Tectonic 3D

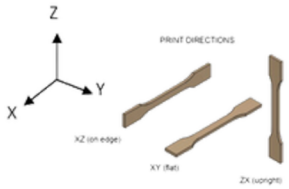
Technical data sheet

KRATIR rPEEK CF

Material class: Polyether Ether Ketone / rCarbon Fiber

High Thermal Resistance & 100% Recycled

- Outstanding mechanical properties
- Excellent Z-strength
- Very good surface finish
- **100% recycled polymer & carbon fiber**



Property	Method	Units	Value XZ** (on edge)	Value ZX** (upright)
Mechanical properties				
Tensile Modulus	ISO 527 Type 1BA	MPa	8000	2900
Tensile Strength at yield	ISO 527 Type 1BA	MPa	no yield	no yield
Tensile Strength at break	ISO 527 Type 1BA	MPa	119	43
Elongation at yield	ISO 527 Type 1BA	%	no yield	no yield
Elongation at break	ISO 527 Type 1BA	%	3.4	1.9
Flexural Modulus	ISO 178	Mpa	5880	2083
Flexural Stress at break	ISO 178	Mpa	160	58
Flexural Strain at break	ISO 178	%	3.4	3.2
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	143
Melting temperature	ISO 11357-3	°C	343
Vicat softening temperature	ISO 306/B50	°C	
Temp. of deflection under load (1.80 Mpa)*	ISO 75-1/-2	°C	270
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	1.36
Humidity absorption (70 °C, 62% r.H.)*	ISO1110	%	0.43
Water absorption (23 °C saturated)*	ISO 62	%	0.53

* Injection moulding data

Recommended processing conditions	
Nozzle temperature	Recommended 450 °C (420 °C - 450 °C)
Bed temperature	Recommended 160 °C (120 °C - 160 °C)
Chamber temperature	Recommended 160 °C (90 °C - 160 °C)
Bed material	Glass, Carbon Fiber Plate
Adhesion promoter	Magigoo HT
Nozzle diameter	≥ 0.6mm, hardened steel nozzle
Print speed	Recommended: 50 mm/s (30-80 mm/s)
Drying instructions filament	120 °C for 6-8 hours