PVDF Rod - Technical Data Sheet

Physical Properties	Value	Unit	Method of verification
Density	1.78	g/cm³	ISO 1183
Moisture pick-up till saturation (in normal climate 23 °C)	0.04	%	ISO 62
Water absorption till saturation (in water at 23 °C)	0.04	%	ISO 62

Mechanical properties	Value	Unit	Method of verification
Tensile stress at yield (v = 50 mm/min)	50	N/mm2	ISO 527-2
Tensile stress at break (v = 5 mm/min)	-	N/mm2	ISO 527-2
Nominal percentage elongation at break	> 50	%	ISO 527-2
Tensile modulus of elasticity	2000	N/mm2	ISO 527-2
Flexural modules of elasticity	-	N/mm2	ISO 178
Ball indentation hardness (value at 30 s)	100	N/mm2	ISO 2039-1
Rockwell hardness	M 75	-	ISO 2039-2
Charpy impact strength (23 °C)	n. br. **	kJ/m2	ISO 179/1eU
Charpy impact strength - notched (23 °C)	6	kJ/m2	ISO 179/1eA

Thermal properties	Value	Unit	Method of verification
Temperature for using in air (maximum)	160	°C	Max. short term
Temperature for using in air (maximum)	150	°C	Max. lasting
Temperature for using in air (minimum)	-40	°C	-
Heat distortion temperature (HDT A process)	105	°C	ISO 75-2
Coefficient of linear expansion, at length (23-60)°C	1.2·10-4	1/K	DIN 53752
Thermal conductivity (23 °C)	0.19	W/(K·m)	DIN 52612
Flammability according UL standard	V 0	Grade	UL 94
Vicat softening temperature (VST/B/50)	-	°C	ISO 306
Melting point DSC (10 K/min)	169	°C	ISO 3146

Electrical properties	Value	Unit	Method of verification
Specific volume resistivity	1012	Ω ·m	IEC 60093
Specific surface resistivity	1013	Ω	IEC 60093
Dielectric factor (at 1 MHz)*	6	-	IEC 60250
Dielectric factor (at 100 Hz)*	7.5	-	IEC 60250
Dissipation factor (at 1 MHz)*	0.165	-	IEC 60250
Dissipation factor (at 100 Hz)*	0.025	-	IEC 60250
Dielectric strength K20/K20	20	kV/mm	IEC 60243-1
Comparative tracking index (CTI)	600	-	IEC 60112

* Values do not apply to black coloured qualities
** n. br. = no break