Therma-Tech™ TT9200-5003 EC Grey

Polyphenylene Sulfide

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	
Filler / Reinforcement	Glass Fiber
Features	Electrically Conductive 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	Extrusion Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.78	g/cm³	ISO 1183
Molding Shrinkage - Flow (Injection Molded)	0.20 to 0.40	%	ISO 294-4
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus [1]	17500	MPa	ISO 527
Tensile Stress (Break)	58.0	MPa	ISO 527-2/1/50
Tensile Elongation [2] (Break)	0.30 to 0.50	%	ISO 527
Flexural Modulus [3] (Injection Molded)	13500	MPa	ISO 178
Flexural Strength [4] (Injection Molded)	75.0	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	2.3	kJ/m²	ISO 179
Charpy Unnotched Impact Strength (23°C)	3.9	kJ/m²	ISO 179
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (1.8 MPa, Annealed)	260	°C	ISO 75-2/A

Thermal Conductivity			
23°C [5]	2.2 to 2.6	W/m/K	ISO 8302
23°C [6]	3.5 to 4.0	W/m/K	ASTM E1461
23°C [7]	16 to 18	W/m/K	ASTM E1461
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	< 1.0E+4	ohms	IEC 60093
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.50 mm	5VA		
3.00 mm	5VA		
Glow Wire Flammability Index			IEC 60695-2-12
0.800 mm	960	°C	
1.60 mm	960	°C	
3.00 mm	> 960	°C	
Glow Wire Ignition Temperature (3.00 mm)	> 960	°C	IEC 60695-2-13
Injection	Nominal Value	Unit	
Processing (Melt) Temp	310 to 340	°C	
Mold Temperature	140 to 170	°C	
NOTE			
1.	Type I, 1.0 mm/min		
2.	Type I, 50 mm/min		
3.	10 mm/min		
4.	10 mm/min		
5.	Through Plane with Modified Transient Plane Source technique, C-Therm TCi™		
6.	Through-Plane		
7.	In-Plane		

Recommended distributors for this material

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