


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, 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/cm ³	0.958

Typical Properties - Plaque¹:

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 - 1% Secant (b)	D 2240	-	1090
Shore D 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	°C	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:

- The information presented in this Data Sheet reflects typical values obtained in our laboratories, but should not be considered as absolute or as warranted values. Only the properties and values mentioned on the Certificate of Quality are considered as guarantee of the product.
- For regulatory information of the product, please refer to Regulatory Document or contact our Technical Assistance Area.
- For information about safety, handling, individual protection, first aids and waste disposal, please refer to MSDS.
- The mentioned values in this report can be changed at any moment without Braskem previous communication.
- HDPE is not a hygroscopic material. However, carbon black, which is used as an anti-UV additive, absorbs moisture from the environment. Therefore, all HDPE containing carbon black in its composition must be dried before use. The drying process must be made at least for 2 hours at 90°C. Under these conditions the amount of moisture decreases to values that will not interfere in the processability of the resin. The use of this resin without previous drying may cause problems in the finished product, such as blistering and/or roughness of the surface.