

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 NBR 15561:07 and ISO 4427:07.

Application:

Black PE 80 pressure pipes for water distribution, underwater emissaries and pressurized sewer systems; self-propelled irrigation pipes; jacketing of umbilical cables; risers and flowlines for oil filed platforms; pipes for mining.

Process:

Extrusion.

Control Properties:

	ASTM Method	Units	Values
Melt Flow Rate (190/5.0)	D 1238	g/10 min	0.45
Density	D 792	g/cm ³	0.955

Typical Properties:

Plaque Properties^a

	ASTM Method	Units	Values
Tensile Strength at Yield	D 638	MPa	23
Tensile Strength at Break	D 638	MPa	34
Flexural Modulus – 1% Secant	D 790	MPa	1090
Shore D Hardness	D 2240	-	62
Notched Izod Impact Strength	D 256	J/m	220
Environmental Stress Cracking Resistance ^b	D 1693	h/F50	> 1000
Vicat Softening Temperature at 10 N	D 1525	°C	124
Deflection Temperature under Load at 0.455 MPa	D 648	°C	70
Elongation at Yield	D 638	%	9.1
Elongation at Break	D 638	%	800
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; 100% Igepal; 50°C.

