Braskem

Datasheet
May/2021

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 15561:16 and ISO 4427:19.

Applications:

PE100 classification in black color, Pressurized sewage networks and submarine emissaries, Underwater cable cover, Non-pressurized pipes for mining, Pressurized pipes

Processes:

Pipes extrusion

Control Properties:

Feature	Method	Units	Values
Melt Flow Rate (190°C/5kg)	D 1238	g/10 min	0.25
Density	D 792	g/cm³	0.958

Typical Properties - Plaque[1]:

Plaque Properties

Feature	Method	Units	Values
Tensile Strength at Yield (a)	D 638	MPa	25
Elongation at Yield (a)	D 638	%	10
Tensile Strength at Break (a)	D 638	MPa	40
Elongation at Break (a)	D 638	%	1500
Flexural Modulus - 2% Secant (b)	D 2240	-	1090
Hardness (c)	ASTM D 2240	-	65
Izod Impact Strength (b)	D 256	J/m	NB
Environmental Stress Cracking Resistance - notch 0,3 mm; 50°C; 10% Igepal CO630 (a)	D 1693	h/F50	> 1000
Deflection Temperature under Load at 0.455 MPa (b)	D 648	ºC	68
Vicat Softening Temperature at 10 N (b)	D 1525	°C	125
Carbon Black Content	D 1603	%	2,0 - 2,5

[1] Test specimens from compression molded plaque according to ASTM D4703. Plaque Thickness: a) 2mm. b) 3mm c) 6mm. NB = No break.

Final Remarks

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