



TORLON® 5030 PAI

30% Glass Fiber Reinforced

DESCRIPTION

TORLON® 5030 is a high modulus polyamide-imide that is 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. Torlon 5030's strength is unmatched and the modulus second only to Torlon 7130.

TYPICAL APPLICATIONS:

- Test sockets for ICs
- Fasteners
- High temperature thermal/electrical insulators
- Activation balls & valve seats

Material Notes: Torlon 5030 contains 30% glass fibers.

EXTRUDED SHAPES PROPERTIES

| PHYSICAL PROPERTIES | METRIC | IMPERIAL | METHODS |
|---|--|--|-------------------------------|
| Specific Gravity | 1.60 g/cc | 0.058 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 ft-lbs/in | ASTM D256 Type A |
| THERMAL PROPERTIES | | | |
| Glass Transition Temp./T _g | 275° C | 527° F | ASTM D3418 |
| Heat Deflection Temperature (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 from test specimens injection molded under optimum conditions. Drake's extruded shape values are generated using specimens machined from actual shapes and may reflect surface imperfections from machining, enhanced crystallinity as a result of 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.