

Braskem PE GP100BKXP

High Density Polyethylene

Braskem

Message:

GP100BKXP 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. GP100BKXP contains carbon black that protects it against ultraviolet radiation action and photodegradation. Meets the requirements of NBR 15561:07 and ISO 4427:07.

Application:

Black PE 100 pressure pipes for water distribution, underwater emissaries and pressurized sewer systems; jacketing of underwater cables; pipes for mining.

Process:

Pipe Extrusion.

General Information			
Additive	Carbon black		
Features	High ESCR (Stress Cracking Resistance)		
	High molecular weight		
	Good UV resistance		
	Bimodal molecular weight distribution		
Uses	Cable sheath		
	Piping system		
Agency Ratings	FDA 21 CFR 177.1520		
	ISO 12162 PE 100		
	ISO 4427		
	NBR 15561		
Processing Method	Pipeline extrusion molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.958	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/5.0 kg)	0.25	g/10 min	ASTM D1238
Environmental Stress-Cracking Resistance (50°C, 2.00 mm, 10% Igepal, Compression Molded, F50)	> 1000	hr	ASTM D1693
Carbon Black Content	2.0 - 2.5	%	ASTM D1603
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, Compression Molded)	65		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Yield, molding	25.0	MPa	ASTM D638
Fracture, molding	40.0	MPa	ASTM D638

Tensile Elongation			ASTM D638
Yield, molding	10	%	ASTM D638
Fracture, molding	1500	%	ASTM D638
Flexural Modulus - 1% Secant (Compression Molded)			ASTM D790
	1090	MPa	
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (Compression Molded)	No Break		ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (0.45 MPa, Unannealed, Compression Molded)	68.0	°C	ASTM D648
Vicat Softening Temperature	125	°C	ASTM D1525 ¹
NOTE			

1. 压力1 (10N)

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