



# P5510 (Provisional Data sheet)

Black High Density Polyethylene for Pipes

## Product Description

P5510 is black compounded high density, designed to be class MRS 8 - PE 80, Polyethylene with a 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.

## Typical Applications

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

## Typical data

Properties	Unit	Value <sup>(1)</sup>	Test Method
<b>Resin Properties</b>			
Melt Flow Rate @ 190°C & 5 kg load	g/10 min.	0.43	ISO 1133
@ 190°C & 21.6 kg load		10.3	
Carbon Black content	%	2.25	ISO 6964
Density @ 23°C	kg/m <sup>3</sup>	956	ISO 1183
<b>Mechanical Properties<sup>(2)</sup></b>			
Tensile Strength @ Yield <sup>(3)</sup>	MPa	22	ISO 527-2
Tensile Elongation @ Yield <sup>(3)</sup>	%	8	
Tensile Modulus <sup>(3)</sup>	MPa	850	
Charpy Impact Notched @ 23°C	kJ/m <sup>2</sup>	24	ISO 179
@ -30°C		8	
Hardness (Shore D)	-	59	ISO 868
<b>Thermal Properties</b>			
Vicat Softening Point @ 50N (VST/B)	°C	70	ISO 306
DSC (Melting Point)	°C	123 - 127	DIN 53765
OIT (210°C)	Min	>20	EN 728

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

(2) Based on Compression molded sheet

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

## Processing Conditions

Typical processing conditions for P5510

Melt temperature: 190 - 220°C

### **Food Regulation**

P5510 grade is suitable for Food contact application. Detailed information is provided in relevant Material Safety Datasheet and for additional specific information please contact SABIC local representative for certificate.

### **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 which may lead to quality deterioration and inadequate product performance. It is advisable to process PE resin within 6 months after delivery.

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