

InStruc® PA12CF20

Americhem - Polyamide 12

General Information

Product Description

20% CARBON FIBER REINFORCED NYLON 12

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Carbon Fiber, 20% Filler by Weight		
Features	• Filled • Good Dimensional Stability	• High Stiffness • High Strength	
Uses	• Automotive Applications • Closures • Consumer Applications • Electrical/Electronic Applications • Engineering Parts	• Household Goods • Housings • Industrial Applications • Industrial Parts • Office Automation Equipment	• Oil/Gas Applications • Outdoor Applications • Window & Door Components
Forms	• Pellets		
Processing Method	• Injection Molding		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.10		ASTM D792
Molding Shrinkage - Flow (0.125 in)	1.0E-3 to 3.0E-3	in/in	
Water Absorption (Equilibrium)	0.080	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Break)	16300	psi	ASTM D638
Tensile Elongation (Break)	2.0 to 3.0	%	ASTM D638
Flexural Modulus	1.25E+6	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	1.5	ft·lb/in	ASTM D256
Unnotched Izod Impact	10 to 12	ft·lb/in	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (264 psi, Unannealed)	325	°F	ASTM D648

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	180	°F
Drying Time	4.0	hr
Processing (Melt) Temp	440 to 460	°F
Mold Temperature	160 to 180	°F
Back Pressure	50.0 to 100	psi
Screw Speed	40 to 70	rpm
Vent Depth	5.0E-4 to 1.0E-3	in

