

PlastiComp Complet® LCF50 - TPU Rigid Thermoplastic Polyurethane, 50% Long Carbon Fiber Reinforced

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

Material Notes:

Complet® long-fiber reinforced pellets are manufactured to exceed expectation for quality and performance. Polyurethane with 50% carbon fiber reinforcement. Information provided by PlastiComp, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_PlastiComp-Complet-LCF50-TPU-Rigid-Thermoplastic-Polyurethane-50-Long-Carbon-Fiber-Reinforced.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.43 g/cc	1.43 g/cc	ASTM D-792
Filler Content	50 %	50 %	Carbon Fiber

Mechanical Properties	Metric	English	Comments
Tensile Strength	256 MPa	37100 psi	ASTM D-638
Elongation at Break	1.0 - 2.0 %	1.0 - 2.0 %	ASTM D-638
Tensile Modulus	37.034 GPa	5371.3 ksi	ASTM D-638
Flexural Strength	432 MPa	62700 psi	ASTM D-790
Flexural Modulus	33.103 GPa	4801.2 ksi	ASTM D-790
Izod Impact, Notched	3.20 J/cm	5.99 ft-lb/in	ASTM D-256
Izod Impact, Unnotched	9.078 J/cm	17.01 ft-lb/in	ASTM D-4812

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	113 °C	235 °F	ASTM D-648

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	204 - 227 °C	400 - 440 °F	
Middle Barrel Temperature	210 - 232 °C	410 - 450 °F	
Front Barrel Temperature	216 - 238 °C	420 - 460 °F	
Nozzle Temperature	221 - 243 °C	430 - 470 °F	
Melt Temperature	216 - 238 °C	420 - 460 °F	

Mold Temperature Processing Properties	87.8 °C Metric	190 °F English	Comments
Injection Velocity	50.8 - 76.2 mm/sec	2.00 - 3.00 in/sec	
Drying Temperature	88.0 °C @Time 14400 sec	190 °F @Time 4.00 hour	
Moisture Content	<= 0.020 %	<= 0.020 %	
Back Pressure	0.172 - 0.345 MPa	25.0 - 50.0 psi	
Cushion	0.635 cm	0.250 in	
Screw Speed	30 - 50 rpm	30 - 50 rpm	

Descriptive Properties	Value	Comments
Injection Pressure	Medium to maximum	

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