

# SABIC® HDPE P6006

HIGH DENSITY POLYETHYLENE FOR PIPE

## DESCRIPTION

P6006 is black compound high density (class MRS 10 - PE 100) Polyethylene with multimodal 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.

## TYPICAL APPLICATIONS

P6006 Pressure pipes for drinking water, irrigation, gas distribution and waste water pipes. It is also recommended for manufacture of chemical liners and containers.

## TYPICAL PROPERTY VALUES

PROPERTIES	TYPICAL VALUES	UNITS	TEST METHODS
<b>POLYMER PROPERTIES</b>			
<b>Melt Flow Rate (MFR) <sup>(1)</sup></b>			
@ 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
<b>Carbon black content <sup>(1)</sup></b>	2.25	%	ISO 6964
<b>Density at 23°C <sup>(1)</sup></b>	959	kg/m <sup>3</sup>	ASTM D1505
<b>MECHANICAL PROPERTIES</b>			
<b>Tensile Strength at Yield <sup>(2)</sup></b>	23	MPa	ASTM D638
<b>Tensile Elongation at Yield <sup>(2)</sup></b>	9	%	ISO 527-1/-2
<b>Tensile modulus <sup>(2)</sup></b>	900	MPa	ASTM D638
<b>Charpy Impact Notched @ 23°C <sup>(3)</sup></b>	26	kJ/m <sup>2</sup>	ISO 179
<b>Charpy Impact Notched @ -30°C <sup>(3)</sup></b>	13	kJ/m <sup>2</sup>	ISO 179
<b>Hardness (Shore D) <sup>(3)</sup></b>	63	-	ASTM D2240
<b>THERMAL PROPERTIES</b>			
<b>Vicat Softening Point @ 50N (VST/B)</b>	74	°C	ISO 306
<b>OIT (210°C)</b>	>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) Properties are based on 20 m film produced at 4 BUR using 100% P6006.

## PROCESSING CONDITIONS

Typical processing conditions for P6006

Melt temperature: 190-220°C. It is recommended to dry the material prior to processing.

## FOOD REGULATION

Detailed information is provided in the relevant Material Safety Datasheet and or Standard Food Declaration, available on the Internet ([www.SABIC.com](http://www.SABIC.com)). Additional specific information can be requested via your local Sales Office.