



## TECHNICAL DATASHEET

### PE 100 Black

#### PRODUCT DESCRIPTION

PE 100 Black is a High Density Polyethylene, black colored resin. The product is classified as PE 100 and provides excellent environmental stress crack resistance properties (ESCR) combined with very good long term hydrostatic strength. It has very high impact and stiffness properties.

#### TRPICAL APPLICATION

Leading PE for pressure pipe, for gas and water distribution, sewage and drainage.

#### TYPICAL DATA

Physical	Method	Unit	Value
Density	ISO 1183	g/cm <sup>3</sup>	0.959
Melt Flow Rate (190°C /5kg)	ISO 1133	g/10 min	0.23
Melt Flow Rate (190°C /21.6kg)	ISO 1133	g/10 min	6.4
Staudinger Index Jg	ISO 1628	MI/g	380
Vicat Softening Temperature(VST/B/50 K/h (50N))	ISO 306	°C	74

Mechanical	Method	Unit	Value
Tensile Modulus (23°C, v = 1mm/min, Secant)	ISO 527-1, -2	MPa	900
Tensile Stress @ Yield (23°C, v = 50 mm/min)	ISO 527-1, -2	MPa	23
Tensile Strain @ Yield (23°C, v = 50 mm/min)	ISO 527-1, -2	%	9
Tensile Creep Modulus 1h [Test stress in MPa]	ISO 899-1	MPa	850 [2.0]
Tensile Creep Modulus 1000h [Test stress in MPa]	ISO 899-1	MPa	360 [2.0]
Maximum Elongation TD	EN 638	%	>350
MRS Classification	ISO/TR 9080	MPa	10
Flexural Stress at 3,5% deflection	ISO 178	MPa	21
FNCT (4.0 MPa, 2% Arkopal N 100, 80°C)	ISO 16770	h	>1000
Flexural Creep Modulus	DIN 19537-2		
(4 Point loading method, 1 min-value)		MPa	1100
(4 Point loading method, 24 h-value)		MPa	560
(4 Point loading method, 2000 h-value)		MPa	330
Charpy Notched Impact Strength	ISO 179		
(23°C)		kJ/m <sup>2</sup>	26
(-30°C)		kJ/m <sup>2</sup>	13
Shore Hardness (Shore D (3 sec))	ISO 868		63
Oxidation Induction Time (OIT) (210°C)	EN 728	min	30
Carbon Black Content	ISO 6964	%	2.25
Odour Treshold	EN1622/EN1240		<2

#### Recommended Temperature:

Melt temperature : 190–220 °C, Injection moulding temperatures : 200–280 °C.

#### Note:

The above properties are not to be construed as specifications.