

Standard Materials	Specific Gravity	Density	Tensile Strength	Elongation	Tensile Modulus	Rockwell Hardness	Izod Impact Strength (73 ° F)	Flexural Strength	Flexural Modulus	Coefficient of Friction 40 psi, 50 fpm	Heat Deflection		Dielectric Strength	Flammability UL 94
											Temp. @ 66 psi	Temp. @ 264 psi		
ABS	—	0.0372 lbs/in ³ (1.30 g/cc)	6000 psi (41 MPa)	40%	—	—	7.7 ft-lbs/in (408 J/m)	—	300000 psi (2000 MPa)	—	201 ° F (94 ° C)	—	—	—
POLYCARBONATE	1.19 g/cc	0.0430 lbs/in ³ (1.19 g/cc)	8000 psi (55 MPa)	50%	300000 psi (2000 MPa)	70-M Scale 118-R Scale	1.7 ft-lbs/in (90 J/m)	14000 psi (98 MPa)	340000 psi (2300 MPa)	0.38	280 ° F (138 ° C)	270 ° F (132 ° C)	380 V/mil	UL 94 HB
20% GF POLYCARBONATE	1.20 g/cc	0.0434 lbs/in ³ (1.20 g/cc)	16000 psi (110 MPa)	5%	860000 psi (5900 MPa)	—	2.06 ft-lbs/in (109 J/m)	19000 psi (131 MPa)	798000 psi (5500 MPa)	0.22	298 ° F (147 ° C)	295 ° F (146 ° C)	490 V/mil	—
NYLON 6/6	1.14 g/cc	0.0412 lbs/in ³ (1.14 g/cc)	10000 psi (68 MPa)	25%	350000 psi (2400 MPa)	90-M Scale	1.1 ft-lbs/in (58 J/m)	15500 psi (107 MPa)	440000 psi (3000 MPa)	0.26	455 ° F (235 ° C)	194 ° F (90 ° C)	300-400 V/mil	V-2 (3.0 mm)
30% GF NYLON	1.35 g/cc	0.0488 lbs/in ³ (1.35 g/cc)	12000 psi (82 MPa)	10%	400000 psi (2700 MPa)	90-M Scale	1.0 ft-lbs/in (53 J/m)	18500 psi (128 MPa)	550000 psi (3800 MPa)	—	490 ° F (254 ° C)	482 ° F (253 ° C)	—	—
DELTRIN	1.42 g/cc	0.0513 lbs/in ³ 1.42 g/cc	9000 psi (62 MPa)	25%	350000 psi (2400 MPa)	94-M Scale 120-R Scale	1.5 ft-lbs/in (80 J/m)	11500 psi (79 MPa)	420000 psi (2900 MPa)	0.20	336 ° F (169 ° C)	257 ° F (125 ° C)	500 V/mil	HB (1.47)
HDPE	—	0.034 lbs/in ³ (0.905 g/cc)	4500 psi (31 MPa)	600%	—	—	1.2 ft-lbs/in (64 J/m)	—	225000 psi (1550 MPa)	—	172 ° F (78 ° C)	—	—	—
POLYPROPYLENE	—	0.033 lbs/in ³ (0.905 g/cc)	5400 psi (37 MPa)	14%	—	92-M Scale	0.375 ft.-lbs/in (20 J/m)	—	225000 psi (1550 MPa)	—	—	—	—	—
CLEAR ACRYLIC	1.19 g/cc	—	11250 psi (77 MPa)	6.4%	450000 psi (3100 MPa)	98-M Scale	1.0 ft-lb/in (53 J/m)	15000 psi (105 MPa)	475000 psi (3275 MPa)	—	230 ° F (110 ° C)	203 ° F (95 ° C)	—	UL 94 HB
PVC WHITE/GRAY	—	0.051 lbs/in ³ (1.42 g/cm ³)	—	—	411000 psi (2800 MPa)	115-R Scale	0.9 ft-lb/in (48 J/m)	—	481000 psi (3300 MPa)	—	179 ° F (82 ° C)	176 ° F (86 ° C)	544 V/mil	UL 94 V-0
PVC CLEAR	—	0.051 lbs/in ³ (1.40g/cm ³)	—	—	426000 psi (2900 MPa)	115-R Scale	—	—	480000 psi (3300 MPa)	—	165 ° F (74 ° C)	154 ° F (68 ° C)	—	UL 94 V-0
PEEK	1.48 g/cc	0.0535 lbs/in ³ (1.48 g/cm ³)	17300 psi (119 MPa)	2.5%	—	85-M Scale	3.25 ft-lb/in (172 J/m)	30000 psi (207 MPa)	1400000 psi (9650 MPa)	0.20	—	530 ° F (276 ° C)	1.4 x 10 ⁻⁵ ohm-cm	—
ULTEM 1000	1.27 g/cc	—	15200 psi (104 MPa)	60%	430000 psi (2900 MPa)	109-M Scale	1 ft-lb/in (53 J/m)	22000 psi (152 MPa)	480000 psi (3300 MPa)	—	410 ° F (210 ° C)	392 ° F (200 ° C)	710 V/mil	UL 94 V-0
20% GF ULTEM 1000	1.42 g/cc	—	20100 psi (138 MPa)	3.0%	1000000 psi (7000 MPa)	114-M Scale	1.6 ft-lb/in (85 J/m)	30000 psi (207 MPa)	9000000 psi (6200 MPa)	—	410 ° F (210 ° C)	408 ° F (209 ° C)	670 V/mil	UL 94 V-0
G-10 FR4	1.85 g/cc	—	40000 psi (275 MPa)	—	—	98-M Scale	7.9 ft-lb/in (419 J/m)	65000 psi (450 MPa)	2900 psi (20 MPa)	—	—	—	800 V/mil	UL 94 V-0

CNC MACHINING

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