

Standard Values of ENSINGER Reinforced Engineering Plastics

		Mechanical Properties											Thermal Properties								Electrical Properties			Miscellaneous					
Trade Name	Raw Material Group	Specific Gravity	Density	Tensile Strength, Break	Elongation at Break	Tensile Modulus	Rockwell Hardness	Impact Strength (73°F)	Flexural Strength	Flexural Modulus	Wear Factor Against Steel	Coefficient of Friction	Melting Point	Heat Deflection at 66 psi	Heat Deflection at 264 psi	Maximum Serving Temperature for short term	Maximum Serving Temperature for Long Term	Thermal Conductivity	Specific Heat	Coefficient of Linear Thermal Expansion	Applicable Temperature Range for Thermal Expansion	Dielectric Constant at 60HZ	Dissipation Factor at 50% RH	Volume Resistivity	Dielectric Strength	Water Absorption - 24 hrs.	Water Absorption - Saturation	Flammability	Weathering Resistance
		ASTM D 792	ASTM D 792	ASTM D 638	ASTM D 638	ASTM D 638	ASTM D 785	ASTM D 256 (notched)	ASTM D 790	ASTM D 790	40 psi 50 fpm	40 psi 50 fpm	°F	°F	°F	°F	°F	ASTM C 177	Btu/lb-°F	ASTM D 696	°F	ASTM D 150 (73°F, 50% RH)	ASTM D 150 (73°F)	ASTM D 257	ASTM D 149	ASTM D 570	ASTM D 570	UL 94	
		-	lb/in ³	p.s.i.	%	p.s.i.	-	ft-lbs/in	p.s.i.	p.s.i.	in ³ x 1/PV	Dynamic	°F	°F	°F	°F	°F	Btu-in./hr-ft ² -°F	Btu/lb-°F	in/in-°F	°F	-	-	ohm-cm	V/mil	%	%	-	-
TECAMID™ 6/6 GF30	Nylon 6/6 30% Glass Fiber Reinforced	1.35	0.0488	27,000	3	14x10 ⁵	M101	2.1	39,100	12x10 ⁵	75x10 ⁻¹⁰	0.31	491	490	482	465	230	1.69	0.36	1.2x10 ⁻⁵	0-200	3.5	0.014	10 ¹⁵	530	0.7	5.4	HB	+
DELIRIN® 570	DELIRIN® 20% Glass Fiber Filled	1.56	0.056	8,500	12	9.0x10 ⁵	M90 R118	0.8	10,700	7.3x10 ⁵	245x10 ⁻¹⁰	0.35	347	345	316	-	185	-	0.35	2.0x10 ⁻⁵ 4.5x10 ⁻⁵	(-40)-85 85-140	3.9	0.005	1x10 ¹⁴	490	0.25	1.0	HB	(+) UV sensitive
TECAFORM™ HPV13	DELIRIN® 13% PTFE Filled	1.54	0.056	7,000	17.5	8.58x10 ⁵	R118	0.7	10,000	3.5x10 ⁵	20x10 ⁻¹⁰	0.12	347	-	215	-	185	165	0.35	5.1x10 ⁻⁵	85-140	-	-	-	-	0.22	0.72	HB	(+) UV sensitive
NORYL® GF30	NORYL® 30% Glass Fiber Reinforced	1.31	0.0491	17,500	5	10x10 ⁵	L108	2.2	25,000	11.3x10 ⁵	230x10 ⁻¹⁰	0.27	330*	285	275	-	221	-	-	1.4x10 ⁻⁵	0-140	3.15	0.002	-	530	0.06	-	V-0* & V-1*	+
TECANAT™ GF20	Polycarbonate 20% Glass Fiber Reinforced	1.35	0.049	16,000	5	8.6x10 ⁵	M91 R122	2.0	19,000	8.0x10 ⁵	200x10 ⁻¹⁰	0.24	330*	300	295	-	248	1.47	0.28	1.5x10 ⁻⁵	0-200	3.17	0.009	10 ¹⁷	490	0.16	0.29	V-0* 5VA*	(+) UV sensitive
ULTEM® GF30	ULTEM® 30% Glass Fiber Reinforced	1.51	0.0546	24,500	13	13x10 ⁵	M114	1.6	33,000	13x10 ⁵	130x10 ⁻¹⁰	0.24	442*	414	410	-	356	1.56	-	1.1x10 ⁻⁵	0-300	3.7	0.015	3x10 ¹⁶	770	0.16	0.90	V-0	+
TECAPEEK™ GF30	PEEK® 30% Glass Fiber Reinforced	1.51	0.0542	24,620	2.7	14x10 ⁵	M103 R124	1.84	36,250	1,450,000	90x10 ⁻¹⁰	0.30	644	-	599	-	482	2.98	0.41	1.2x10 ⁻⁵	0-289	-	-	-	-	0.11	-	V-0	(+)
TECAPEEK™ CF30	PEEK® 30% Carbon Fiber Reinforced	1.41	0.0520	32,480	2.0	19x10 ⁵	M107 R124	1.65	51,475	2,929,000	60x10 ⁻¹⁰	0.13	644	-	599	-	482	6.38	0.44	0.8x10 ⁻⁵	0-289	-	-	1.4x10 ⁵	-	0.06	-	V-0	(+)-
SINTIMID®	Polyimide 15% Graphite Filled	1.42	0.0513	12,800	8.2	-	M116	-	18,400	6.1x10 ⁵	37x10 ^{-10*}	0.38*	-	-	695	662	572	-	-	1.8x10 ⁻⁵	0-500	-	-	-	-	1.55	2.3	V-0	+

™ Ensinger Industries, Inc.
 Delrin® - DuPont Company
 Ultem®, Noryl® - Sabic Innovative Plastics
 SINTIMID® - Ensinger Industries, Inc.

- * = Vicat Softening Temperature
- ** = Tested at 100,000 PV and 300°F
- = Flammability ratings are dependent on material thickness.

- + = Resistant
- (+) = Limited Resistance
- = Not Resistant

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