


Datasheet
May/2022

High Density Polyethylene GM5010T2

Description:

GM5010T2 is a High Density Polyethylene compound specially developed for the manufacturing of extruded pipes. It is produced with bimodal technology and has high molar mass. It shows high mechanical properties and has excellent resistance to hydrostatic pressure and to stress cracking. This resin has MRS (Minimum Required Strength) of 8 MPa, according to ISO 9080, and is classified as PE 80, according to ISO 12162. GM5010T2 contains carbon black pigment that protects it against ultraviolet radiation action and photodegradation.

Meets the requirements of ISO 4427:19 only for pipes with less than 32 mm of wall thickness.
Meets the requirements of NBR 15561:16.

Applications:

Umbilical cables cape, Non-pressurized pipes for mining, Risers and Flowlines for Petroleum Platform, Pressurized pipes, Self-propelled irrigation pipes

Processes:

Pipes extrusion

Control Properties:

Feature	Method	Units	Values
Melt Flow Rate (190°C/5kg)	ASTM D 1238	g/10 min	0.45
Density	D 792	g/cm ³	0.955

Typical Properties - Plaque¹:

Plaque Properties

Feature	Method	Units	Values
Tensile Strength at Yield (a)	ASTM D 638	MPa	23
Elongation at Yield (a)	D 638	%	9.1
Tensile Strength at Break (a)	D 638	MPa	34
Elongation at Break (a)	D 638	%	800
Flexural Modulus - 1% Secant (b)	D 2240	-	1090
Shore D Hardness (c)	D 1693	h/F50	62
Izod Impact Strength (b)	D 256	J/m	220
Environmental Stress Cracking Resistance - notch 0,3 mm; 50°C; 100% Igepal CO630 (a)	ASTM D 1693	h/F50	> 1000
Deflection Temperature under Load at 0.455 MPa (b)	D 648	°C	70
Vicat Softening Temperature at 10 N (b)	D 1525	°C	124
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.

