



PEEK 140/80x3000 mm black

Article No.	P1500361
Category	PEEK

Technical Properties

Density & Weight

Property	Value	Unit	Test standard
Density	1.31	g/cm³	ISO 1183

Moisture Absorption

Property	Value	Unit	Test standard
Water absorption to saturation	0.2	%	ISO 62
Water Absorption to Saturation	0.45	%	ISO 62

Tensile Properties

Property	Value	Unit	Test standard
Tensile Strength	112	MPa	ISO527-2
Modulus of elasticity (tensile)	4400	MPa	ISO 527-2
Breakdown Voltage	67	MPa	ISO 527
Break Elongation	20	%	ISO 527-2

Flexural Properties

Property	Value	Unit	Test standard
Flexural Strength	110	MPa	ISO 527-2

Impact Resistance

Property	Value	Unit	Test standard
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Mechanical Properties			
Modulus of Elasticity	2.3	GPa	ISO 178
Tensile Strength	55	MPa	ISO 527-1
Elongation at Break	10	%	ISO 527-1
Impact Resistance (Charpy)	92	kJ/m²	ISO 179/1eU
Notched impact strength (Charpy)	3.5	kJ/m²	ISO 179/1eA

Hardness

Property	Value	Unit	Test standard
Hardness Shore D	90	° Shore D	DIN EN ISO 868
Ball pressure hardness	230	MPa	ISO 2039-1

Temperature Limits

Property	Value	Unit	Test standard
Melting point	340	°C	ISO 3146
Maximal operating temperature (short-term)	291	°C	UL746B
Maximum Operating Temperature	245	°C	
Minimum temperature	-35	°C	
Heat deflection temperature (HDT/A)	160	°C	ISO 75-2
Heat deflection temperature (HDT/B)	240	°C	ISO 75
Vicat softening temperature (VST/B/50)	50	°C	ISO 306

Thermal Conductivity

Property	Value	Unit	Test standard
Thermal Conductivity	0.25	W/(m·K)	DIN 52612

Thermal Expansion

Property	Value	Unit	Test standard
Thermal Expansion Coefficient	0.5	10 ⁻⁴ /K	DIN 11359

Insulation Properties

Property	Value	Unit	Test standard
Dielectric Strength	24	kV/mm	IEC 60243-1
Volume Resistivity	10 ¹⁴	Ω·cm	IEC 60093
Dielectric Constant (1 MHz)	3.6	-	IEC 60250
Dielectric Constant (100 Hz)	3.2	-	IEC 60250
Dielectric loss factor (1 MHz)	0.0	-	IEC 60250
Dielectric loss factor (100 Hz)	0.0	-	IEC 60250

Static spread

Property	Value	Unit	Test standard
Surface Resistivity	10 ¹³	Ω	IEC 60093
Comparative Tracking Index (CTI)	150	V	IEC 60112

Fire Classification

Property	Value	Unit	Test standard
Flammability Classification (UL 94)	0		UL 94