



# CARBON FIBER COMPOUNDS

## Benefits of Using Carbon Fiber Compounds

### Strength

Carbon Fiber Compounds from RTP Company provide the tensile and flexural strength your application requires, at a low density, for strong, lightweight parts.

Polymer Matrix	Fiber	Product Code	Density g/cm <sup>3</sup>	Tensile Strength PSI	Flexural Strength PSI
PP	30% GF	RTP 105 CC	1.12	10,875	15,950
	40% GF	RTP 107 CC	1.21	11,890	18,850
	30% CF	RTP 199 X 138502 F	1.06	15,500	24,000
	40% CF	RTP 199 X 138502 H	1.11	17,000	28,000
PA 6,6	30% GF	RTP 205	1.36	23,000	35,000
	40% GF	RTP 207	1.46	27,000	43,000
	30% CF	RTP 285	1.27	36,000	50,000
	40% CF	RTP 287	1.31	40,000	54,000
PPA	30% GF	RTP 4005	1.44	28,000	39,000
	40% GF	RTP 4007	1.55	32,000	46,000
	30% CF	RTP 4085	1.33	41,000	58,000
	40% CF	RTP 4087	1.38	43,000	62,000

### Modulus

Our Carbon Fiber Compounds offer exceedingly high tensile and flexural modulus. Your application will benefit from strong, rigid material that maintains its structural integrity.

Polymer Matrix	Fiber	Product Code	Density g/cm <sup>3</sup>	Tensile Modulus X 10 <sup>6</sup> PSI	Flexural Modulus X 10 <sup>6</sup> PSI
PP	30% GF	RTP 105 CC	1.12	0.87	0.72
	40% GF	RTP 107 CC	1.21	1.01	0.94
	30% CF	RTP 199 X 138502 F	1.06	1.80	1.21
	40% CF	RTP 199 X 138502 H	1.11	2.50	1.80
PA 6,6	30% GF	RTP 205	1.36	1.35	1.25
	40% GF	RTP 207	1.46	1.90	1.68
	30% CF	RTP 285	1.27	3.30	2.75
	40% CF	RTP 287	1.31	4.10	3.70
PPA	30% GF	RTP 4005	1.44	1.65	1.50
	40% GF	RTP 4007	1.55	2.15	1.95
	30% CF	RTP 4085	1.33	3.40	3.20
	40% CF	RTP 4087	1.38	4.60	4.00

### Lightweighting

In comparison to Glass Fiber Compounds, our Carbon Fiber Compounds provide similar strength at a much lower density. Improve your product yield and lightweight your application with Carbon Fiber Compounds from RTP Company today!

Polymer Matrix	Fiber	Product Code	Density g/cm <sup>3</sup>	% Wt. Saved	Tensile Strength PSI	Flexural Modulus X 10 <sup>6</sup> PSI
PA 6,6	30% GF	RTP 205*	1.36		16,800	1.04
PP	20% CF	RTP 199 X 138502 D	1.00	26.5	13,500	1.15
PPA	50% GF	RTP 4009	1.64		36,000	2.50
PA 6,6	30% CF	RTP 285	1.27	22.5	36,000	2.75
PEEK	50% GF	RTP 2209 HF	1.73		32,000	2.80
PPA	20% CF	RTP 4083	1.28	26.0	35,000	2.30

\* 50% RH conditioned

### Metal Replacement

In terms of flexural modulus and tensile strength, our Carbon Fiber Compounds from stack up well against metal, and at a much lighter density.

Material Matrix	Grade	Fiber	Density g/cm <sup>3</sup>	Tensile Strength PSI	Flexural Modulus X 10 <sup>6</sup> PSI
PPA	RTP 4087 UP	40% Carbon	1.38	52,000	5.00
PPA	RTP 4087	40% Carbon	1.38	43,000	4.00
PEEK	RTP 2287 HF UP	40% Carbon	1.45	43,000	4.90
PEEK	RTP 2287 HF	40% Carbon	1.45	40,750	4.50
PPS	RTP 1387 UP	40% Carbon	1.48	38,000	4.70
PPS	RTP 1387	40% Carbon	1.48	30,000	4.50
Metal	Zamak 5	Zinc Alloy	6.60	48,000	13.00
Metal	Zamak 3	Zinc Alloy	6.60	41,000	13.00
Metal	6061-T6	Aluminum	2.70	40,000	10.00

### Ultra Performance (UP)

Ultra Performance Carbon Fiber Compounds from RTP Company outperform all other carbon fiber compounds.

Polymer Matrix	Fiber	Product Code	Density g/cm <sup>3</sup>	Tensile Strength PSI	Flexural Modulus X 10 <sup>6</sup> PSI
PPS	30% Glass	RTP 1305	1.58	22,000	1.80
	40% Glass	RTP 1307	1.68	23,500	2.20
	30% Carbon	RTP 1385 UP	1.45	37,000	3.30
	40% Carbon	RTP 1387 UP	1.48	38,000	4.70
PPA	30% Glass	RTP 4005	1.44	28,000	1.50
	40% Glass	RTP 4007	1.55	32,000	1.95
	30% Carbon	RTP 4085 UP	1.33	46,000	3.50
	40% Carbon	RTP 4087 UP	1.38	52,000	5.00
PEEK	30% Glass	RTP 2205 HF	1.52	27,000	1.61
	40% Glass	RTP 2207 HF	1.61	30,500	2.10
	30% Carbon	RTP 2285 HF UP	1.41	39,000	3.70
	40% Carbon	RTP 2287 HF UP	1.45	43,000	4.90

Carbon Fiber Compounds from RTP Company are formulated to be lighter, stiffer, and stronger than traditional glass-filled compounds, allowing for more design freedom and flexibility.

For more information, visit [www.rtpcompany.com/CF](http://www.rtpcompany.com/CF)



RTP Company Corporate Headquarters • 580 East Front Street • Winona, Minnesota 55987 USA website: [www.rtpcompany.com](http://www.rtpcompany.com) • email: [rtp@rtpcompany.com](mailto:rtp@rtpcompany.com)

TELEPHONE: U.S.A. +1 507-454-6900 SOUTH AMERICA +55 11 4193-8772 MEXICO +52 81 8134-0403 EUROPE +33 380-253-000 SINGAPORE +65 6863-6580 CHINA +86 512-6283-8383 WIMAN CORPORATION +1 320-259-2554 ESP™ +1 800-432-2386

