

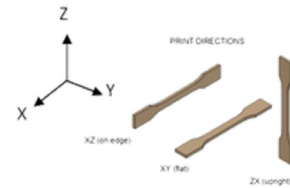


VULCAN PEKK-A

Material class: Polyetherketoneketone (Amorphous)

Flame-Retardant & Chemical Resistance

- Flame retardant V0 at 0.8 mm (UL)
- EN45545 R1 HL2 & FAR 25.853 approved
- Thermal resistance



Property	Method	Units	Value XZ** (on edge)	Value ZX** (upright)
Mechanical properties				
Tensile Modulus	ISO 527 Type 1BA	MPa	2700	2500
Tensile Strength at yield	ISO 527 Type 1BA	MPa	100	no yield
Tensile Strength at break	ISO 527 Type 1BA	MPa	65	86
Elongation at yield	ISO 527 Type 1BA	%	5.5	no yield
Elongation at break	ISO 527 Type 1BA	%	8.1	4.7
Flexural Modulus	ISO 178	Mpa	3020	2730
Flexural Stress at break	ISO 178	Mpa	134	109
Flexural Strain at break	ISO 178	%	6.1	5.6
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	158
Melting temperature	ISO 11357-3	°C	305
Vicat softening temperature	ISO 306/B50	°C	
Temp. of deflection under load (1.80 Mpa)*	ISO 75-1/-2	°C	139
Temp of deflection under load (0.45 Mpa)*	ISO 75-1/-2	°C	
Physical properties			
Filament diameter (+/- 0.05 mm)		mm	1.75/2.85
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 380 °C (350 °C - 400 °C)
Bed temperature	Recommended 160 °C (120 °C - 160 °C)
Chamber temperature	Recommended 150 °C (70 °C - 150 °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 4-8 hours

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