Therma-Tech™ TT9200-5001 EI White

Polyphenylene Sulfide

Key Characteristics

Product Description
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			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber	• Mineral	
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	• Extrusion	• Injection Molding	

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	2.91	2.91	ISO 1183
Molding Shrinkage - Flow (Injection Molded)	1.0E-3 to 4.0E-3 in/in	0.10 to 0.40 %	ISO 294-4
Mechanical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Modulus [2]	2.18E+6 psi	15000 MPa	ISO 527
Tensile Stress (Break)	10900 psi	75.0 MPa	ISO 527-2/1/50
Tensile Elongation [3] (Break)	0.50 to 1.0 %	0.50 to 1.0 %	ISO 527
Flexural Modulus [4] (Injection Molded)	1.78E+6 psi	12300 MPa	ISO 178
Flexural Strength [4] (Injection Molded)	13100 psi	90.0 MPa	ISO 178
Impact	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Charpy Notched Impact Strength (73°F (23°C))	1.7 ft·lb/in²	3.5 kJ/m²	ISO 179
Charpy Unnotched Impact Strength			ISO 179
73°F (23°C)	5.7 ft·lb/in²	12 kJ/m²	
Thermal	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Heat Deflection Temperature			ISO 75-2/A
264 psi (1.8 MPa), Annealed	428 °F	220 °C	
Thermal Conductivity [5] (73°F (23°C))	5.6 to 8.3 Btu·in/hr/ft²/°F	0.80 to 1.2 W/m/K	ASTM E1461
Thermal Conductivity [6] (73°F (23°C))	4.9 to 7.6 Btu·in/hr/ft²/°F	0.70 to 1.1 W/m/K	ASTM E1461
Electrical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Surface Resistivity	> 1.0E+11 ohms	> 1.0E+11 ohms	IEC 60093
Dielectric Strength (0.0295 in (0.750 mm))	> 100 V/mil	> 4.0 kV/mm	ASTM D149
Flammability	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Flame Rating (0.06 in (1.6 mm))	V-0	V-0	UL 94

Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Glow Wire Flammability Index			IEC 60695-2-12
0.12 in (3.0 mm)	> 1760 °F	> 960 °C	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Processing (Melt) Temp	590 to 644 °F	310 to 340 °C
Mold Temperature	284 to 338 °F	140 to 170 °C

Notes

[1] Typical values are not to be construed as specifications.

[2] Type I, 0.039 in/min (1.0 mm/min)

[3] Type I, 2.0 in/min (50 mm/min)

[4] 0.39 in/min (10 mm/min)

[5] In Plane

[6] Through-Plane

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