

Toyobo TS501 PPS, 50% Glass Fiber Reinforced

Category : Polymer , Thermoplastic , Polyphenylene Sulfide (PPS) , Polyphenylene Sulfide (PPS) with 50% Glass Fiber Filler

Material Notes:

Key Feature: High stiffness High performance injection-molding resin created from crystalline polyphenylene sulfide, using a special formulation technology developed by Toyobo. Excellent physical, electrical, and thermal properties, corrosion resistant, and inherently flame retardant. PPS resins are used in the electrical, electronic, automotive, and industrial machinery industries. Information provided by Toyobo Co., Ltd

Order this product through the following link:

http://www.lookpolymers.com/polymer_Toyobo-TS501-PPS-50-Glass-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.75 g/cc	0.0632 lb/in ³	ASTM D792
Water Absorption	0.020 %	0.020 %	24 hrs; ASTM D570
Linear Mold Shrinkage	0.0020 cm/cm	0.0020 in/in	
Linear Mold Shrinkage, Transverse	0.0085 cm/cm	0.0085 in/in	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	123	123	ASTM D785
Tensile Strength, Ultimate	200 MPa	29000 psi	ASMT D638
Elongation at Break	1.6 %	1.6 %	ASTM D638
Modulus of Elasticity	18.7 GPa	2710 ksi	ASMT D638
Flexural Yield Strength	281 MPa	40800 psi	Flexural elongation is 2.1%; ASTM D790
Flexural Modulus	14.7 GPa	2130 ksi	ASMT D790
Izod Impact, Notched	1.70 J/cm	3.18 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear	7.00 $\mu\text{m}/\text{m}\cdot\text{°C}$	3.89 $\mu\text{in}/\text{in}\cdot\text{°F}$	MD
	@Temperature 20.0 °C	@Temperature 68.0 °F	
CTE, linear, Transverse to Flow	61.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	33.9 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Melting Point	282 °C	540 °F	
Deflection Temperature at 1.8 MPa (264 psi)	≥ 260 °C	≥ 500 °F	ASTM D648

Thermal Properties	Metric	English	Comments
Flammability UL 94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	ASTM D257
Dielectric Constant	3.8	3.8	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	3.9	3.9	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Dissipation Factor	12.0 kV/mm	305 kV/in	ASTM D149
Dissipation Factor	0.0014	0.0014	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dissipation Factor	0.0017	0.0017	ASTM D150
	@Frequency 1000 Hz	@Frequency 1000 Hz	
Arc Resistance	133 sec	133 sec	ASTM D495
Comparative Tracking Index	165 V	165 V	IEC test

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