

SABIC® HDPE B4520

High Density Polyethylene

Saudi Basic Industries Corporation (SABIC)

Message:

SABIC® HDPE B4520 is typically used for blow moulding packaging up to 20 l, combining medium stiffness with a superior ESCR. This grade is suitable for packaging aggressive detergents and technical articles such as, spare fuel tanks, air- and cable ducts.
The product mentioned herein is in particular not tested and therefore not validated for use in pharmaceutical/medical applications.

General Information			
Features	Rigid, good		
	High ESCR (Stress Cracking Resistance)		
	Workability, good		
	Good toughness		
	Medium wide molecular weight distribution		
Uses	Bottle		
	Application in Automobile Field		
Agency Ratings	EEC 2002/72/EC		
	FDA 21 CFR 177.1520		
Forms	Particle		
Processing Method	Blow molding		
	Extrusion		
Physical	Nominal Value	Unit	Test Method
Density	0.945	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/2.16 kg	0.16	g/10 min	ISO 1133
190°C/21.6 kg	20	g/10 min	ISO 1133
190°C/5.0 kg	0.89	g/10 min	ISO 1133
Environmental Stress-Cracking Resistance ¹ (75°C, 1.00 mm, Rhodacal-DS10)	40.0	hr	Internal method
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 23°C, Molded)	59		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (2.00 mm, Compression Molded)	800	MPa	ISO 527-2/1BA/50
Tensile Stress			ISO 527-2/1BA/50
Yield, 23°C, 2.00mm, molded	22.0	MPa	ISO 527-2/1BA/50
Fracture, 23°C, 2.00mm, molded	31.0	MPa	ISO 527-2/1BA/50

Tensile Strain (Break, 2.00 mm, Compression Molded)	> 1000	%	ISO 527-2/1BA/50
Flexural Modulus (2.00 mm, Compression Molded)	850	MPa	ISO 178
Flexural Stress (2.00 mm, Compression Molded)	22.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ISO 180/A
-30°C, molded	5.0	kJ/m ²	ISO 180/A
23°C, molded	12	kJ/m ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	73.0	°C	ISO 75-2/B
Vicat Softening Temperature	126	°C	ISO 306/A
Melting Temperature (DSC)	130	°C	ISO 11357-3
Enthalpy Change	181	J/g	ISO 11357-3
NOTE			
1.	3 MPa		

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