



# 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 • General Purpose • Electrical/Electronic Applications • Industrial Applications
Appearance	• Natural Color
Forms	• Pellets
Processing Method	• Injection Molding

## Technical Properties <sup>1</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	1.33 g/cm <sup>3</sup>	1.33 g/cm <sup>3</sup>	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 73°F (23°C), 0.157 in (4.00 mm), Injection Molded	1.02E+6 psi	7000 MPa	ISO 527-2/1
Tensile Stress Break, 73°F (23°C), 0.157 in (4.00 mm)	19400 psi	134 MPa	ISO 527-2/5
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 73°F (23°C), Injection Molded, Complete Break	3.0 ft-lb/in <sup>2</sup>	6.3 kJ/m <sup>2</sup>	ISO 179
Charpy Unnotched Impact Strength 73°F (23°C)	20 ft-lb/in <sup>2</sup>	43 kJ/m <sup>2</sup>	ISO 179
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flammability Classification 0.118 in (3.00 mm)	V-0	V-0	IEC 60695-11-10, -20

## Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	248 °F	120 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr

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Injection	Typical Value (English)	Typical Value (SI)
Processing (Melt) Temp	554 to 626 °F	290 to 330 °C
Mold Temperature	266 to 320 °F	130 to 160 °C
Screw Speed	50 to 90 rpm	50 to 90 rpm

**Notes**

<sup>1</sup> Typical values are not to be construed as specifications.

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