

## Torlon® 7130 PAI

### 30% Carbon Fiber Reinforced

Torlon 7130 containing 30% carbon fiber is recognized as the strongest and stiffest of polyamide-imide grades. Torlon 7130 also has the lowest CLTE which closely matches both aluminum and many advanced composites. The high surface hardness resulting from the carbon fiber results in good wear resistance in well lubricated service. Torlon 7130 is commonly used for:

- Vacuum pump vanes
- Mechanical stand-offs and linkages
- Impellers, wear rings and guides
- Labyrinth seals

**Material Notes:** *Torlon 7130 contains 30% carbon fiber*

Physical Properties	Metric	English	Methods
Specific Gravity	1.47 g/cc	.054 lb/in <sup>3</sup>	ASTM D792
Water Absorption	0.3%	0.3 %	Immersion, 24hr; ASTM D570(2)
Water Absorption at Saturation	1.5%	1.5 %	Immersion; ASTM D570(2)

#### Mechanical Properties\*

Hardness, Rockwell M		M125	ASTM D785
Hardness, Rockwell		E91	ASTM D785
Hardness, Shore D		88	ASTM D2240
Tensile Strength, Ultimate	152 MPa	22,000 psi	ASTM D638
Elongation at Break	3 %	3 %	ASTM D638
Tensile Modulus	8275 MPa	1,200,000 psi	ASTM D638
Flexural Modulus	6900 MPa	1,000,000 psi	ASTM D790
Flexural Yield Strength	220 MPa	32,000 psi	ASTM D790
Compressive Strength	255 MPa	37,000 psi	10% Def.; ASTM D695
Compressive Modulus	7240 MPa	1,050,000 psi	ASTM D695
Izod Impact (notched)	42 J/M	0.9	ASTM D256 Type A

#### Thermal Properties

Melt Point/T <sub>g</sub>	275 °C	527°F	ASTM D3418
Heat Deflection Temp (264 psi)	278°C	532°F	ASTM TMA
Coefficient of Linear Thermal Expansion	0.9 x 10 <sup>-5</sup> C <sup>-1</sup>	0.5 x 10 <sup>-5</sup> F <sup>-1</sup>	E831 TMA