Braskem

Data Sheet

High Density Polyethylene GP100BKXP

Description:

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.

Control Properties:

	ASTM Method	Units	Values
Melt Flow Rate (190/5.0)	D 1238	g/10 min	0.25
Density	D 792	g/cm3	0.958

Typical Properties:

Plaque Properties[a]

	ASTM Method	Units	Values
Tensile Strength at Yield	D 638	MPa	25
Tensile Strength at Break	D 638	MPa	40
Flexural Modulus – 1% Secant	D 790	MPa	1090
Shore D Hardness	D 2240	-	65
Notched Izod Impact Strength	D 256	J/m	NB
Environmental Stress Cracking Resistanceb	D 1693	h/F50	> 1000
Vicat Softening Temperature at 10 N	D 1525	°C	125
Deflection Temperature under Load at 0.455 MPa	D 648	ºC	68
Elongation at Yield	D 638	%	10
Elongation at Break	D 638	%	1500
Carbon Black Content	D 1603	%	2.0 to 2.5

(a) Test specimens prepared from compression molded sheet made according to ASTM D 4703.
(b) Compression molded 2 mm thickness, 0.3 mm notched-plaques; 10% Igepal; 50ºC.