

Vyncolit Vyntec® CF8030 Carbon Fiber Reinforced Novolac Phenolic

Category : Polymer , Thermoset , Filled/Reinforced Thermoset , Phenolic , Phenolic, Carbon Fiber Composite

Material Notes:

Carbon fiber reinforced phenolic moldable composite with superior tribological properties. High tensile and flexural strength and modulus combined with low density. Information provided by Vyncolit, a Sumitomo Bakelite Group

Order this product through the following link:

http://www.lookpolymers.com/polymer_Vyncolit-Vyntec-CF8030-Carbon-Fiber-Reinforced-Novolac-Phenolic.php

Physical Properties	Metric	English	Comments
Bulk Density	0.600 - 0.700 g/cc	0.0217 - 0.0253 lb/in ³	Powder Density; ISO 60
Density	1.35 g/cc	0.0488 lb/in ³	Relative Density; ISO 1183
Water Absorption	0.050 - 0.10 %	0.050 - 0.10 %	
Linear Mold Shrinkage	0.00 - 0.0020 cm/cm	0.00 - 0.0020 in/in	Injection Molding; ISO 2577

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	100 - 130 MPa	14500 - 18900 psi	ISO 527
Elongation at Break	0.40 - 0.70 %	0.40 - 0.70 %	Tensile; ISO 527
	1.2 - 1.5 %	1.2 - 1.5 %	Flexure; ISO 178
Tensile Modulus	20.0 - 23.0 GPa	2900 - 3340 ksi	ISO 527
Flexural Strength	250 - 300 MPa	36300 - 43500 psi	At Rupture; ISO 178
Flexural Modulus	17.0 - 24.0 GPa	2470 - 3480 ksi	ISO 178
Compressive Strength	270 - 330 MPa	39200 - 47900 psi	ISO 604
Charpy Impact Unnotched	1.10 - 1.70 J/cm ²	5.24 - 8.09 ft-lb/in ²	ISO 179
Charpy Impact, Notched	0.200 - 0.300 J/cm ²	0.952 - 1.43 ft-lb/in ²	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	1.00 - 5.00 $\mu\text{m}/\text{m}\cdot\text{C}$	0.556 - 2.78 $\mu\text{in}/\text{in}\cdot\text{F}$	TMA
	@Temperature 20.0 °C	@Temperature 68.0 °F	
CTE, linear, Transverse to Flow	25.0 - 40.0 $\mu\text{m}/\text{m}\cdot\text{C}$	13.9 - 22.2 $\mu\text{in}/\text{in}\cdot\text{F}$	TMA
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Deflection Temperature at 1.8 MPa (264 psi)	230 - 250 °C	446 - 482 °F	ISO 75 A

Shrinkage Thermal Properties	0.00 - 0.10 % Metric	0.00 - 0.10 % English	Post Shrinkage; ISO 2577 Comments
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Electrical Properties	Metric	English	Comments
Volume Resistivity	3.817e+7 ohm-cm	3.817e+7 ohm-cm	ASTM D257
Surface Resistance	3.669e+6 ohm	3.669e+6 ohm	ASTM D257

Descriptive Properties	Value	Comments
Color	Black	
Main Filler	Carbon Fiber	
Molding Method	Compression, transfer, injection	

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