InStruc® PA12GF33

Product Description 33% GLASS FIBER REINFORCED NYLON 12

Material Status Commercial: Active

Availability Africa & Middle East, Asia Pacific, Europe, Latin America, North America

Filler / Reinforcement Carbon Fiber, 33% 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

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.23	g/cm³	ASTM D792
Molding Shrinkage - Flow (3.18 mm)	0.20 to 0.40	%	ASTM D955
Water Absorption (Equilibrium)	0.080	%	ASTM D570

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	6210	MPa	ASTM D638
Tensile Strength	100	MPa	ASTM D638
Tensile Elongation (Yield)	3.0 to 4.0	%	ASTM D638
Flexural Modulus	5520	MPa	ASTM D790
Flexural Strength	155	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	130	J/m	ASTM D256
Unnotched Izod Impact	750	J/m	ASTM D4812

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	163	°C	

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+18	ohms	ASTM D257

Properties provided are only typical values and Americhem assumes no liability for the customer's use of the information provided. The customer assumes all responsibility for testing determining this products suitability in the customer's specific end application.

Revision Date: 9/16/2024

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Injection	Nominal Value	Unit
Drying Temperature	82	°C
Drying Time	4.0	hr
Processing (Melt) Temp	227 to 238	°C
Mold Temperature	71 to 82	°C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	40 to 70	rpm
Vent Depth	0.013 to 0.025	mm

Notes

[1] Typical properties: these are not to be construed as specifications.

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