

EPSILON COMPOSITE

The alternative

CARBON FIBER PULTRUDED STANDARD PROFILES



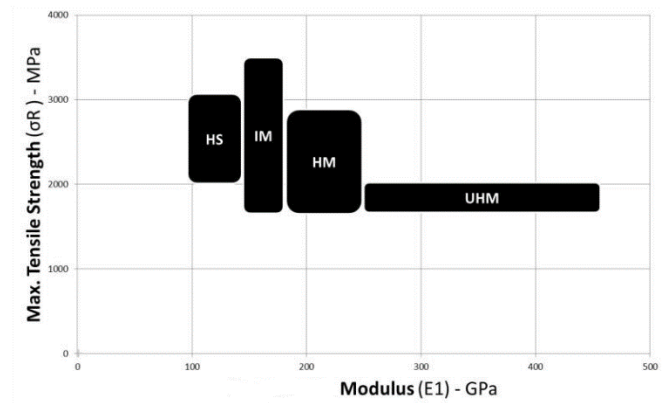


General features

Profile types ⁽¹⁾	Tensile Modulus (E ₁)	Tensile strength (σ _t)	Strain (ε _t) ⁽²⁾
HS	100 GPa à 140 GPa	2000 MPa à 3 000 MPa	1% à 2%
IM	140 GPa à 190 GPa	1 700 MPa à 3 400 MPa	1% à 2%
HM	190 GPa à 250 GPa	1 700 MPa à 2 700 MPa	0,8% à 1,8%
UHM	250 GPa à 450 GPa	1 700 MPa à 2 000 MPa	0,2 à 0,4%

(1) High Strength / Intermediate Modulus
High Modulus / Ultra High Modulus

(2) Estimative values (depending on profile shape and fiber grade used)



Profile types ⁽³⁾	Aspect	Torsional strength	Flexural strength
UD	①	--	+++++
PWI	①	+	++++
PWE	②	+++	+

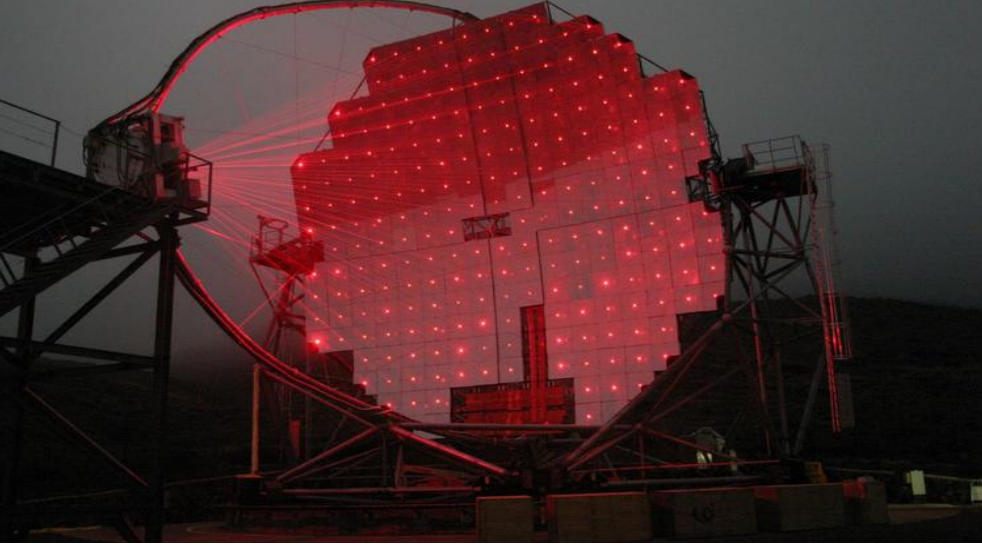
(3) Depending on mechanical specifications



