

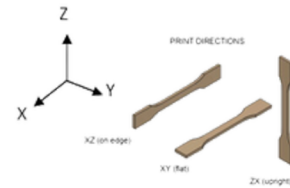


VULCAN PEKK- SC

Material class: Polyetherketoneketone (semi-crystalline)

Flame-Retardant & Superior Thermal Resistance

- Higher melting point (T_m) and better thermal stability (compared to PEKK-A)
- Superior mechanical and thermal properties



Property	Method	Units	Value XZ** (on edge)	Value ZX** (upright)
Mechanical properties				
Tensile Modulus	ISO 527 Type 1BA	MPa	3400	1300
Tensile Strength at yield	ISO 527 Type 1BA	MPa	no yield	no yield
Tensile Strength at break	ISO 527 Type 1BA	MPa	100	93
Elongation at yield	ISO 527 Type 1BA	%	no yield	no yield
Elongation at break	ISO 527 Type 1BA	%	5.4	4.6
Flexural Modulus	ISO 178	Mpa	3010	2725
Flexural Stress at break	ISO 178	Mpa	130	112
Flexural Strain at break	ISO 178	%	6	5.8
Impact Strength	ISO 180	J/m		
Impact Strength	ISO 180	kJ/m2		

** XZ/ZX Bars cut out of 3D printed plates on edge and in Z direction printed according to guidelines



Property	Method	Units	Value
Thermal properties			
Glass transition temperature (Tg)	ISO 11357-1	°C	161
Melting temperature	ISO 11357-3	°C	332
Vicat softening temperature	ISO 306/B50	°C	
Temp. of deflection under load (1.80 Mpa)*	ISO 75-1/-2	°C	172
Temp of deflection under load (0.45 Mpa)*	ISO 75-1/-2	°C	
Physical properties			
Filament diameter (+/- 0.05 mm)		mm	1.75
Density	ISO 1183-1	g/cm3	1.27
Humidity absorption (70 °C, 62% r.H.)*	ISO1110	%	
Water absorption (23 °C saturated)*	ISO 62	%	

* Injection moulding data



Recommended processing conditions

Nozzle temperature	Recommended 420 °C (380 °C - 420°C)
Bed temperature	Recommended 150 °C (120 °C - 160 °C)
Chamber temperature	Recommended 150 °C (90 °C - 160 °C)
Bed material	(Textured) PEI Sheet, Glass, Carbon Fiber Plate
Adhesion promoter	Magigoo HT
Nozzle diameter	≥ 0.4mm
Print speed	Recommended: 30 mm/s (15-150 mm/s)
Drying instructions filament	120 °C for 6-8 hours

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