

PolyOne Therma-Tech™ NJC-7500 TC Nylon 12 (discontinued **)

Category : Polymer , Thermoplastic , Nylon , Nylon 12

Material Notes:

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. Description/Features: PA 12 (Nylon 12) Thermally Conductive Electrically Conductive Applications: Enclosures Heat Sinks Motor components Processing Method: Injection Molding Information provided by PolyOne Corporation

Order this product through the following link:

http://www.lookpolymers.com/polymer_PolyOne-Therma-Tech-NJC-7500-TC-Nylon-12-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.68 g/cc	1.68 g/cc	ASTM D792
Water Absorption	0.10 % @Thickness 3.17 mm	0.10 % @Thickness 0.125 in	24 hr. Immersion; ASTM D570
Linear Mold Shrinkage	0.0030 - 0.0040 cm/cm	0.0030 - 0.0040 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	39.3 MPa	5700 psi	Type 1 - Rigids, Yield, 0.2 in/min; ASTM D638
Elongation at Break	0.40 %	0.40 %	Type 1 - Rigids, 0.2 in/min; ASTM D638
Tensile Modulus	14.5 GPa	2100 ksi	Type 1 - Rigids, 0.2 in/min; ASTM D638
Flexural Strength	68.9 MPa	10000 psi	ASTM D790
Flexural Modulus	11.415 GPa	1655.6 ksi	ASTM D790
Izod Impact, Notched	0.160 J/cm @Thickness 6.35 mm, Temperature 23.0 °C	0.300 ft-lb/in @Thickness 0.250 in, Temperature 73.4 °F	Method A, Injection Molded; ASTM D256

Thermal Properties	Metric	English	Comments
Thermal Conductivity	20.0 - 24.9 W/m-K	139 - 173 BTU-in/hr-ft ² -°F	ASTM C177
Deflection Temperature at 0.46 MPa (66 psi)	193 °C	380 °F	Unannealed; ASTM D648
Deflection Temperature at 1.8 MPa	185 °C	365 °F	Unannealed; ASTM D648

<small>(264 psi)</small> Thermal Properties	Metric	English	Comments
Electrical Properties	Metric	English	Comments
Volume Resistivity	10000 ohm-cm - 1e+05	10000 ohm-cm - 1e+05	ASTM D257
Surface Resistivity per Square	1000 - 30000 ohm	1000 - 30000 ohm	ASTM D257
Processing Properties	Metric	English	Comments
Melt Temperature	260 - 277 °C	500 - 530 °F	Molding
Mold Temperature	65.6 - 93.3 °C	150 - 200 °F	

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