

SABIC® HDPE F4520

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 good ESCR. This grade is typically used for packaging of aggressive detergents and technical articles such as spare fuel tanks, air- and cable ducts. This product is not intended for and must not be used in any pharmaceutical/medical applications.

General Information			
Features	Food Contact Acceptable		
	Good Processability		
	Good Stiffness		
	Good Surface Finish		
	High Density		
	High ESCR (Stress Crack Resist.)		
Uses	Cosmetics		
	Industrial Applications		
	Non-specific Food Applications		
	Packaging		
	Personal Care		
	Tubing		
Processing Method	Blow Molding		
	Extrusion		
	Pipe 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	
190°C/21.6 kg	20	g/10 min	
190°C/5.0 kg	0.89	g/10 min	
Environmental Stress-Cracking Resistance (10% Igepal CO-630, Compression Molded, F50)	150	hr	ASTM D1693B
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D, Compression 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, 2.00 mm, Compression Molded	22.0	MPa	
Break, 2.00 mm, Compression Molded	31.0	MPa	
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
ESCR (Strain Hardening) - Gp	23.0	MPa	Internal Method
Enthalpy Change	181	J/g	ISO 11357-3
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength			ISO 180/A
-30°C, Compression Molded	5.0	kJ/m ²	
23°C, Compression Molded	12	kJ/m ²	
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

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