# Braskem PE GP100BLXP

### High Density Polyethylene

#### Braskem

#### Message:

GP100BLXP 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 excellent mechanical properties and resistance to hydrostatic pressure and stress cracking. This resin has MRS (Minimum Required Strength) of 10 MPa, according to ISO 9080, and is classified as PE 100, according to ISO 12162. GP100BLXP 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 100 pressure pipes for water branch lines, distribution and adductor water systems.

Process:

Pipe Extrusion.

| General Information                                 |  |          |             |  |
|---|--|----------|-------------|--|
| Additive  | UV stabilizer                          |          |             |  |
| Features  | UV Stabilized                          |          |             |  |
|   | High ESCR (Stress Cracking Resistance) |          |             |  |
|   | High molecular weight                  |          |             |  |
|   | Bimodal molecular weight distribu      | ition    |             |  |
|   |  |          |             |  |
| Uses  | Piping system                          |          |             |  |
| Agency Ratings                                      | FDA 21 CFR 177.1520                    |          |             |  |
|   | ISO 12162 PE 100                       |          |             |  |
|   | ISO 4427                               |          |             |  |
|   | NBR 15561                              |          |             |  |
|   |  |          |             |  |
| Appearance  | Blue                                   |          |             |  |
| Processing Method                                   | Pipeline extrusion molding             |          |             |  |
| Physical  | Nominal Value                          | Unit     | Test Method |  |
| Specific Gravity                                    | 0.949                                  | g/cm³    | ASTM D792   |  |
| Melt Mass-Flow Rate (MFR) (190°C/5.0 kg)            | 0.25                                   | g/10 min | ASTM D1238  |  |
| Environmental Stress-Cracking Resistance            |  |          | ASTM D1693  |  |
| 50°C, 2.00mm, 10% Igepal, molded, F50               | > 1000                                 | hr       | ASTM D1693  |  |
| 50°C, 2.00mm, 100% Igepal, molded, F50              | > 1000                                 | hr       | ASTM D1693  |  |
| Hardness  | Nominal Value                          | Unit     | Test Method |  |
| Durometer Hardness (Shore D,<br>Compression Molded) | 65                                     |          | ASTM D2240  |  |
| Mechanical  | Nominal Value                          | Unit     | Test Method |  |
| Tensile Strength                                    |  |          | ASTM D638   |  |
| Yield, molding                                      | 24.0                                   | MPa      | ASTM D638   |  |
| Fracture, molding                                   | 38.0                                   | MPa      | ASTM D638   |  |
| Tensile Elongation                                  |  |          | ASTM D638   |  |

| Yield, molding                          | 10            | %    | ASTM D638               |
|---|---------------|------|-------------------------|
| Fracture, molding                       | 1400          | %    | ASTM D638               |
| Flexural Modulus - 1% Secant            |               |      |                         |
| (Compression Molded)                    | 1030          | MPa  | ASTM D790               |
| Impact                                  | Nominal Value | Unit | Test Method             |
| Notched Izod Impact (Compression        |               |      |                         |
| Molded)                                 | No Break      |      | ASTM D256               |
| Thermal                                 | Nominal Value | Unit | Test Method             |
| Deflection Temperature Under Load (0.45 |               |      |                         |
| MPa, Unannealed, Compression Molded)    | 67.0          | °C   | ASTM D648               |
| Vicat Softening Temperature             | 126           | °C   | ASTM D1525 <sup>1</sup> |
| NOTE                                    |               |      |                         |
| 1.                                      | 压力1 (10N)     |      |                         |

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