

TECHNICAL DATA AND PROCESS SHEET

20% CARBON FIBER REINFORCED PBT

INELEC PBTCF20

TYPICAL PROPERTIES

PROPERTY	ASTM METHOD	English	UNITS	Metric SI	UNITS
GENERAL					
SPECIFIC GRAVITY	D792	1.37		1.37	
SPECIFIC VOLUME		20.22	in ³ /lb	0.730	cm ³ /gm
WATER ABSORPTION (24 Hrs)	D570	0.06	%	0.06	%
MOLD SHRINKAGE	D955	0.2-0.4	%	0.2-0.4	%
MECHANICAL					
TENSILE STRENGTH	D638	20,000	psi	138	MPa
ELONGATION, YIELD	D638	1-3	%	1-3	%
FLEXURAL STRENGTH	D790	28,500	psi	197	MPa
FLEXURAL MODULUS	D790	1,800,000	psi	12,411	MPa
SHEAR STRENGTH	D732				
IZOD IMPACT STRENGTH	D256				
NOTCHED 1/8"		1.1	ft.lb./in.	59	J/m
UNNOTCHED 1/8"		9	ft.lb./in.	480	J/m
ROCKWELL HARDNESS					
THERMAL					
HDTUL	D648	420	°F	216	°C
@ 264 PSI					
COEFFICIENT OF LINEAR THERMAL EXPANSION	D696	0.8	in./in. F x10 ⁻⁵	1.44	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		230	°F	110	°C
DRYING TIME		4	hrs	4	hrs
MELT TEMPERATURE		430-500	°F	220- 260	°C
MOLD TEMPERATURE		225	°F	107	°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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