SABIC® HDPE PCG40053

High Density Polyethylene

SABIC Americas, Inc.

Message:

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 PCG40053 is designed for the injection moulding of healthcare packaging, caps and closures and other parts for medical packaging. This grade has a very high impact resistance, even at low temperatures.

SABIC I HDPE PCG40053 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 Information			
Features	High Impact Resistance		
	High Purity		
	Low Temperature Impact Resistance	e	
Uses	Caps		
	Closures		
	Medical Packaging		
	Medical/Healthcare Applications		
	Packaging		
Agency Ratings	EP Unspecified Rating		
	USP Class VI		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	0.953	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/2.16 kg	4.7	g/10 min	
190°C/5.0 kg	13	g/10 min	
Melt Volume-Flow Rate (MVR)			ISO 1133
190°C/2.16 kg	5.80	cm³/10min	
190°C/5.0 kg	17.0	cm ³ /10min	
Environmental Stress-Cracking Resistance			
' (60°C, 3.00 mm, Rhodacal-DS10)	95.0	hr	Internal Method
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D, Compression Molded)	61		ISO 868
Mechanical	Nominal Value	Unit	Test Method

Tensile Modulus (2.00 mm, Compression			
Molded)	1100	MPa	ISO 527-2/1BA/50
Tensile Stress			ISO 527-2/1BA/50
Yield, 2.00 mm, Compression Molded	26.0	MPa	
Break, 2.00 mm, Compression Molded	25.0	MPa	
Tensile Strain (Break, 2.00 mm,			
Compression Molded)	> 200	%	ISO 527-2/1BA/50
Tensile Creep Modulus			ISO 899-1
1 hr	500	MPa	
1000 hr	225	MPa	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength			ISO 180/A
Notched Izod Impact Strength -30°C, Compression Molded	4.0	kJ/m²	ISO 180/A
Notched Izod Impact Strength -30°C, Compression Molded 23°C, Compression Molded	4.0	kJ/m² kJ/m²	ISO 180/A
Notched Izod Impact Strength -30°C, Compression Molded 23°C, Compression Molded Thermal	4.0 4.0 Nominal Value	kJ/m² kJ/m² Unit	ISO 180/A Test Method
Notched Izod Impact Strength -30°C, Compression Molded 23°C, Compression Molded Thermal Heat Deflection Temperature (0.45 MPa,	4.0 4.0 Nominal Value	kJ/m² kJ/m² Unit	ISO 180/A Test Method
Notched Izod Impact Strength -30°C, Compression Molded 23°C, Compression Molded Thermal Heat Deflection Temperature (0.45 MPa, Unannealed)	4.0 4.0 Nominal Value 81.0	kJ/m² kJ/m² Unit	ISO 180/A Test Method ISO 75-2/B
Notched Izod Impact Strength-30°C, Compression Molded23°C, Compression MoldedThermalHeat Deflection Temperature (0.45 MPa, Unannealed)Vicat Softening Temperature	4.0 4.0 Nominal Value 81.0 124	kJ/m ² kJ/m ² Unit °C °C	ISO 180/A Test Method ISO 75-2/B ISO 306/A
Notched Izod Impact Strength-30°C, Compression Molded23°C, Compression MoldedThermalHeat Deflection Temperature (0.45 MPa, Unannealed)Vicat Softening TemperatureMelting Temperature (DSC)	4.0 4.0 Nominal Value 81.0 124 132	kJ/m ² kJ/m ² Unit °C °C °C	ISO 180/A Test Method ISO 75-2/B ISO 306/A DIN 53765
Notched Izod Impact Strength-30°C, Compression Molded23°C, Compression MoldedThermalHeat Deflection Temperature (0.45 MPa, Unannealed)Vicat Softening TemperatureMelting Temperature (DSC)Enthalpy Change	4.0 4.0 Nominal Value 81.0 124 132 203	kJ/m ² kJ/m ² Unit °C °C J/g	ISO 180/A Test Method ISO 75-2/B ISO 306/A DIN 53765 DIN 53765
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