americhem
PERFORMANCE | SOLUTIONS | TRUST

InStruc® PA12CF20

Product Description 20% CARBON FIBER REINFORCED NYLON 12

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

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.10	g/cm³	ASTM D792
Molding Shrinkage - Flow (3.18 mm)	0.10 to 0.30	%	
Water Absorption (Equilibrium)	0.080	%	ASTM D570

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Break)	112	MPa	ASTM D638
Tensile Elongation (Break)	2.0 to 3.0	%	ASTM D638
Flexural Modulus	8620	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	80	J/m	ASTM D256
Unnotched Izod Impact	530 to 640	J/m	ASTM D4812

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

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

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

Americhem World Headquarters
2000 Americhem Way
Cuyahoga Falls, OH 44221
Tel: +1 330 929 4213
Toll Free: +1 800 228 3476

Americhem Engineered Compounds
20 Progress Drive
Morrisvillle, PA 19067
Tel: +1 215 736 1126
Toll Free: +1 800 863 4260

Notes

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

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

Americhem World Headquarters
2000 Americhem Way
Cuyahoga Falls, OH 44221
Tel: +1 330 929 4213
Toll Free: +1 800 228 3476

Americhem Engineered Compounds
20 Progress Drive
Morrisvillle, PA 19067
Tel: +1 215 736 1126
Toll Free: +1 800 863 4260