

InStruc® TPURCF10
Americhem - Thermoplastic Polyurethane Elastomer
General Information
Product Description

TPURCF10 is a 10% carbon fiber filled injection molding grade of reinforced rigid TPU (thermoplastic polyurethane) with high impact strength, excellent chemical resistance, and low shrinkage.

General

Material Status	• Commercial: Active
Availability	• Africa & Middle East • Asia Pacific • Europe • Latin America • North America
Filler / Reinforcement	• Carbon Fiber, 10% Filler by Weight
Features	• Filled • Good Dimensional Stability • High Stiffness • High Strength
Uses	• Connectors • Consumer Applications • Electrical/Electronic Applications • Household Goods • Industrial Applications • Industrial Parts
Forms	• Pellets
Processing Method	• Injection Molding

Properties ¹

	Nominal Value	Unit	Test Method
Physical			
Density / Specific Gravity	1.28		ASTM D792
Molding Shrinkage - Flow	1.0E-3	in/in	ASTM D955
Mechanical			
Tensile Modulus	1.05E+6	psi	ASTM D638
Tensile Strength	18000	psi	ASTM D638
Tensile Elongation (Yield)	3.5	%	ASTM D638
Flexural Modulus	1.00E+6	psi	ASTM D790
Flexural Strength	27000	psi	ASTM D790
Impact			
Notched Izod Impact	1.6	ft·lb/in	ASTM D256
Thermal			
Deflection Temperature Under Load (264 psi, Unannealed)	190	°F	ASTM D648

Processing Information

	Nominal Value	Unit
Injection		
Drying Temperature	220 to 250	°F
Drying Time	4.0 to 6.0	hr
Suggested Max Moisture	0.030	%
Processing (Melt) Temp	450 to 480	°F
Mold Temperature	110 to 150	°F
Back Pressure	> 800	psi
Screw Speed	40 to 80	rpm

