

Standard Values of ENSINGER Reinforced Engineering Plastics

		Mechanical Properties											Thermal Properties								Electrical Properties			Miscellaneous					
Trade Name	Raw Material Group	Specific Gravity ASTM D 792	Density ASTM D 792	Tensile Strength, Break ASTM D 638	Elongation at Break ASTM D 638	Tensile Modulus ASTM D 638	Rockwell Hardness ASTM D 785	Impact Strength (73°F) ASTM D 256 (notched)	Flexural Strength ASTM D 790	Flexural Modulus ASTM D 790	Wear Factor Against Steel 40 psi 50 fpm	Coefficient of Friction 40 psi 50 fpm	Melting Point	Heat Deflection at 66 psi ASTM D 648	Heat Deflection at 264 psi ASTM D 648	Maximum Serving Temperature for short term	Maximum Serving Temperature for Long Term	Thermal Conductivity ASTM C 177	Specific Heat	Coefficient of Linear Thermal Expansion ASTM D 696	Applicable Temperature Range for Thermal Expansion	Dielectric Constant at 60HZ ASTM D 150 (73°F, 50% RH)	Dissipation Factor at 60HZ ASTM D 150 (73°F)	Volume Resistivity ASTM D 257	Dielectric Strength ASTM D 149	Water Absorption - 24 hrs. ASTM D 570	Water Absorption - Saturation ASTM D 570	Flammability UL 94	Weathering Resistance
		-	lb/in ³	p.s.i.	%	p.s.i.	-	ft-lbs/in	p.s.i.	p.s.i.	in ³ x 1/PV hr.	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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