

InStruc® PA12GF15IMUV

Americhem - Polyamide 12

General Information

Product Description

InStruc PA12GF15IMUV is a heat stabilized Nylon 12 (PA-12) grade reinforced with 15% glass fiber. It exhibits very low water absorption, high dimensional stability and very high elongation at break. It is also UV stabilized and resistant to heat and chemicals. Suitable for processing by injection molding, InStruc PA12GF15IMUV can be used in automotive, electrical & electronic components, safety parts, domestic appliances, medical devices, and sports & leisure goods.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Carbon Fiber, 15% Filler by Weight		
Additive	• Impact Modifier	• UV Stabilizer	
Features	• Filled • Good Dimensional Stability • High Impact Resistance	• High Stiffness • High Strength • Impact Modified	• Low Temperature Toughness • UV Stabilized
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	1.12		ASTM D792
Molding Shrinkage - Flow (0.125 in)	2.0E-3 to 4.0E-3	in/in	ASTM D955
Water Absorption (Equilibrium)	0.080	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	507000	psi	ASTM D638
Tensile Strength	11000	psi	ASTM D638
Tensile Elongation (Yield)	7.0 to 8.0	%	ASTM D638
Flexural Modulus	435000	psi	ASTM D790
Flexural Strength (Yield)	13000	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	2.5	ft-lb/in	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (264 psi, Unannealed)	320	°F	ASTM D648
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+18	ohms	ASTM D257

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

