



# Therma-Tech™ X TT9200-8706 EC

## 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	• Asia Pacific
Features	• Electrically Conductive • Thermally Conductive
Uses	• Automotive Applications • Consumer Applications • Housings • Automotive Under the Hood • Electrical/Electronic Applications • Industrial Applications
RoHS Compliance	• RoHS Compliant
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

### Technical Properties <sup>1</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Specific Gravity	1.70	1.70	ASTM D792
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Modulus <sup>2</sup> (0.126 in (3.20 mm))	3.20E+6 psi	22100 MPa	ASTM D638
Tensile Strength <sup>2</sup> (0.126 in (3.20 mm))	8500 psi	58.6 MPa	ASTM D638
Tensile Elongation <sup>2</sup>			ASTM D638
Break, 0.126 in (3.20 mm)	0.50 %	0.50 %	
Flexural Modulus (0.126 in (3.20 mm))	3.00E+6 psi	20700 MPa	ASTM D790
Flexural Strength (0.126 in (3.20 mm))	12500 psi	86.2 MPa	ASTM D790
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Notched Izod Impact (0.126 in (3.20 mm))	0.50 ft-lb/in	27 J/m	ASTM D256
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Thermal Conductivity			ASTM E1461
-- <sup>3</sup>	21 to 28 Btu·in/hr/ft <sup>2</sup> °F	3.0 to 4.0 W/m/K	
-- <sup>4</sup>	97 to 100 Btu·in/hr/ft <sup>2</sup> °F	14 to 15 W/m/K	
Electrical	Typical Value (English)	Typical Value (SI)	Test Method
Surface Resistivity	1.0E+2 to 9.0E+3 ohms	1.0E+2 to 9.0E+3 ohms	ASTM D257
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Rating (0.06 in (1.6 mm))	V-0	V-0	Internal Method

### Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	284 to 302 °F	140 to 150 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Processing (Melt) Temp	608 to 644 °F	320 to 340 °C

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Injection	Typical Value (English)	Typical Value (SI)
Mold Temperature	284 to 320 °F	140 to 160 °C

**Notes**

- <sup>1</sup> Typical values are not to be construed as specifications.
- <sup>2</sup> 0.20 in/min (5.0 mm/min)
- <sup>3</sup> Through-Plane
- <sup>4</sup> In-Plane

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