

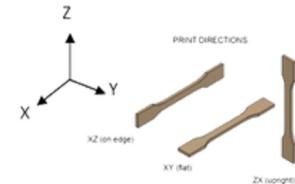


## VULCAN 9085

Material class: Polyetherimide (PEI)

### Flame-Retardant & Low Smoke

- Flame retardant V0 at 1.5mm (UL)
- Base material meets the requirements of FAR 25.853, OSU 55/55 and EN45545 R6-HL3
- Low smoke & toxicity



Property	Method	Units	Value XZ** (on edge)	Value ZX** (upright)
<b>Mechanical properties</b>				
Tensile Modulus	ISO 527 Type 1BA	MPa	2400	2000
Tensile Strength at yield	ISO 527 Type 1BA	MPa	83	no yield
Tensile Strength at break	ISO 527 Type 1BA	MPa	83	51
Elongation at yield	ISO 527 Type 1BA	%	6.1	no yield
Elongation at break	ISO 527 Type 1BA	%	6.1	3.3
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/m <sup>2</sup>		

Property	Method	Units	Value
<b>Thermal properties</b>			
Glass transition temperature (Tg)	ISO 11357-1	°C	186
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	
Temp of deflection under load ( 0.45 Mpa)*	ISO 75-1/-2	°C	
<b>Physical properties</b>			
Filament diameter (+/- 0.05 mm)		mm	1.75
Density	ISO 1183-1	g/cm3	1.34
Humidity absorption (70 °C, 62% r.H.)*	ISO1110	%	
Water absorption (23 °C saturated)*	ISO 62	%	0.7

\* Injection moulding data

## Recommended processing conditions

Nozzle temperature	Recommended 375 °C (350 °C - 380°C)
Bed temperature	Recommended 150 °C (120 °C - 160 °C)
Chamber temperature	Recommended 160 °C (70 °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 4-6 hours

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