

PolyOne Therma-Tech™ SF-5000C TC Polyphenylene Sulfide (PPS) (discontinued **)

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS)

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: PPS (Polyphenylenesulfide) Thermally Conductive Electrically Insulative 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-SF-5000C-TC-Polyphenylene-Sulfide-PPS-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.75 g/cc	1.75 g/cc	ASTM D792
Water Absorption	0.030 % @Thickness 3.17 mm	0.030 % @Thickness 0.125 in	24 hr immersion; ASTM D570
Linear Mold Shrinkage	0.0010 - 0.0020 cm/cm	0.0010 - 0.0020 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	54.5 MPa	7900 psi	Type 1 - Rigids, Yield, 0.2 in/min; ASTM D638
Elongation at Break	0.20 %	0.20 %	Type 1 - Rigids, 0.2 in/min; ASTM D638
Tensile Modulus	22.8 GPa	3300 ksi	Type 1 - Rigids, 0.2 in/min; ASTM D638
Flexural Strength	91.0 MPa	13200 psi	ASTM D790
Flexural Modulus	22.1 GPa	3200 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	4.01 - 5.00 W/m-K	27.8 - 34.7 BTU-in/hr-ft ² -°F	ASTM C177
Deflection Temperature at 0.46 MPa (66 psi)	282 °C	540 °F	Unannealed; ASTM D648

Deflection Temperature at 1.8 MPa (100 psi) Thermal Properties	Metric 266 °C	English 510 °F	Comments ASTM D648
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Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 - 1.00e+16 ohm-cm	1.00e+15 - 1.00e+16 ohm-cm	ASTM D257
Surface Resistivity per Square	1.00e+13 - 1.00e+14 ohm	1.00e+13 - 1.00e+14 ohm	ASTM D257

Processing Properties	Metric	English	Comments
Melt Temperature	316 - 329 °C	600 - 625 °F	Molding
Mold Temperature	121 - 149 °C	250 - 300 °F	

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