

Please note that the certificates of analysis are also conveniently available online and around the clock at www.worldaccount.basf.com

Fax No 003800443775551

TELKO UKRAINE LLC

Grigory Andriushchenko Str., 4-G

01135 Kyiv

Україна

2017-01-13

ENO/QA

Hr. Dr. Florian Wildschek

florian.wildschek@basf.com

Certificate No 6219

Page 1 of 3

Certificate of Analysis according to DIN 55350-18-4.1.2

1,2-PROPYLENE GLYCOL USP

220KG Plastic drums

Purchase Order/Customer Product#

Contr.TELKO/2014/ED dd. 08.10.2014

Material	52705412
Order	3013081598 000010
Delivery	3097230444 000010
Lot	08962388Q0
Lot/Qty	18480 000 KG
Total	18480 000 KG
Transport	BK2242XT

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
Sulfate	Max.: 60	mg/kg	<1
Arsenic *	must conform (max.2mg/kg)		conforms



The aforementioned data shall constitute the agreed contractual quality of the product at the time of passing of risk. The data are controlled at regular intervals as part of our quality assurance program. Neither these data nor the properties of product specimens shall imply any legally binding guarantee of certain properties or of fitness for a specific purpose. No liability of ours can be derived therefrom.

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Test Parameter	Requirements	UoM	Results
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
Identification: Diethylene glycol *	must conform		conforms



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* 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 USP39/NF34,

"Propylenglycole" of European Pharmacopoeia 8th edition

Manufacturer: BASF SE

Carl-Bosch-Str.38

67056 Ludwigshafen

Germany

QC-Reference-No.	16C11231
Production date	(YYYY-MM-DD) 2016-09-12
Release date	(YYYY-MM-DD) 2016-09-15
Best before	(YYYY-MM-DD) 2017-09-12

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



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