Edgetek™ ET9700-5012 NHFR Natural

Polyphthalamide

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 reflectivity, high-modulus / structural materials for load-bearing and high-strength applications and flame-retardant products. These compounds are based on selected engineering thermoplastic resins which are compounded with reinforcing additives such as glass fiber and mineral fillers.

General		
Material Status	• Commercial: Active	
Regional Availability	• Europe	
Filler / Reinforcement	• Glass Fiber, 15% Filler by Weight	
Features	• Halogen Free	• High Heat Resistance
Uses	• Consumer Applications • Electrical/Electronic Applications	• General Purpose • Industrial Applications
Appearance	• Natural Color	
Forms	• Pellets	
Processing Method	• Injection Molding	

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	1.33 g/cm³	1.33 g/cm³	ISO 1183
Molding Shrinkage	0.10 to 0.80 %	0.10 to 0.80 %	ISO 294-4
Mechanical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Modulus			ISO 527-2/1
73°F (23°C), 0.157 in (4.00 mm), Injection Molded	1.02E+6 psi	7000 MPa	
Tensile Stress			ISO 527-2/5
Break, 73°F (23°C), 0.157 in (4.00 mm)	19400 psi	134 MPa	
Tensile Strain (Break, 73°F (23°C))	3.0 %	3.0 %	ISO 527-2
Flexural Modulus (73°F (23°C))	885000 psi	6100 MPa	ISO 178
Flexural Stress (73°F (23°C))	25800 psi	178 MPa	ISO 178
Impact	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Charpy Notched Impact Strength			ISO 179
73°F (23°C), Injection Molded, Complete Break	3.0 ft·lb/in²	6.3 kJ/m²	
Charpy Unnotched Impact Strength			ISO 179
73°F (23°C)	20 ft·lb/in²	43 kJ/m²	
Flammability	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Flammability Classification			IEC 60695-11-10, -20
0.12 in (3.0 mm)	V-0	V-0	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	248 °F	120 °C
Drying Time	4.0 hr	4.0 hr
Nozzle Temperature	599 °F	315 °C
Processing (Melt) Temp	572 to 599 °F	300 to 315 °C
Mold Temperature	> 176 °F	> 80 °C
Injection Pressure	8700 to 21800 psi	60.0 to 150 MPa
Back Pressure	< 72.5 psi	< 0.500 MPa
Screw Speed	< 150 rpm	< 150 rpm

Notes

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

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