PE 100 Material Properties

Specific material properties PE

	Property	Standard	Unit	PE100
	Specific density at 23°C	ISO 1183	g/cm3	95
	Melt flow index MFR 190/5 MFR 190/2,16 MFR 230/5 MFI range	ISO 1133 ISO1872/1873	g/10min	0,3 <0,1 T003
Mechanical Properties	Tensile stress at yield	ISO 527	MPa	25
	Elongation at yield	ISO 527	%	9
	Elongation at break	ISO 527	%	>600
	Impact strength unnotched at +23°C Impact strength unnotched at -30°C	ISO 179	2 kJ/m	no break no break
	Impact strength notched at +23°C Impact strength notched at 0°C Impact strength notched at -30°C	ISO 179	kJ/m2	16 6
	Ball indentation hardness acc. Rockwell	ISO 2039-1	MPa	46
	Flexural strength (3,5% flexural stress)	ISO 178	MPa	24
	Modulus of elasticity	ISO 527	MPa	1100
Thermal Properties	Vicat-Softening point VST/B/50	ISO 306	°C	77
	Heat deflection temperature HDT/B	ISO 75	°C	75
	Linear coefficient of thermal expansion	DIN 53752	K-1 x 10-4	18
	Thermal conductivity at 20 °C	DIN 52612	W/(mxK)	4
	Flammability	UL94 DIN 4102	--	94-HB B2
Electrical Properties	Specific volume resistance	VDE 0303	OHM cm	16 >10
	Specific surface resistance	VDE 0303	OHM	>1013
	relative dielectric constant at 1 MHz	DIN 53483	--	23
	Dielectric strength	VDE 0303	kV/mm	70
	Physiologically non-toxic	EEC 90/128	--	Yes
	FDA	--	--	Yes
	UV stabilized	--	--	carbon black
	Colour	--	--	black
	MRS - Classification	ISO 9080	N/mm²	10

Note: The mentioned values are recommended values for the particular material.

Material Properties

Specific properties PPh

	Property	Standard	Unit	PP-H
	Specific density at 23°C	ISO 1183	g/cm3	91
	Melt flow index MFR 190/5 MFR 190/2,16 MFR 230/5 MFI range	ISO 1133 ISO1872/1873	g/10min	0,5 1,25 M003
Mechanical Properties	Tensile stress at yield	ISO 527	MPa	30
	Elongation at yield	ISO 527	%	10
	Elongation at break	ISO 527	%	>300
	Impact strength unnotched at +23°C Impact strength unnotched at -30°C	ISO 179	kJ/m2	no break
	Impact strength notched at +23°C Impact strength notched at 0°C Impact strength notched at -30°C	ISO 179	kJ/m2	50 5
	Ball indentation hardness acc. Rockwell	ISO 2039-1	MPa	60
	Flexural strength (3,5% flexural stress)	ISO 178	MPa	28
	Modulus of elasticity	ISO 527	MPa	1300
Thermal Properties	Vicat-Softening point VST/B/50	ISO 306	°C	91
	Heat deflection temperature HDT/B	ISO 75	°C	96
	Linear coefficient of thermal expansion	DIN 53752	K-1 x 10-4	16
	Thermal conductivity at 20 °C	DIN 52612	W/(mxK)	22
	Flammability	UL94 DIN 4102	--	94-HB B2
Electrical Properties	Specific volume resistance	VDE 0303	OHM cm	>1016
	Specific surface resistance	VDE 0303	OHM	>1013
	relative dielectric constant at 1 MHz	DIN 53483	--	23
	Dielectric strength	VDE 0303	kV/mm	75
	Physiologically non-toxic	EEC 90/128	--	Yes
	FDA	--	--	Yes
	UV stabilized	--	--	No
	Colour	--	--	Ral 7032 grey

*) ..... Fire classification B1 only valid for wall thickness of 2-10mm