

Braskem GP1000R HDPE High Density Extrusion Polyethylene

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

Material Notes:

GP1000R is a high-density polyethylene compound specially developed for the manufacturing of extruded pipes for gas distribution. It is produced with bimodal technology and has high molar mass. It shows excellent 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. GP1000R is manufactured in an orange color and contains additives to protect it against ultraviolet radiation action and photodegradation. Its applications include orange PE 100 pressure pipes for gas distribution and jacketing of underwater cables.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Braskem-GP1000R-HDPE-High-Density-Extrusion-Polyethylene.php

| Physical Properties | Metric | English | Comments |
|---------------------|--|---|--|
| Density | 0.950 g/cc | 0.0343 lb/in³ | ASTM-D792 |
| ESCR 100% Igepal® | >= 1000 hour | >= 1000 hour | 0.3 mm notched-plaques; ASTM- D1693 |
| | @Thickness 2.00 mm, Temperature 50.0 °C | @Thickness 0.0787 in, Temperature 122 °F | |
| Melt Flow | 0.22 g/10 min | 0.22 g/10 min | ASTM-D1238 |
| | @Load 5.00 kg, Temperature 190 °C | @Load 11.0 lb, Temperature 374 °F | |

| Mechanical Properties | Metric | English | Comments |
|-----------------------------|-----------|---------------|------------|
| Hardness, Shore D | 64 | 64 | ASTM-D2240 |
| Tensile Strength at Break | 36.0 MPa | 5220 psi | ASTM-D638 |
| Tensile Strength, Yield | 24.0 MPa | 3480 psi | ASTM-D638 |
| Elongation at Break | 770 % | 770 % | ASTM-D638 |
| Elongation at Yield | 8.1 % | 8.1 % | ASTM-D638 |
| Flexural Modulus, 1% Secant | 1240 MPa | 180000 psi | ASTM-D790 |
| Izod Impact, Notched | 3.50 J/cm | 6.56 ft-lb/in | ASTM-D256 |

| Thermal Properties | Metric | English | Comments |
|---|---------------|---------------|------------|
| Deflection Temperature at 0.46 MPa (66 psi) | 72.0 °C | 162 °F | ASTM-D648 |
| Vicat Softening Point | 126 °C | 259 °F | ASTM-D1525 |
| | @Load 1.02 kg | @Load 2.25 lb | |



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