



Product Datasheet

Torlon® 5030 PAI

30% Glass Fiber Reinforced, Extruded



Torlon 5030 is a high modulus polyamide-imide containing 30% glass fibers well suited for electrical insulators and thermal isolators. It offers a 50% lower CLTE than non-reinforced Torlon 4203 but without the conductivity of carbon fibers. The strength of 5030 is unmatched and the modulus second only to Torlon7130. Torlon 5030 is ideal for:

- High temperature thermal/electrical insulators
- Test sockets for IC's
- Fasteners
- Activation balls and valve seats

Material Notes: *Torlon 5030 contains 30% glass fibers*

| Physical Properties | Metric | English | Methods |
|--------------------------------|-----------|-------------------------|-------------------------------|
| Specific Gravity | 1.60 g/cc | .058 lb/in ³ | 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 | | E90 | ASTM D785 |
| Hardness, Shore D | | 90 | ASTM D2240 |
| Tensile Strength, Ultimate | 159 MPa | 23,000 psi | ASTM D638 |
| Elongation at Break | 4 % | 4 % | ASTM D638 |
| Tensile Modulus | 6900 MPa | 1,000,000 psi | ASTM D638 |
| Flexural Modulus | 6760 MPa | 980,000 psi | ASTM D790 |
| Flexural Yield Strength | 207 MPa | 30,000 psi | ASTM D790 |
| Compressive Strength | 276 MPa | 40,000 psi | 10% Def.; ASTM D695 |
| Compressive Modulus | 4828 MPa | 700,000 psi | ASTM D695 |
| Izod Impact (notched) | 52 J/M | 1.0 | ASTM D256 Type A |

Thermal Properties

| | | | |
|---|--|--|------------|
| Melt Point/T _g | 275 °C | 527°F | ASTM D3418 |
| Heat Deflection Temp (264 psi) | 278°C | 532°F | ASTM TMA |
| Coefficient of Linear Thermal Expansion | 1.6 x 10 ⁻⁵ C ⁻¹ | 0.9 x 10 ⁻⁵ F ⁻¹ | E831 TMA |

*The mechanical properties of extruded shapes may differ from the values published by resin producers. Published resin data is always generated off injection molded test specimens run under near perfect conditions. Drake's extruded shape values are generated using specimens machined from actual shapes and may reflect surface imperfections from machining, enhanced crystallinity resulting from processing and fiber alignment inherent in all reinforced plastic shapes, regardless of process. For additional information on the effects of fiber alignment see Drake Fiber Orientation Diagram available on the Resource page of our website.