

**TECHNICAL DATA AND PROCESS SHEET**

**20% GLASS FIBER REINFORCED POLYCARBONATE**

**INSTRUC PCGF20**

**TYPICAL PROPERTIES**

<b>PROPERTY</b>	<b>ASTM METHOD</b>	<b>English</b>	<b>UNITS</b>	<b>Metric SI</b>	<b>UNITS</b>
<b>GENERAL</b>					
SPECIFIC GRAVITY	D792	1.34		1.34	
SPECIFIC VOLUME		20.67	in <sup>3</sup> /lb	0.746	cm <sup>3</sup> /gm
WATER ABSORPTION (24 Hrs)	D570	0.09	%	0.09	%
MOLD SHRINKAGE	D955	0.2- 0.3	%	0.2- 0.3	%
<b>MECHANICAL</b>					
TENSILE STRENGTH	D638	16,000	psi	110	MPa
ELONGATION, YIELD	D638	2-4	%	2-4	%
FLEXURAL STRENGTH	D790	25,000	psi	172	MPa
FLEXURAL MODULUS	D790	1,000,000	psi	6,895	MPa
SHEAR STRENGTH	D732		psi	0	MPa
IZOD IMPACT STRENGTH	D256				
NOTCHED 1/8"		3	ft.lb./in.	160	J/m
UNNOTCHED 1/8"		18	ft.lb./in.	959	J/m
ROCKWELL HARDNESS					
<b>THERMAL</b>					
HDTUL @ 264 PSI	D648	295	°F	146	°C
COEFFICIENT OF LINEAR THERMAL EXPANSION	D696	1.5	in./in. F x10 <sup>-5</sup>	2.7	mm/mm C 10 <sup>-6</sup>
FLAMMABILITY <sup>1</sup>	U.L.Subj 94	HB@1/16	in	HB@ 1.5	mm
<b>ELECTRICAL</b>					
SURFACE RESISTIVITY		10e <sup>16</sup>	ohms/sq	10e <sup>16</sup>	ohms/sq
<b>PROCESSING</b>					
DRYING TEMPERATURE		250	°F	121	°C
DRYING TIME		4	hrs	4	hrs
MELT TEMPERATURE		540-630	°F	280- 330	°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		0.0015-0.003	in	0.038 - 0.075	mm

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