

SABIC® HDPE PCG300054

High Density Polyethylene Copolymer

Saudi Basic Industries Corporation (SABIC)

Technical Data

Product Description

SABIC® HDPE grades for healthcare applications are produced under controlled conditions resulting in high product quality, consistency and a high level of purity.

SABIC® HDPE PCG300054 is a high density polyethylene copolymer injection moulding grade. Its narrow molecular weight distribution and high flow results in low warpage, good rigidity, excellent gloss and fast moulding cycles.

SABIC® HDPE PCG300054 is recommended for healthcare packaging applications like, syringes, caps and closures, thin wall articles and other parts for medical devices.

SABIC® HDPE PCG300054 complies with the relevant monographs of the European Pharmacopoeia (EP) and the United States Pharmacopoeia (USPVI). The product mentioned herein may not be used for medical healthcare devices or materials intended for temporary or permanent implementation in the human body.

General

Features	• Fast Molding Cycle • Good Stiffness • High Flow	• High Impact Resistance • High Purity • Low Temperature Impact Resistance	• Low Warpage • Medium Gloss • Narrow Molecular Weight Distribution
Uses	• Caps • Closures	• Medical Packaging • Medical/Healthcare Applications	• Packaging • Thin-walled Parts
Agency Ratings	• EP Unspecified Rating	• USP Class VI	
Processing Method	• Injection Molding		

Physical	Nominal Value Unit	Test Method
Density	0.954 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	30 g/10 min	ISO 1133
Environmental Stress-Cracking Resistance ³ 60°C, 3.00 mm	40.0 hr	Internal Method

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus 2.00 mm, Compression Molded	1100 MPa	ISO 527-2/1BA/50
Tensile Stress Yield, 2.00 mm, Compression Molded Break, 2.00 mm, Compression Molded	26.0 MPa 25.0 MPa	ISO 527-2/1BA/50
Tensile Strain Break, 2.00 mm, Compression Molded	> 200 %	ISO 527-2/1BA/50
Flexural Modulus 23°C, 2.00 mm, Compression Molded	1250 MPa	ISO 178
Flexural Strength 23°C, 2.00 mm, Compression Molded	27.0 MPa	ISO 178

Impact	Nominal Value Unit	Test Method
Notched Izod Impact Strength 23°C, Compression Molded	3.0 kJ/m ²	ISO 180/A

Hardness	Nominal Value Unit	Test Method
Shore Hardness (Shore D, Compression Molded)	61	ISO 868

Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature 0.45 MPa, Unannealed	82.0 °C	ISO 75-2/B
Vicat Softening Temperature	125 °C	ISO 306/A

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Thermal	Nominal Value Unit	Test Method
Melting Temperature (DSC)	132 °C	ISO 11357-3
Enthalpy Change	205 J/g	ISO 11357-3