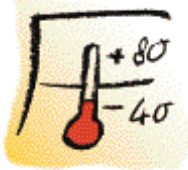


Material data

Material PE 100



Operating temp. range from -40°C bis +80°C



Low specific weight



Physiologically acceptable



Resistant to impact



Light and weather resistant



No water absorption and swelling



Very good chemical resistance



High abrasion resistance



Outstanding electrical insulation properties



Easy connection through welding

Material data

Material PE 100

PE 100 Material properties

Property	Test standard	Test method / test sample	Units	PE 80	PE 100	PE-EL
<i>Mechanical properties</i>						
Density	ISO 1183	method C	g/cm ³	0.95	0.958	0.99
Melt index group	ISO 1133	MFR 190/5	group no.	005	003	003
<i>Tensile test</i>						
	DIN EN ISO 527	Type 1B				
Yield stress			MPa	22	23	26
Elongation at yield			%	9	9	7
Elongation at break			%	≥ 300	≥ 300	≥ 60
Tensile-E-Modulus			MPa	800	900	1100
<i>Impact resistance test</i>						
	DIN EN ISO 179					
Impact strength		80 x 10 x 4 mm	kJ / m ²	without break	without break	without break
Notched impact strength		V notched	kJ / m ²	12	①	5
<i>Surface hardness</i>						
Ball indentation hardness	DIN EN ISO 2039-1		MPa	40	①	50
Shore hardness	ISO 868	method D	–	63	61	63
<i>Thermal properties</i>						
Crystalline melting range	DIN 53736	DSC	K (°C)	399-403 (126-130)	①	399-403 (126-130)
Average thermal coefficient of elongation	DIN 53752	method A	K - 1	1.8 x 10 ⁻⁴	1.3 x 10 ⁻⁴	1.8 x 10 ⁻⁴
Thermal conductivity	DIN 52612	PIC. 500 x 500 x 20mm	W/m –K	0.38	①	0.38
<i>Electrical properties</i>						
Dielectric strength	VDE 0303-21		kV/mm	47	22	–
Volume resistivity	DIN IEC 93		Ohm•cm	> 10 ¹⁶	①	≥ 10 ⁶
Surface resistance	DIN IEC 167		Ohm	10 ¹⁴	①	≥ 10 ⁶
Track resistance	DIN IEC 112	method KC	V	600		–
<i>Other properties</i>						
Fire behaviour	DIN 4102		class	B2	B2	B2
Water absorption	DIN 53495	Method C	%/24hrs.	negligible	negligible	< 0.006
Physiological acceptability	acc. to BgVV/KTW/FDA®			yes	yes	no
Chemical resistance	DIN 8075 suppl.			conforms②	conforms②	conforms②

Note: 1 MPa ~ 1 N/mm²

① Values yet to be determined

② Please refer to SIMONA® SIMCHEM

Material data

Material PE 100

Internal pressure creep curves for PE 100 pipes

Internal pressure creep curves for PE 100 pipes

