

TECHNICAL DATA AND PROCESS SHEET

20% CARBON FIBER REINFORCED NYLON 6

INELEC PA6CF20

TYPICAL PROPERTIES

PROPERTY	ASTM METHOD	English	UNITS	Metric SI	UNITS
GENERAL					
SPECIFIC GRAVITY	D792	1.22		1.22	
SPECIFIC VOLUME		22.70	in ³ /lb	0.820	cm ³ /gm
WATER ABSORPTION (24 Hrs)	D570	1.3	%	1.30	%
MOLD SHRINKAGE	D955	0.3-0.4	%	0.3-0.4	%
MECHANICAL					
TENSILE STRENGTH	D638	25,000	psi	172	MPa
ELONGATION, YIELD	D638	2-3	%	2-3	%
FLEXURAL STRENGTH	D790	38,000	psi	262	MPa
FLEXURAL MODULUS	D790	1,600,000	psi	11,032	MPa
SHEAR STRENGTH	D732				
IZOD IMPACT STRENGTH	D256				
NOTCHED 1/8"		1.3	ft.lb./in.	69	J/m
UNNOTCHED 1/8"		14	ft.lb./in.	746	J/m
ROCKWELL HARDNESS					
THERMAL					
HDTUL @ 264 PSI	D648	425	°F	218	°C
COEFFICIENT OF LINEAR THERMAL EXPANSION	D696	1.7	in./in. F x10 ⁻⁵	3.06	mm/mm C 10 ⁻⁶
FLAMMABILITY ¹	U.L.Subj 94	HB@1/16"	in	HB@ 1.5	mm
ELECTRICAL					
SURFACE RESISTIVITY		10e ² -10e ⁴	ohms/sq	10e ² -10e ⁴	ohms/sq
PROCESSING					
DRYING TEMPERATURE		175	°F	79	°C
DRYING TIME		4	hrs	4	hrs
MELT TEMPERATURE		480-550	°F	250 - 290	°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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