

PVDF

Mechanical properties	Test method	Test environment	Unit	Value
Tensile strength	ISO 527	yield	MPa	50
Tensile strain	ISO 527	break	%	>20
Tensile modulus	ISO 527	-	GPa	2,3
Bending modulus	DIN 53453	-	GPa	2
Compression strength	ISO 604	1% deformation	MPa	17
Compression strength	ISO 604	2% deformation	MPa	32
Creep strength	- -	$\sigma_{B/1000}$, static load, 1000 h	MPa	34
Creep strength	- -	$\sigma_{1/1000}$, 1% strain, 1000 h	MPa	3
Impact strength	ISO 179	Charpy, notched	kJ/m ²	10
Impact strength	ISO 179	Charpy, unnotched	kJ/m ²	no break
Hardness	ASTM D2240	-	Shore D	73-85
Hardness	ISO 2039	Rockwell	-	M75
Hardness	ISO 2039	-	MPa	110
Coefficient of friction	- -	P=0,05 MPa, v=0,6 m/s, steel	-	0,3

Thermal properties	Test method	Test environment	Unit	Value
Service temperature	- -	continuous	°C	135
Service temperature	- -	short term	°C	150
Melting point	- -	-	°C	178
Glass transition temperature	- -	-	°C	-18
Heat distortion temperature	ISO 75	0,45 MPa	°C	140
Heat distortion temperature	ISO 75	1,82 MPa	°C	105
Coefficient of linear thermal expansion	- -	23-150 °C	10 ⁻⁵ K ⁻¹	14,5
Coefficient of linear thermal expansion	- -	23-100 °C	10 ⁻⁵ K ⁻¹	13,0
Thermal conductivity	- -	-	W/m,K	0,19
Specific heat	- -	-	kJ/kg,K	1,2

Electrical properties	Test method	Test environment	Unit	Value
Dielectric constant	IEC 60250	ϵ , 100 Hz	-	7,4
Dielectric constant	IEC 60250	ϵ , 1 MHz	-	6,0
Loss factor	IEC 60250	$\tan \delta$, 100 Hz	-	0,025
Loss factor	IEC 60250	$\tan \delta$, 1 MHz	-	0,165
Dielectric strength	IEC 60243	-	kV/mm	18
Volume resistivity	IEC 60093	-	ohm cm	$>10^{14}$
Surface resistivity	IEC 60093	-	ohm	$>10^{13}$
Arc resistance	ASTM D495	-	s	>30
Tracking resistance	IEC 60112	-	-	600
Refractive index	ASTM D542	n_D^{25}	-	1,42

Other properties	Test method	Test environment	Unit	Value
Density	- -	-	g/cm ³	1,78
Water absorption	- -	immersion, 24 h, 23 °C	%	0,01
Water absorption	- -	equilibrium, 23 °C, RH 50%	%	0,05
Water absorption	- -	saturation, immersion, 23 °C	%	0,05
Oxygen index	ISO 4589	-	%	44
Oxygen index	ASTM D2863	-	%	43
Flammability	UL 94	3 mm	-	V0
Flammability	UL 94	1,5 mm	-	V0

The data presented are taken from our suppliers and represent our best knowledge. The values are given in good faith. They should not constitute the basis for calculations, construction etc. The responsibility for verifying material data rests with the end-user.