

Braskem PE GP 100 BK

High Density Polyethylene

Braskem

Message:

GP100BK is a High Density Polyethylene compound specially developed for the manufacturing of extruded pipes for water distribution. It is produced with bimodal technology and has high molar mass. It shows high mechanical properties and has excellent resistance to hydrostatic pressure and stress cracking. This resin has MRS (Minimum Required Strength) of 10 MPa, according to ISO 9080, and is classified as PE 100, according to ISO 12162. GP100BK contains carbon black that protects it against ultraviolet radiation action and photodegradation. Meets the requirements of NBR 15561:07. Application: Black PE 100 pressure pipes for water distribution, underwater emissaries and pressurized sewer systems; jacketing of underwater cables; pipes for mining.

General Information			
Additive	Carbon Black (2%)		
Features	Food Contact Acceptable		
	Good UV Resistance		
	High Density		
	High ESCR (Stress Crack Resist.)		
	High Molecular Weight		
Uses	Piping		
Agency Ratings	FDA 21 CFR 177.1520		
	ISO 12162 PE 100		
	ISO 9080 PE 100		
Appearance	Black		
Forms	Pellets		
Processing Method	Extrusion		
	Pipe Extrusion		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.960	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/5.0 kg)	0.22	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (50°C, 2.00 mm, 100% Igepal, Compression Molded, F50)	> 1000	hr	ASTM D1693
Carbon Black Content	2.0 to 2.5	%	ASTM D1603
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, Compression Molded)	64		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield, Compression Molded	25.0	MPa	

Break, Compression Molded	35.0	MPa	
Tensile Elongation			ASTM D638
Yield, Compression Molded	7.8	%	
Break, Compression Molded	780	%	
Flexural Modulus - 1% Secant (Compression Molded)	1260	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (Compression Molded)	290	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed, Compression Molded)	71.0	°C	ASTM D648
Vicat Softening Temperature	126	°C	ASTM D1525 ¹
NOTE			
1.	Loading 1 (10 N)		

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