

InElec® PPACF20IM2MD
 Americhem - Polyphthalamide

General Information
Product Description

20% CARBON FIBER REINFORCED, IMPACT MODIFIED PPA. THIS IS A LOCKED MEDICAL FORMULA.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East	• Europe	• North America
	• Asia Pacific	• Latin America	
Filler / Reinforcement	• Carbon Fiber, 20% Filler by Weight		
Additive	• Impact Modifier		
Features	• E-beam Sterilizable	• Good Dimensional Stability	• Low Temperature Toughness
	• Electrically Conductive	• High Impact Resistance	• Permanent Antistatic
	• ESD Protection	• High Stiffness	• Radiation Sterilizable
	• Ethylene Oxide Sterilizable	• High Strength	• Steam Sterilizable
	• Filled	• Impact Modified	
Uses	• Connectors	• Housings	• Metal Replacement
	• Electrical/Electronic Applications	• Industrial Parts	• Semiconductor Applications
	• Engineering Parts	• Medical/Healthcare Applications	• Surgical Instruments
Forms	• Pellets		
Processing Method	• Injection Molding		

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.25		ASTM D792
Molding Shrinkage - Flow	5.0E-4 to 2.0E-3	in/in	ASTM D955
Water Absorption (24 hr)	0.20	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3.30E+6	psi	ASTM D638
Tensile Strength	35000	psi	ASTM D638
Tensile Elongation (Yield)	1.0 to 3.0	%	ASTM D638
Flexural Modulus	2.70E+6	psi	ASTM D790
Flexural Strength	50000	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (0.125 in)	3.0	ft·lb/in	ASTM D256
Unnotched Izod Impact (0.125 in)	24	ft·lb/in	ASTM D4812
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (264 psi, Unannealed)	560	°F	ASTM D648
CLTE - Flow	1.2E-5	in/in/°F	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+3 to 1.0E+5	ohms	
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in)	HB		UL 94

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	275	°F
Drying Time	4.0	hr
Processing (Melt) Temp	625	°F
Mold Temperature	275	°F
Back Pressure	50.0 to 100	psi
Screw Speed	40 to 70	rpm
Vent Depth	5.0E-4 to 1.0E-3	in

