

## SABIC® HDPE P6006N

HIGH DENSITY POLYETHYLENE FOR PIPE

### DESCRIPTION

P6006N is a grade which has a high density (classified as PE4710) and multimodal distribution of the molecular mass. An universal grade for pipe extrusion which, due to keen combination of properties. It can be used for telecommunication, corrugated and spiral pipes.

### TYPICAL APPLICATIONS

P6006N is a natural High Density Polyethylene (HDPE) resin specifically designed for Pipe Extrusion. It provides excellent stress crack resistance properties (ESCR) combined with very long term hydrostatic strength.

### TYPICAL PROPERTY VALUES

Revision 20200310

| PROPERTIES                                           | TYPICAL VALUES | UNITS             | TEST METHODS |
|------------------------------------------------------|----------------|-------------------|--------------|
| <strong>POLYMER PROPERTIES</strong>                  |                |                   |              |
| <strong>Melt Flow Rate (MFR) <sup>(1)</sup></strong> |                |                   |              |
| @ 190°C & 5 kg load <sup>(1)</sup>                   | 0.23           | g/10 min          | ISO 1133     |
| @ 190°C & 21.6 kg load <sup>(1)</sup>                | 6.2            | g/10 min          | ISO 1133     |
| Density at 23°C <sup>(1)</sup>                       | 949            | kg/m <sup>3</sup> | ASTM D1505   |
| <strong>MECHANICAL PROPERTIES</strong>               |                |                   |              |
| Tensile Strength at Yield <sup>(2)</sup>             | 23             | MPa               | ASTM D638    |
| Tensile Elongation at Yield <sup>(2)</sup>           | 10             | %                 | ISO 527-1/-2 |
| Tensile modulus <sup>(2)</sup>                       | 850            | MPa               | ASTM D638    |
| Charpy Notched Impact Strength @ 23°C <sup>(3)</sup> | 25             | kJ/m <sup>2</sup> | ISO 179      |
| Flexural Creep Modulus (4point, 1min) <sup>(3)</sup> | 1050           | MPa               | DIN 19537-2  |
| Hardness (Shore D) <sup>(3)</sup>                    | 64             | -                 | ASTM D2240   |
| <strong>THERMAL PROPERTIES</strong>                  |                |                   |              |
| Vicat Softening Point                                | 74             | °C                | ASTM D1525   |
| Brittleness Temperature                              | <80            | °C                | ASTM D746    |
| OIT (210°C)                                          | >20            | Minutes           | EN 728       |

(1) Typical values: not to be construed as specification limits.

(2) Test specimen according to ISO 527-2 type 1 BA, thickness 2mm with 50mm/min test speed.

(3) Based on compression molded sheet

### PROCESSING CONDITIONS

Typical processing conditions for P6006N Melt temperature: 190-220°C

### STORAGE AND HANDLING

Polyethylene material / compound should be stored in a manner to prevent a direct exposure to sunlight and/or heat. The storage area should also be dry and preferably don't exceed 50°C. SABIC would not give warranty to bad storage conditions lead to quality deterioration and inadequate product performance. It is advisable to process PE resin within 6 months after delivery.



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