

SABIC® HDPE M453G

High Density Polyethylene

Saudi Basic Industries Corporation (SABIC)

Message:

SABIC® HDPE M453G exhibits a good impact resistance, even at low temperatures.

Typical applications are Caps & closures, Crates & boxes and PE-Xb pipes for hot and cold water and central floor heating.

This product is not intended for and must not be used in any pharmaceutical/medical applications.

General Information			
Features	High density		
	Impact resistance, good		
	Low temperature impact resistance		
Uses	Piping system		
	Shield		
	Shell		
	Loading box		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	0.953	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			ISO 1133
190°C/2.16 kg	4.7	g/10 min	ISO 1133
190°C/5.0 kg	13	g/10 min	ISO 1133
Environmental Stress-Cracking Resistance (40°C, 1.00mm, 10% Igepal CO-630, compression molding)	60.0	hr	Internal method
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, Compression Molded)	61		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			ISO 527-2/1BA/50
2.00, molded	1100	MPa	ISO 527-2/1BA/50
1% Secant: mm, molded	1200	MPa	ISO 527-2/1BA/50
Tensile Stress			ISO 527-2/1BA/50
Yield, 2.00mm, molded	26.0	MPa	ISO 527-2/1BA/50
Fracture, 2.00mm, molded	25.0	MPa	ISO 527-2/1BA/50
Tensile Strain (Break, 2.00 mm, Compression Molded)	> 200	%	ISO 527-2/1BA/50
Flexural Modulus (2.00 mm, Compression Molded)	26.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method

Notched Izod Impact (23°C, Compression Molded)	4.0	kJ/m ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	81.0	°C	ISO 75-2/B
Vicat Softening Temperature	124	°C	ISO 306/A
Melting Temperature (DSC)	132	°C	ISO 11357-3
Enthalpy Change	203	J/g	ISO 11357-3

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