InElec® PEICF20

Product Description 20% CARBON FIBER REINFORCED POLYETHERIMIDE

Material Status Commercial: Active

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

Filler / Reinforcement Carbon Fiber, 20% Filler by Weight

Features Electrically Conductive, ESD Protection, Filled, Good Dimensional Stability, High Stiffness, High Strength, Permanent Antistatic

Uses Aerospace Applications, Connectors, Consumer Applications, Electrical/Electronic Applications, Engineering Parts, Industrial Applications, Industrial Parts, Metal Replacement, Military/Defense Applications, Oil/Gas Applications, Outdoor Applications, Semiconductor Applications

Forms Pellets

Processing Method Injection Molding

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.35	g/cm³	ASTM D792
Specific Volume	0.741	cm³/g	
Molding Shrinkage - Flow	0.15 to 0.25	%	ASTM D955
Water Absorption (24 hr)	0.20	%	ASTM D570

Mechanical	Nominal Value	Unit	Test Method
Tensile Strength	195	MPa	ASTM D638
Tensile Elongation (Yield)	1.0 to 3.0	%	ASTM D638
Flexural Modulus	13100	MPa	ASTM D790
Flexural Strength	269	MPa	ASTM D790

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (3.18 mm)	59	J/m	ASTM D256
Unnotched Izod Impact (3.18 mm)	530	J/m	ASTM D4812

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	213	°C	
CLTE - Flow	2.0E-5	cm/cm/°C	ASTM D696

Electrical	Nominal Value	Unit
Surface Resistivity	1.0E+3 to 1.0E+5	ohms

Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.6 mm)	V-0		UL 94

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	149	°C
Drying Time	4.0	hr
Processing (Melt) Temp	360 to 379	°C
Mold Temperature	149	°C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	40 to 70	rpm
Vent Depth	0.038 to 0.076	mm

Notes

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

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