InLube® PPACF30TF10
Americhem - *Polyphthalamide*

General Information

Product Description

InLube PPACF30TF10 is a 30% carbon fiber reinforced, 10% PTFE lubricated Polyphthalamide. This material offers high wear resistance, thermal stability, very good strength and hardness, good chemical resistance, and good mechanical damping characteristics.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Carbon Fiber, 30% Filler by Weight		
Additive	• PTFE Lubricant: 10%		
Features	• Chemical Resistant • Filled • Good Dimensional Stability	• Good Mold Release • High Stiffness • High Strength	• Low Friction • Lubricated • Wear Resistant
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		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.41		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	3.65E+6	psi	ASTM D638
Tensile Strength	38000	psi	ASTM D638
Tensile Elongation (Yield)	1.0 to 2.0	%	ASTM D638
Flexural Modulus	3.20E+6	psi	ASTM D790
Flexural Strength	58000	psi	ASTM D790

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (0.125 in)	1.5	ft·lb/in	ASTM D256

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (264 psi, Unannealed)	> 550	°F	ASTM D648

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+2 to 1.0E+4	ohms	ASTM D257

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	250	°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