

PRODUCT NAME: HDPE P6006

Supplier: SABIC®

Product Identification & 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.

Physical Properties

Property	Typical Values	Units	Test Methods
Density/Specific Gravity	959	kg/m ³	ASTM D1505
Melt Flow Rate (MFR) at 190°C and 5 kg	0.23	g/10 min	ISO 1133
Melt Flow Rate (MFR) at 190°C and 21.6 kg	6.2	g/10 min	ISO 1133
Carbon black content	2.25	%	ISO 6964

Mechanical Properties

Property	Typical Values	Units	Test Methods
Tensile Strength at Yield	23	Mpa	ASTM D638
Tensile Elongation at Yield	9	%	ISO 527-1/-2
Tensile Modulus	900	Mpa	ASTM D638
Charpy Impact Notched @ 23°C	26	kJ/m ²	ISO 179
Charpy Impact Notched @ -30°C	13	kJ/m ²	ISO 179
Hardness (Shore D)	63	-	ASTM D2240

Thermal Properties

Property	Typical Values	Units	Test Methods
Vicat Softening Point @ 50N (VST/B)	74	°C	ISO 306
OIT (210°C)	>20	Minutes	EN 728

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). Additional specific information can be requested via your local Sales Office.

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.

DISCLAIMER

The information contained herein may include typical properties of our products or their typical performances when used in certain typical applications. Actual properties of our products, in particular when used in conjunction with any third party material(s) or for any non-typical applications, may differ from typical properties. It is the customer's responsibility to inspect and test our product(s) in order to satisfy itself as to the suitability of the product(s) for its and its customers particular purposes. The customer is responsible for the appropriate, safe and legal use, processing and handling of all product(s) purchased from us. Nothing herein is intended to be nor shall it constitute a warranty whatsoever, in particular, warranty of merchantability or fitness for a particular purpose.

Revision: This datasheet replaces all previous versions. **Revision Date:** Mar 2026