

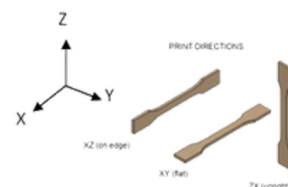


VULCAN 1010

Material class: Polyetherimide (PEI)

Flame-Retardant & Low Smoke

- Flame retardant V0 at 1.5mm (UL)
- Low smoke & toxicity
- Natural base material meets the requirements of FAR 25.853, IEC 61249-2-21, IPC 4101E, JEDEC JS709B



Property	Method	Units	Value XZ** (on edge)	Value ZX** (upright)
Mechanical properties				
Tensile Modulus	ISO 527 Type 1BA	MPa	3900	2900
Tensile Strength at yield	ISO 527 Type 1BA	MPa	111	89
Tensile Strength at break	ISO 527 Type 1BA	MPa	64	12.8
Elongation at yield	ISO 527 Type 1BA	%	6.4	4.4
Elongation at break	ISO 527 Type 1BA	%	7.8	4.4
Flexural Modulus	ISO 178	Mpa		
Flexural Stress at break	ISO 178	Mpa		
Flexural Strain at break	ISO 178	%		
Impact Strength	ISO 180	J/m		
Impact Strength	ISO 180	kJ/m2		



Property	Method	Units	Value
Thermal properties			
Glass transition temperature (Tg)	ISO 11357-1	°C	217
Melting temperature	ISO 11357-3	°C	
Vicat softening temperature	ISO 306/B50	°C	
Temp. of deflection under load (1.80 Mpa)*	ISO 75-1/-2	°C	192
Temp of deflection under load (0.45 Mpa)*	ISO 75-1/-2	°C	209
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	%	1.27

* Injection moulding data



Recommended processing conditions

Nozzle temperature	Recommended 380 °C (360 °C - 400°C)
Bed temperature	Recommended 190 °C (160 °C - 210 °C)
Chamber temperature	Recommended 190 °C (160 °C - 210 °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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