

MTI ThermoStran® TPU-40C Long Carbon Fiber Compound

Category : Polymer , Thermoplastic , Polyurethane, TP , Thermoplastic Polyurethane (TPUR), Carbon Fiber Reinforced

Material Notes:

ThermoStran® is custom designed long fiber thermoplastic compound (LFC) engineered to meet specific end use requirements. Continuous fibers are pultruded to yield pellets with fibers equivalent to the pellet length. Fiber / pellet length = 0.5 inches. Property values are estimated. Processing information: Mold Temperature: Higher mold temperatures are recommended for smoother surface appearance. Nozzle: Shortest length possible and 0.25 inch diameter or larger is recommended. Gates: Gates should be as large as possible and located to eliminate knit line and advantageously align fiber. Runners: Full round runners with 0.25 inch diameter and no sharp corners. Construction Material: Tool steels can be heat treated and polished to increase hardness and wear resistance. A-2 and D-2 steels can be hardened to Rockwell 60 C scale for longer life. Plating: Electroless nickel plating may offer additional wear protection. Information provided by MTI Thermoplastic Composites, Division of Montsinger Technologies, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_MTI-ThermoStran-TPU-40C-Long-Carbon-Fiber-Compound.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.37 g/cc	1.37 g/cc	
Filler Content	40 %	40 %	Long Carbon Fiber

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	262 MPa	38000 psi	
Tensile Modulus	31.0 GPa	4500 ksi	
Flexural Strength	379 MPa	55000 psi	
Flexural Modulus	27.6 GPa	4000 ksi	
Izod Impact, Notched	1.71 J/cm	3.20 ft-lb/in	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	216 Â°C	420 Â°F	
Middle Barrel Temperature	238 Â°C	460 Â°F	
Front Barrel Temperature	249 Â°C	480 Â°F	
Nozzle Temperature	249 Â°C	480 Â°F	
Melt Temperature	238 - 260 Â°C	460 - 500 Â°F	
Mold Temperature	65.6 Â°C	150 Â°F	
Drying Temperature	82.2 Â°C	180 Â°F	

Processing Properties	Metric	English	Comments
Dew Point	-28.9 Â°C	-20.0 Â°F	
Injection Pressure	82.7 MPa	12000 psi	
Screw Speed	50 - 75 rpm	50 - 75 rpm	

Descriptive Properties	Value	Comments
Nozzle ID	0.25 Inches	
Screw Design	20:1 L/D	

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