

InStruc® PA12GF20IM

Americhem - Polyamide 12

General Information

Product Description			
20% GLASS FIBER REINFORCED, IMPACT MODIFIED 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		
Additive	• Impact Modifier		
Features	• Filled • Good Dimensional Stability • High Impact Resistance	• High Stiffness • High Strength • Impact Modified	• Low Temperature Toughness
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	1.14		ASTM D792
Molding Shrinkage - Flow (0.125 in)	3.0E-3 to 5.0E-3	in/in	ASTM D570
Water Absorption (Equilibrium)	0.070	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	700000	psi	ASTM D638
Tensile Strength	11000	psi	ASTM D638
Tensile Elongation (Yield)	> 5.0	%	ASTM D638
Flexural Modulus	600000	psi	ASTM D790
Flexural Strength	13000	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	3.5	ft·lb/in	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (264 psi, Unannealed)	300	°F	ASTM D648
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+17	ohms	ASTM D257

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	175	°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

