

## Material Selection Matrix

	Tensile Strength (ASTM D 638)	Tensile Modulus (ASTM D 638)	Elongation @ Break (ASTM D 638)	Heat Deflection Temperature (ASTM D 648)
<b>SLS</b>				
Nylon PA	43 MPa (6237 PSI)	1586 MPa (230 KSI)	14 %	@ 66 PSI 180 °C 356 °F @ 264 PSI 95 °C 203 °F
Nylon GF	30 MPa (4400 PSI) XY 40 MPa (5800 PSI) Z	2700 MPa (390 KSI)	2 % (Z-axis) 3.5 % (X-Y axis)	@ 264 PSI 106 °C
DuraForm EX	48 MPa (6961 PSI)	1517 MPa (220 KSI)	47%	@ 66 PSI 188 °C 370 °F @ 264 PSI 48 °C 118 °F
DuraForm HST	48-51 MPa (7050-7350 PSI)	5475-5725 MPa (795-831 KSI)	4.5 %	@ 66 PSI 184 °C 363 °F @ 264 PSI 179 °C 355 °F
Nylon FR-106	46 MPa (6700 PSI) XY 39 MPa (5600 PSI) Z	1,345 MPa (195 KSI)	38 % (XY-axis) 21 % (Z-axis)	N/A
SLS Flex	N/A	4.8 – 8.3 MPa (700 - 1200 PSI)	90 – 250 %	N/A

<b>SLA</b>				
Somos 18420	42.2 - 43.8 MPa (6100 - 6400 PSI)	2180 - 2310 MPa (316 - 336 KSI)	8 - 16 %	@ 66 PSI 53 56 °C 127-133 °F @ 264 PSI 46-47 °C 114-116 °F
Watershed XC 11122	47.1 - 53.6 MPa (6831 - 7774 PSI)	2650 - 2880 MPa (384 - 418 KSI)	11 - 20 %	@66 PSI 45.9-54.5°C 115-130 °F @264 PSI 49.0 -49.7 °C 120 °F
Accura 25	38 MPa (5450 - 5570 PSI)	1590 - 1660 MPa (230 - 240 KSI)	13 - 20 %	@ 66 PSI 58-63 °C 136-145 °F @ 264 PSI 51-55 °C 24-131 °F
DMX SL-100	29.7 - 32.1 MPa (4300 - 4700 PSI)	2256 - 2559 MPa (32.7 - 37.1 KSI)	12.2 - 28.0 %	@66 PSI 43.4-45.3 °C 110-114 °F @264 PSI 40.8-41.4 °C 105-107 °F
NanoTool	61.7 -78.0 MPa (8900 –11300 PSI)	11000 –11400 MPa (1,590 –1,650 KSI)	0.7 –1.0 %	@66 PSI 225°C 437°F @ 264 PSI 85 –90°C 185 –193°F

<b>ProJet</b>				
VisiJet EX200 Plastic	42.4 MPa	1238 MPa	6.83 %	N/A

<b>Cast Urethane</b>				
RC-81D	8500 PSI	N/A	10%	@66 PSI N/A @ 264 PSI 75°C 167°F