Edgetek™ PF-20GF/000

Polysulfone

Key Characteristics

Product Description
The Edgetek® Engineering Thermoplastic Compounds portfolio covers a broad range of standard and custom-formulated high performance materials. This portfolio includes high-temperature materials for elevated service temperature environments, high-modulus / structural materials for load-bearing and high-strength applications and flame-retardant products. These compounds are based on select engineering thermoplastic resins that are compounded with reinforcing additives such as carbon fiber, glass fiber and glass beads.

General		
Material Status	• Commercial: Active	
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America
Filler / Reinforcement	• Glass Fiber, 20% Filler by Weight	
RoHS Compliance	• RoHS Compliant	
Forms	• Pellets	

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.38	1.38	ASTM D792
Molding Shrinkage - Flow	• 3.0E-3 • 3.0E-3 to 4.0E-3 in/in	• 0.30 • 0.30 to 0.40 %	ASTM D955
Water Absorption (24 hr)	0.20 %	0.20 %	ASTM D570
Water Absorption (Saturation)	0.60 %	0.60 %	ASTM D570
Mechanical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Modulus [2]	800000 psi	5520 MPa	ASTM D638
Tensile Strength [2] (Break)	15000 psi	103 MPa	ASTM D638
Tensile Elongation [2] (Break)	3.0 %	3.0 %	ASTM D638
Flexural Modulus	800000 psi	5520 MPa	ASTM D790
Flexural Strength	22000 psi	152 MPa	ASTM D790
Compressive Strength	20000 psi	138 MPa	ASTM D695
Shear Strength	9100 psi	62.7 MPa	ASTM D732
Impact	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Notched Izod Impact			ASTM D256A
73°F (23°C), 0.250 in (6.35 mm), Injection Molded	1.3 ft·lb/in	69 J/m	
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Rockwell Hardness (M-Scale)	92	92	ASTM D785
Thermal	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Annealed, 0.125 in (3.18 mm)	365 °F	185 °C	
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Annealed, 0.125 in (3.18 mm)	355 °F	179 °C	
CLTE - Flow	1.6E-5 in/in/°F	2.9E-5 cm/cm/°C	ASTM D696

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Electrical	Typical Value (English)	Typical Value (SI)	Test Method
Volume Resistivity	1.0E+16 ohms·cm	1.0E+16 ohms·cm	ASTM D257
Flammability	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Flame Rating	V-0	V-0	UL 94

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	275 °F	135 °C
Drying Time	2.0 hr	2.0 hr
Processing (Melt) Temp	640 to 700 °F	338 to 371 °C
Mold Temperature	200 to 300 °F	93 to 149 °C

Notes

[1] Typical values are not to be construed as specifications.

[2] Type I, 0.20 in/min (5.1 mm/min)

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