

TECHNICAL DATA AND PROCESS SHEET

30% CARBON FIBER REINFORCED NYLON 610

INELEC PA610CF30

TYPICAL PROPERTIES

PROPERTY	ASTM METHOD	English	UNITS	Metric SI	UNITS
GENERAL					
SPECIFIC GRAVITY	D792	1.23		1.23	
SPECIFIC VOLUME		22.52	in ³ /lb	0.813	cm ³ /gm
WATER ABSORPTION (24 Hrs)	D570	0.15	%	0.15	%
MOLD SHRINKAGE	D955	0.2-0.3	%	0.2-0.3	%
MECHANICAL					
TENSILE STRENGTH	D638	28,000	psi	193	MPa
ELONGATION, YIELD	D638	2-4	%	2-4	%
FLEXURAL STRENGTH	D790	40,500	psi	279	MPa
FLEXURAL MODULUS	D790	2,200,000	psi	15,168	MPa
SHEAR STRENGTH	D732	12,000	psi		
IZOD IMPACT STRENGTH	D256				
NOTCHED 1/8"		2	ft.lb./in.	96	J/m
UNNOTCHED 1/8"		14	ft.lb./in.	746	J/m
ROCKWELL HARDNESS		M90	M Scale	M90	M Scale
THERMAL					
HDTUL @ 264 PSI	D648	495	°F	257	°C
COEFFICIENT OF LINEAR THERMAL EXPANSION	D696	0.9	in./in. F x10 ⁻⁵	1.62	mm/mm C 10 ⁻⁶
FLAMMABILITY ¹	U.L.Subj 94	HB@1/16	in	HB@ 1.5	mm
ELECTRICAL					
SURFACE RESISTIVITY		10e2 -10e6	ohms/sq	10e2 -10e6	ohms/sq
PROCESSING					
DRYING TEMPERATURE		175	°F	79	°C
DRYING TIME		4	hrs	4	hrs
MELT TEMPERATURE		460-525	°F	238 - 275	°C
MOLD TEMPERATURE		200	°F	93	°C
BACK PRESSURE		50-100	psi	0.3 - 0.7	MPa
SCREW SPEED		40-70	rpm	40-70	rpm
VENT DEPTH		0.0005-0.001	in	0.0125 - 0.025	mm

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