

P6006 Black

HDPE for Pipe Extrusion

P6006 is a black High Density Polyethylene (HDPE) resin specifically designed for Pipe Extrusion. It provides excellent stress crack resistance properties (ESCR) combined with very good long term hydrostatic strength.

Typical Applications

SABIC HDPE P6006 (black) is a grade, which has a high density (class MRS 10 - PE 100) and a bimodal distribution of the molecular mass. An universal grade for pipe extrusion which, due to a keen combination of properties, is particularly suitable for drinking water, gas distribution and waste water pipes. It is also used for the manufacture of chemical apparatus and containers.

Polymer Properties	Unit	Values	Test Method
Melt Flow Rate (MFR) (190°C/5.0 kg) (190°C/21.6 kg)	g/10 min.	0.22 6.4	ISO 1133
Carbon Black Content	%	2.25	ISO 6964
Density ⁽¹⁾	kg/m ³	959	ISO 1183
Mechanical Properties ^{(1) (2)}			
Tensile Test ^{(3) (4)}			
Stress at Yield	Mpa	23	ISO 527-2
Strain at Yield	%	9	
Tensile Modulus	Mpa	900	
Charpy Impact Notched at 23 °C	kJ/m ²	26	ISO 179
at -30 °C		13	
Hardness Shore D	-	63	ISO 868
Thermal Properties			
Vicat Softening Temperature ^{(1) (2)} at 50 N (VST/B)	°C	74	ISO 306
DSC Test (Melting Point)	°C	124-128	DIN 53765
OIT 210 °C	min	> 20	EN 728

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(1) Compression moulding conditions of test specimen (according to ISO 293) :
moulding temp: 160 °C, cooling rate: 40 °C/min

(2) Conditioning of test specimen: temp. 23 °C, relative humidity 50 %, 24 hours

(3) Speed of testing: 50 mm/min

(4) Test specimen according to ISO 527-2 type 1BA, thickness 2 mm

Processing Conditions

Recommended melt temperatures: 190-220 °C

Food Regulations

Certificate is available on request.