

Cesic[®] Material Properties

Type: HB-Cesic[®]

Starting material	Short chopped C-fibers
Fiber orientation	Isotropic
Max. temperature at permanent operation	1400° C (1673 K)

Mechanical Properties

Density	2.96	g / cm³		
4-Point bending strength				
293 K (samples: 120 x 20 x 3 mm)	266	MPa	Weibull	13
293 K (samples: 40 x 4 x 3 mm)	320	MPa	Weibull	12,8
Young's modulus	350	GPa		
Fracture toughness K _{IC}	3.7	MPa m^{1/2}		
Poisson's ratio	0.18			

Thermal Properties

Coefficient of thermal expansion	2.3	10⁻⁶ / K		
313 K - 293 K				
Thermal conductivity	145	W / (m K)		
293 K				
Specific heat capacity	0.71	kJ / (kg K)		

Electrical Properties

Specific electrical resistance, 293 K	3.48	10⁻⁵ Ω m		
Specific electrical conductivity (293 K)	28.735	S / m		