

High Density Polyethylene GM5010T2B

Description:

GM5010T2B 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 MRS (Minimum Required Strength) of 8 MPa, according to ISO 9080, and is classified as PE 80, according to ISO 12162. GM5010T2B is manufactured in blue color and contains additives to protect it against ultraviolet radiation action and photodegradation.

Meets the requirements of NBR 15561:07 and ISO 4427:07.

Application:

Blue PE 80 pressure pipes for water branch lines, distribution and adductor water systems.

Process:

Pipe 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 | 0.947 |

Typical Properties:

Plaque Properties^a

| | ASTM Method | Units | Values |
|---|-------------|-------|--------|
| Tensile Strength at Yield | D 638 | MPa | 22 |
| Tensile Strength at Break | D 638 | MPa | 36 |
| Flexural Modulus – 1% Secant | D 790 | MPa | 1090 |
| Shore D Hardness | D 2240 | - | 62 |
| Notched Izod Impact Strength | D 256 | J/m | 260 |
| Environmental Stress Cracking Resistance ^b | D 1693 | h/F50 | > 1000 |
| Vicat Softening Temperature at 10 N | D 1525 | °C | 122 |
| Deflection Temperature under Load at 0.455 MPa | D 648 | °C | 69 |
| Elongation at Yield | D 638 | % | 12 |
| Elongation at Break | D 638 | % | 910 |

(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.

Final Remarks:

- This resin meets the requirements for olefin polymers as defined in 21 CFR, section 177.1520 issued by FDA – Food and Drug Administration in force on the date of publication of this specification. The additives present are covered in appropriate regulation by FDA.
- 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.
- In some applications, Braskem has developed tailor-made resins to reach specific requirements.
- In case of doubt regarding utilization, or for other applications, please contact our Technical Assistance.
- For information about safety, handling, individual protection, first aids and waste disposal, please see MSDS. CAS Registry number: 25087-34-7.
- The mentioned values in this report can be changed at any moment without Braskem previous communication.
- Braskem does not recommend this grade for packages, parts or any kind of product manufacture that will be used for storage or contact with solution that will have internal contact with human body.
- The content of this Data Sheet replaces previous revisions published for this product.
- This resin does not contain the substance Bisphenol A (BPA, CAS # No. 80-05-7) in its composition.