

Therma-Tech™ X TT6000-8711 EI NHFR WHITE

Polyamide 6
PolyOne Corporation

Message:

Therma-Tech™ Thermal Management Compounds have been engineered to combine the heat transfer and cooling capabilities of metals with the design freedom, weight reduction and cost advantages of thermoplastics. These materials provide the benefits of proprietary conductive additive technologies and the performance of select engineering thermoplastic resins. Therma-Tech compounds have been shown to improve thermal conductivity up to 100-times that of conventional plastics and can be used in a wide range of thermal management applications.

| General Information | | | |
|--|------------------------------------|-------------------|-------------|
| Features | Electrically Insulating | | |
| | Thermally Conductive | | |
| Uses | Automotive Applications | | |
| | Automotive Under the Hood | | |
| | Consumer Applications | | |
| | Electrical/Electronic Applications | | |
| | Housings | | |
| | Industrial Applications | | |
| RoHS Compliance | RoHS Compliant | | |
| Forms | Pellets | | |
| Processing Method | Injection Molding | | |
| Physical | Nominal Value | Unit | Test Method |
| Specific Gravity | 1.80 | g/cm ³ | ASTM D792 |
| Molding Shrinkage | | | ASTM D955 |
| Flow | 0.40 to 0.60 | % | |
| Across Flow | 0.60 to 0.80 | % | |
| Mechanical | Nominal Value | Unit | Test Method |
| Tensile Modulus ¹ (3.20 mm) | 13800 | MPa | ASTM D638 |
| Tensile Strength ² (3.20 mm) | 75.8 | MPa | ASTM D638 |
| Tensile Elongation ³ (Break, 3.20 mm) | 1.0 | % | ASTM D638 |
| Flexural Modulus (3.20 mm) | 10300 | MPa | ASTM D790 |
| Flexural Strength (3.20 mm) | 131 | MPa | ASTM D790 |
| Impact | Nominal Value | Unit | Test Method |
| Notched Izod Impact (3.20 mm) | 32 | J/m | ASTM D256 |
| Thermal | Nominal Value | Unit | Test Method |
| Deflection Temperature Under Load | | | ASTM D648 |
| 0.45 MPa, Unannealed | 215 | °C | |
| 1.8 MPa, Unannealed | 190 | °C | |
| Thermal Conductivity | | | ASTM E1461 |

| -- 4 | 1.0 to 1.4 | W/m/K | |
|-------------------------|---------------|-------|-------------|
| -- 5 | 1.0 to 2.0 | W/m/K | |
| Electrical | Nominal Value | Unit | Test Method |
| Surface Resistivity | 1.0E+12 | ohms | ASTM D257 |
| Flammability | Nominal Value | Unit | Test Method |
| Flame Rating (0.800 mm) | V-0 | | UL 94 |
| Injection | Nominal Value | Unit | |
| Drying Temperature | 80.0 to 90.0 | °C | |
| Drying Time | 2.0 to 4.0 | hr | |
| Processing (Melt) Temp | 220 to 280 | °C | |
| Mold Temperature | 65.0 to 85.0 | °C | |
| NOTE | | | |
| 1. | 5.0 mm/min | | |
| 2. | 5.0 mm/min | | |
| 3. | 5.0 mm/min | | |
| 4. | Through-Plane | | |
| 5. | In-Plane | | |

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