SABIC® HDPE P6006

High Density Polyethylene

SABIC Americas, Inc.

Message:

P6006 is black compound high density (class MRS 10 - PE 100) Polyethylene with bimodal distribution of molecular mass. It is specifically designed for Pressure Pipe applications. It provides excellent stress crack resistance properties (ESCR) combined with very good long term hydrostatic strength. Pressure pipes for drinking water, irrigation, gas distribution and waste water pipes. It is also recommended for manufacture of chemical liners and containers.

| General Information | | | | | |
|--|---------------------------------------|----------|------------------|--|--|
| Features | Bimodal Molecular Weight Distribution | | | | |
| | Food Contact Acceptable | | | | |
| | High ESCR (Stress Crack Resist.) | | | | |
| | | | | | |
| Uses | Containers | | | | |
| | Irrigation Applications | | | | |
| | Liners | | | | |
| | Piping | | | | |
| | | | | | |
| Appearance | Black | | | | |
| Forms | Pellets | | | | |
| Processing Method | Pipe Extrusion | | | | |
| Physical | Nominal Value | Unit | Test Method | | |
| Density ¹ | 0.959 | g/cm³ | ISO 1183 | | |
| Melt Mass-Flow Rate (MFR) | | | ISO 1133 | | |
| 190°C/21.6 kg | 6.2 | g/10 min | | | |
| 190°C/5.0 kg | 0.23 | g/10 min | | | |
| Carbon Black Content | 2.3 | % | ISO 6964 | | |
| Hardness | Nominal Value | Unit | Test Method | | |
| Shore Hardness (Shore D) | 63 | | ISO 868 | | |
| Mechanical | Nominal Value | Unit | Test Method | | |
| Tensile Modulus (2.00 mm, Compression Molded) | 900 | MPa | ISO 527-2/1BA/50 | | |
| Tensile Stress (Yield, 2.00 mm, Compression Molded) | 23.0 | MPa | ISO 527-2/1BA/50 | | |
| Tensile Strain (Yield, 2.00 mm, Compression Molded) | 9.0 | % | ISO 527-2/1BA/50 | | |
| Impact | Nominal Value | Unit | Test Method | | |
| Charpy Notched Impact Strength | | | ISO 179 | | |
| -30°C | 13 | kJ/m² | | | |
| 23°C | 26 | kJ/m² | | | |
| Thermal | Nominal Value | Unit | Test Method | | |

| Vicat Softening Temperature | 74.0 | °C | ISO 306 |
|----------------------------------|---------------|------|---------|
| Oxidation Induction Time (210°C) | > 20 | min | EN 728 |
| Extrusion | Nominal Value | Unit | |
| Melt Temperature | 190 to 220 | °C | |
| NOTE | | | |
| 1. | 23°C | | |

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