



- With a higher strength-to-weight ratio than 6061-T6 Aluminum
- Up to 27x stiffer than ABS
- Up to 24x stronger than ABS

Mechanical Properties of Continuous Fibers

	Carbon	Kevlar	Fiberglass	HSHT Glass	Standard
Tensile Strength (MPa)	700	610	590	600	ASTM D303
Tensile Modulus (GPa)	54	27	21	21	ASTM D3039
Tensile Strain at Break (%)	1.5	2.7	3.8	3.9	ASTM D3039
Flexural Strength (MPa)	470	190	210	420	ASTM D790*
Flexural Modulus (GPa)	51	26	22	21	ASTM D790*
Flexural Strain at Break (%)	1.2	2.1	1.1	2.2	ASTM DT90*
Compressive Strength (MPa)	320	97	140	192	ASTM D6641
Compressive Modulus (GPa)	54	28	21	21	ASTM D6641
Compressive Strain at Break (%)	0.7	1.5	n/a	n/a	ASTM D6641
Heat Deflection Temperature (°C)	105	105	105	150	ASTM D648 B
Izod Impact - notched (J/m)	958	1873**	2603	3117	ASTM D256-10 A

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User should satisfy himself that he has all current data relevant to his particular use.



CFF materials properties
#high performance

- Tensile test specimens: ASTM D638 type IV beams
- Flexural test specimens: 3-pt. Bending, 4.5 in (L) x 0.4 in (W) x 0.24 in (H)
- Heat-deflection temperature at 0.45 MPa, 66 psi (ASTM D648-07 Method B)
- Flexural Strain at Break is not available because nylon does not break before the test ends

Mechanical Properties of Nylon

	Nylon	Onyx	Standard
Tensile Modulus (GPa)	0.94	0.94	ASTM D638
Tensile Stress at Yield (MPa)	31	31	ASTM D638
Tensile Strain at Yield (%)	27	27	ASTM D638
Tensile Stress at Break (MPa)	54	54	ASTM D638
Tensile Strain at Break (%)	260	260	ASTM D638
Flexural Strength (MPa)	32	32	ASTM D790*
Flexural Modulus (GPa)	0.84	0.84	ASTM D790*
Flexural Strain at Break (%)	n/a	n/a	ASTM D790*
Heat Deflection Temperature (°C)	49 140*	145	ASTM D648 B
Izod Impact - notched (J/m)	1015	334	ASTM D256-10 A

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