

Hybrid Plastics PO6C81.01 Nanoreinforced[®] Polyphenylene Oxide (PPO)

Category : Polymer , Thermoplastic , Polyphenylene Ether/PPO

Material Notes:

PPO available on the market today is typically mixed with polystyrene or other polymers to make it processable. However, these resins degrade the excellent mechanical and flammability properties of PPO. POSS[®] Flow incorporated into pure PPO resin decreases melt viscosity, making injection molding possible. Because no polymer diluents are used, the properties of PPO are retained. This resin is transparent, low density, has an exceptionally high heat distortion temperature, and very low flammability. This resin is a lower cost alternative to high temperature polymers such as PEEK and PPSU.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hybrid-Plastics-PO6C8101-Nanoreinforced-Polyphenylene-Oxide-PPO.php

Physical Properties	Metric	English	Comments
Density	1.09 g/cc	0.0394 lb/in ³	
Melt Flow	12.5 g/10 min	12.5 g/10 min	
	@Load 5.00 kg, Temperature 300 °C	@Load 11.0 lb, Temperature 572 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	75.0 MPa	10900 psi	
Elongation at Break	14 %	14 %	
Elongation at Yield	6.0 %	6.0 %	
Flexural Modulus	1.85 GPa	268 ksi	
	@Temperature 175 °C	@Temperature 347 °F	
	2.40 GPa	348 ksi	
	@Temperature 40.0 °C	@Temperature 104 °F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	175 °C	347 °F	
Glass Transition Temp, Tg	210 °C	410 °F	
Flammability, UL94	V-0	V-0	
	@Thickness 3.20 mm	@Thickness 0.126 in	

Optical Properties	Metric	English	Comments

Transmission Visible Optical Properties	80 % Metric	80 % English	thickness unknown Comments
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Processing Properties	Metric	English	Comments
Rear Barrel Temperature	250 - 270 Â°C	482 - 518 Â°F	
Middle Barrel Temperature	260 - 300 Â°C	500 - 572 Â°F	
Front Barrel Temperature	300 - 350 Â°C	572 - 662 Â°F	
Nozzle Temperature	300 - 350 Â°C	572 - 662 Â°F	
Mold Temperature	150 - 200 Â°C	302 - 392 Â°F	
Drying Temperature	150 Â°C	302 Â°F	
Dry Time	4 hour	4 hour	

Descriptive Properties	Value	Comments
Color	Transparent, light amber	

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