

## Braskem GP100BK HDPE High Density Extrusion Polyethylene

Category : Polymer , Thermoplastic , Polyethylene (PE) , HDPE , High Density Polyethylene (HDPE), Pipe Grade

### Material Notes:

GP100BK 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 to stress cracking. This resin has the MRS (Minimum Required Strength) of 10 MPa, according to ISO 9080, and is classified as PE 100 according to ISO 12162. GP100BK contains carbon black that protects it against ultraviolet radiation action and photodegradation. Its applications include: black PE 100 pressure pipes for water distribution, underwater emissaries, and pressurized sewer systems; jacketing of underwater cables; and pipes for mining.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Braskem-GP100BK-HDPE-High-Density-Extrusion-Polyethylene.php](http://www.lookpolymers.com/polymer_Braskem-GP100BK-HDPE-High-Density-Extrusion-Polyethylene.php)

Physical Properties	Metric	English	Comments
Density	0.960 g/cc	0.0347 lb/in <sup>3</sup>	ASTM-D792
ESCR 100% Igepal®	>= 1000 hour @Thickness 2.00 mm, Temperature 50.0 °C	>= 1000 hour @Thickness 0.0787 in, Temperature 122 °F	0.3 mm notched-plaques; ASTM-D1693
Melt Flow	0.22 g/10 min @Load 5.00 kg, Temperature 190 °C	0.22 g/10 min @Load 11.0 lb, Temperature 374 °F	ASTM-D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	64	64	ASTM-D2240
Tensile Strength at Break	35.0 MPa	5080 psi	ASTM-D638
Tensile Strength, Yield	25.0 MPa	3630 psi	ASTM-D638
Elongation at Break	780 %	780 %	ASTM-D638
Elongation at Yield	7.8 %	7.8 %	ASTM-D638
Flexural Modulus, 1% Secant	1260 MPa	183000 psi	ASTM-D790
Izod Impact, Notched	2.90 J/cm	5.43 ft-lb/in	ASTM-D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	71.0 °C	160 °F	ASTM-D648
Vicat Softening Point	126 °C @Load 1.02 kg	259 °F @Load 2.25 lb	ASTM-D1525

Component Elements Properties	Metric	English	Comments
Carbon, C	2.0 - 2.5 %	2.0 - 2.5 %	Black Content; ASTM-D1603

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