
Organic chlorine compounds as Cl	Max.: 1	mg/kg	<1
Acidity	must conform (max. 0.019 mg KOH/ml)		conforms
Oxidizing substances	must conform		conforms
Reducing substances	must conform		conforms
Residual solvents **	must comply with the requirements of PhEur 5.4, USP <467> and ICH Q3C		conforms
Colour (Hazen)	Max.: 10		<5
Identification: Ethylene glycol *	must conform		conforms







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Test Parameter	Requi	irements	UoM	Results
Identification: Di	iethylene must	conform		conforms
alvcol *				

- * Test is verified on random samples only.
- **Not tested, since no organic solvents are likely to be present.

The product meets the specifications of following monographs:

"Propylene Glycol" of USP41/NF36,

"Propylenglycole" of European Pharmacopoeia 9th edition

Manufacturer: BASF SE

Carl-Bosch-Str.38 67056 Ludwigshafen

Germany

 QC-Reference-No.
 18C05778

 Production date
 (YYYY-MM-DD)
 2018-06-17

 Release date
 (YYYY-MM-DD)
 2018-06-20

 Best before
 (YYYY-MM-DD)
 2019-06-17







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BASF SE Quality Assurance - Release sig. Hr. Frühbeis QA-Representative