## Quadrant EPP Duratron® PAI T5030 Polyamide-imide, glass reinforced, extruded (ASTM Product Data Sheet)

### Categories:
- Polymer, Thermoplastic, Polyamide-imide (PAI), Polyamide-imide, Glass Filled

### Physical Properties
- **Specific Gravity**: 1.80 g/cc, 1.80 g/cc
- **Water Absorption at Saturation**
  - Metric: 1.5 %
  - English: 1.5 %
  - Comments: Immersion, 24hr, ASTM D570(2)

### Mechanical Properties
- **Hardness, Rockwell E**
  - Metric: 90
  - English: 90
  - Comments: ASTM D785
- **Tensile Strength**
  - Metric: 159 MPa, 23000 psi
  - English: 159 MPa, 23000 psi
  - Comments: ASTM D638
- **Tensile Strength at 150°C (300°F)**
  - Metric: 124 MPa, 18000 psi
  - English: 124 MPa, 18000 psi
  - Comments: ASTM D638
- **Tensile Strength at 65°C (150°F)**
  - Metric: 133 MPa, 19000 psi
  - English: 133 MPa, 19000 psi
  - Comments: ASTM D638
- **Elongation at Break**
  - Metric: 6.0 %
  - English: 6.0 %
  - Comments: ASTM D638
- **Tensile Modulus**
  - Metric: 8.89 GPa, 1250 ksi
  - English: 8.89 GPa, 1250 ksi
  - Comments: ASTM D790
- **Flexural Strength**
  - Metric: 207 MPa, 30000 psi
  - English: 207 MPa, 30000 psi
  - Comments: ASTM D790
- **Flexural Modulus**
  - Metric: 6.76 GPa, 960 ksi
  - English: 6.76 GPa, 960 ksi
  - Comments: ASTM D790
- **Compressive Strength**
  - Metric: 276 MPa, 40000 psi
  - English: 276 MPa, 40000 psi
  - Comments: 10% Def.; ASTM D695
- **Compressive Modulus**
  - Metric: 4.83 GPa, 700 ksi
  - English: 4.83 GPa, 700 ksi
  - Comments: ASTM D695
- **Izod Impact, Notched**
  - Metric: 0.534 J/cm, 1.00 ft-lb/in
  - English: 0.534 J/cm, 1.00 ft-lb/in
  - Comments: ASTM D256 Type A

### Electrical Properties
- **Surface Resistivity per Square**
  - Metric: >= 1e+13 ohm
  - English: >= 1e+13 ohm
  - Comments: EOS/ESD S11.11
- **Dielectric Strength**
  - Metric: 27.6 kV/mm
  - English: 706 kV/in
  - Comments: Short Term; ASTM D149

### Thermal Properties
- **CTE, linear**
  - Metric: 16.2 μm/m°C
  - English: 3.00 μm/m°F
  - Comments: ASTM E831
- **Thermal Conductivity**
  - Metric: 0.366 W/m-K
  - English: 2.50 BTU/in/hr-ft-°F
  - Comments: ASTM F453
- **Maximum Service Temperature, Air**
  - Metric: 260 °C
  - English: 500 °F
  - Comments: Long Term
- **Deflection Temperature at 1.8 MPa (264 psi)**
  - Metric: 277 °C
  - English: 527 °F
  - Comments: ASTM D648
- **Glass Transition Temp, Tg**
  - Metric: 275 °C
  - English: 527 °F
  - Comments: ASTM D3418
- **Flammability, UL94**
  - Metric: V-0
  - English: V-0
  - Comments: Estimated Rating

### Compliance Properties
- **3A-Dairy**
  - Metric: No
  - English: No
- **Canada AG**
  - Metric: No
  - English: No
- **FDA**
  - Metric: No
  - English: No
- **NSF**
  - Metric: No
  - English: No
- **USDA**
  - Metric: No
  - English: No
- **USP Class VI**
  - Metric: No
  - English: No

### Chemical Resistance Properties
- **Acids, Strong (pH 1-3)**
  - Metric: Limited
  - English: Limited
- **Acids, Weak**
  - Metric: Acceptable
  - English: Acceptable
- **Alcohols**
  - Metric: Acceptable
  - English: Acceptable
- **Alkalis, Strong (pH 11-14)**
  - Metric: Unacceptable
  - English: Unacceptable
- **Alkalis, Weak**
  - Metric: Limited
  - English: Limited
- **Chlorinated Solvents**
  - Metric: Acceptable
  - English: Acceptable
- **Conductive / Static Dissipative**
  - Metric: No
  - English: No
- **Continuous Sunlight**
  - Metric: Acceptable
  - English: Acceptable
- **Hot Water / Steam**
  - Metric: Limited
  - English: Limited
- **Hydrocarbons - Aliphatic**
  - Metric: Acceptable
  - English: Acceptable
- **Hydrocarbons - Aromatic**
  - Metric: Acceptable
  - English: Acceptable
- **Inorganic Salt Solutions**
  - Metric: Acceptable
  - English: Acceptable
- **Ketones, Esters**
  - Metric: Acceptable
  - English: Acceptable

### Descriptive Properties
- **Machinability**
  - Metric: 8
  - English: 1-10, 1=Easier to Machine