

SABIC® P6006

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.

Physical Properties	Metric	English	Comments
Density	0.959 g/cc	0.0346 lb/in ³	ASTM D1505

Oxidative Induction Time (OIT)	>= 20 min @Temperature 210 °C	>= 20 min @Temperature 410 °F	EN 728
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Carbon Black Loading	2.25 %	2.25 %	ISO 6964
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Melt Flow	0.23 g/10 min @Load 5.00 kg, Temperature 190 °C	0.23 g/10 min @Load 11.0 lb, Temperature 374 °F	ISO 1133
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	6.2 g/10 min @Load 21.6 kg, Temperature 190 °C	6.2 g/10 min @Load 47.6 lb, Temperature 374 °F	ISO 1133
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Mechanical Properties	Metric	English	Comments
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Hardness, Shore D

63

63

Properties are based
on 20 m film produced
at 4 BUR using 100%
P6006.; ASTM D2240

Tensile Strength, Yield

23.0 MPa

3340 psi

Test specimen
according to ISO 527-2
type 1 BA, thickness
2mm with 50mm/min
test speed.; ASTM
D638

Elongation at Yield

9.0 %

9.0 %

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

Tensile Modulus

0.900 GPa

131 ksi

Test specimen according to ISO 527-2 type 1 BA, thickness 2mm with 50mm/min test speed.; ASTM D638

Charpy Impact, Notched

2.60 J/cm²

12.4 ft-lb/in²

Properties are based on 20 m film produced at 4 BUR using 100% P6006.; ISO 179

1.30 J/cm²
@Temperature -30.0 °C

6.19 ft-lb/in²
@Temperature -22.0 °F

Properties are based on 20 m film produced at 4 BUR using 100% P6006.; ISO 179

Thermal Properties

Metric

English

Comments

Vicat Softening Point

74.0 °C

165 °F

@ 50N (VST/B); ISO 306