

## **Braskem GM5010T2 HDPE High Density Extrusion Polyethylene**

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

## **Material Notes:**

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 the 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. Its applications include: black PE 80 pressure pipes for water distribution, underwater emissaries, and pressurized sewer systems; self-propelled irrigation pipes; jacketing of umbilical cables; risers and flow lines for oil filed platforms; and pipes for mining.

## Order this product through the following link:

http://www.lookpolymers.com/polymer\_Braskem-GM5010T2-HDPE-High-Density-Extrusion-Polyethylene.php

| Physical Properties | Metric                                     | English                                     | Comments                               |
|---------------------|--------------------------------------------|---------------------------------------------|----------------------------------------|
| Density             | 0.955 g/cc                                 | 0.0345 lb/in³                               | ASTM-D792                              |
| ESCR 100% Igepal®   | >= 1000 hour                               | >= 1000 hour                                | 0.3 mm notched-plaques; ASTM-<br>D1693 |
|                     | @Thickness 2.00 mm,<br>Temperature 50.0 °C | @Thickness 0.0787 in,<br>Temperature 122 °F |                                        |
| Melt Flow           | 0.45 g/10 min                              | 0.45 g/10 min                               | ASTM-D1238                             |
|                     | @Load 5.00 kg,<br>Temperature 190 °C       | @Load 11.0 lb,<br>Temperature 374 °F        |                                        |

| Mechanical Properties       | Metric    | English       | Comments   |
|-----------------------------|-----------|---------------|------------|
| Hardness, Shore D           | 62        | 62            | ASTM-D2240 |
| Tensile Strength at Break   | 34.0 MPa  | 4930 psi      | ASTM-D638  |
| Tensile Strength, Yield     | 23.0 MPa  | 3340 psi      | ASTM-D638  |
| Elongation at Break         | 800 %     | 800 %         | ASTM-D638  |
| Elongation at Yield         | 9.1 %     | 9.1 %         | ASTM-D638  |
| Flexural Modulus, 1% Secant | 1090 MPa  | 158000 psi    | ASTM-D790  |
| Izod Impact, Notched        | 2.20 J/cm | 4.12 ft-lb/in | ASTM-D256  |

| Thermal Properties                          | Metric        | English       | Comments   |
|---------------------------------------------|---------------|---------------|------------|
| Deflection Temperature at 0.46 MPa (66 psi) | 70.0 °C       | 158 °F        | ASTM-D648  |
| Vicat Softening Point                       | 124 °C        | 255 °F        | ASTM-D1525 |
|                                             | @Load 1.02 kg | @Load 2.25 lb |            |



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

## **Contact Songhan Plastic Technology Co.,Ltd.**

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