



The Resin Enterprise, Inc.
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High Temperature Material Comparison

Properties	Test Method	Units	PES 2016PDX1045	Temppeclear™ X01	Polysulfone P1700	Ultem® 1000
Physical:						
Specific Gravity	ASTM-D792	-----	1.37	1.07	1.24	1.27
Water Absorption (24 hr)	ASTM-D570	%	0.80	0.07	0.3	1.3
Melt Mass Flow Rate (337°C 6.6kg)	ASTM-D1238		2-6	1-2	6.5	9.0
Mechanical:						
Tensile Strength	ASTM-D638	psi	12,300	10,443	10,200	15,200
Elongation	ASTM-D638	%	6.5 (yield)	19 (break)	50-100 (break)	60 (break)
Flexural Strength	ASTM-D790	psi	17,400	12,500	15,400	25,000
Flexural Modulus	ASTM-D790	psi	384,000	352,442	390,000	510,000
Izod Impact Strength		ft. lb./in.				
Notched (1/8")			3.8	1.3	1.3	1.0
Ball Indentation Hardness	ISO 2039-1	psi	22,300			
Thermal:						
Heat Deflection Temp.	ASTM-D648	°F				
264 psi			405	361	345	394
Glass Transition Temperature	ISO 11357-2	F	437			
Miscellaneous:						
Flammability .06 in	UL Subj. 94	-----	V-0	V-1	HB	V-2 (.016)
Flammability .18 in	UL Subj. 94	-----	V-0	V-0	V-0	V-0 (.030)

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