①

②

②



■ Rounds tubes $\varnothing < 40$ mm

Product description			Outer diameter	Thickness	Weight
Tube $\varnothing 4 \times 2,6$	UD	HS	4,0 mm	0,7 mm	11 g/m
Tube $\varnothing 5 \times 3,2$	UD	HS	5,0 mm	0,9 mm	19 g/m
Tube $\varnothing 5,5 \times 3,6$	UD	HS	5,5 mm	0,9 mm	21 g/m
Tube $\varnothing 6 \times 4$	UD	HS	6,0 mm	1,0 mm	23 g/m
Tube $\varnothing 8 \times 5$	UD	HS	8,0 mm	1,5 mm	50 g/m
Tube $\varnothing 16 \times 12,5$	PWI	HS	16,0 mm	1,8 mm	124 g/m
Tube $\varnothing 16 \times 12,5$	PWE	HS	16,0 mm	1,8 mm	127 g/m
Tube $\varnothing 16 \times 12,5$	PWE	HM	16,0 mm	1,8 mm	127 g/m
Tube $\varnothing 16 \times 13$	PWE	HS	16,0 mm	1,5 mm	114 g/m
Tube $\varnothing 20 \times 15$	PWE	HS	20,0 mm	2,5 mm	217 g/m
Tube $\varnothing 20 \times 17$	PWE	HS	20,0 mm	1,5 mm	139 g/m
Tube $\varnothing 22 \times 17$	PWI	HS	22,0 mm	2,5 mm	277 g/m
Tube $\varnothing 22 \times 18,5$	PWE	HS	22,0 mm	1,8 mm	178 g/m
Tube $\varnothing 24 \times 21$	PWE	HS	24,0 mm	1,5 mm	164 g/m
Tube $\varnothing 25,4 \times 18$	PWE	HS	25,4 mm	3,7 mm	396 g/m
Tube $\varnothing 28,65 \times 24,65$	PWE	HS	28,7 mm	2,0 mm	263 g/m
Tube $\varnothing 28 \times 25$	PWE	HS	28,0 mm	1,5 mm	200 g/m
Tube $\varnothing 32,3 \times 25,8$	PWE	HS	32,3 mm	3,3 mm	500 g/m
Tube $\varnothing 32 \times 29$	PWE	HS	32,0 mm	1,5 mm	225 g/m
Tube $\varnothing 32 \times 26$	PWE	HM	32,0 mm	3,0 mm	412 g/m



Tubes UD/PWI



Tubes PWE



■ Round tubes $\varnothing > 40$ mm

Désignation produit			Diamètre	Epaisseur	Poids/m
Tube $\varnothing 40 \times 36$	PW	HS	40,0 mm	2,0 mm	370 g/m
Tube $\varnothing 50 \times 46$	PW	HS	50,0 mm	2,0 mm	495 g/m
Tube $\varnothing 55 \times 45$	PW	HS	55,0 mm	5,0 mm	1 250 g/m
Tube $\varnothing 55 \times 51$	PW	HS	55,0 mm	2,0 mm	550 g/m
Tube $\varnothing 60 \times 52$	PW	UHM	60,0 mm	4,0 mm	1 235 g/m
Tube $\varnothing 60 \times 56$	PW	HS	60,0 mm	2,0 mm	600 g/m
Tube $\varnothing 80 \times 74$	PW	HS	80,0 mm	3,0 mm	1 175 g/m
Tube $\varnothing 100 \times 84$	PW	HS *	100,0 mm	8,0 mm	3 850 g/m
Tube $\varnothing 100 \times 84$	PW	UHM	100,0 mm	8,0 mm	3 790 g/m
Tube $\varnothing 100 \times 91$	PW	IM	100,0 mm	4,5 mm	2 200 g/m
Tube $\varnothing 100 \times 94$	PW	HS	100,0 mm	3,0 mm	1 490 g/m
Tube $\varnothing 108 \times 91$	PW	HS *	108,0 mm	8,5 mm	4 450 g/m
Tube $\varnothing 110 \times 101$	PW	HS	110,0 mm	4,5 mm	2 331 g/m
Tube $\varnothing 120 \times 112$	PW	HS	120,0 mm	4,0 mm	2 350 g/m
Tube $\varnothing 120 \times 106$	PW	HS *	120,0 mm	7,0 mm	4 120 g/m
Tube $\varnothing 130 \times 116$	PW	HM	130,0 mm	7,0 mm	4 360 g/m
Tube $\varnothing 140 \times 126$	PW	HM *	140,0 mm	7,0 mm	4 990 g/m
Tube $\varnothing 150 \times 141$	PW	HS	150,0 mm	4,5 mm	3 340 g/m
Tube $\varnothing 160 \times 150$	PW	HS	160,0 mm	5,0 mm	4 100 g/m
Tube $\varnothing 160 \times 150$	PW	IM	160,0 mm	5,0 mm	4 150 g/m
Tube $\varnothing 170 \times 159$	PW	HS	170,0 mm	5,5 mm	4 500 g/m

*External galvanic protective layer (glass fiber)



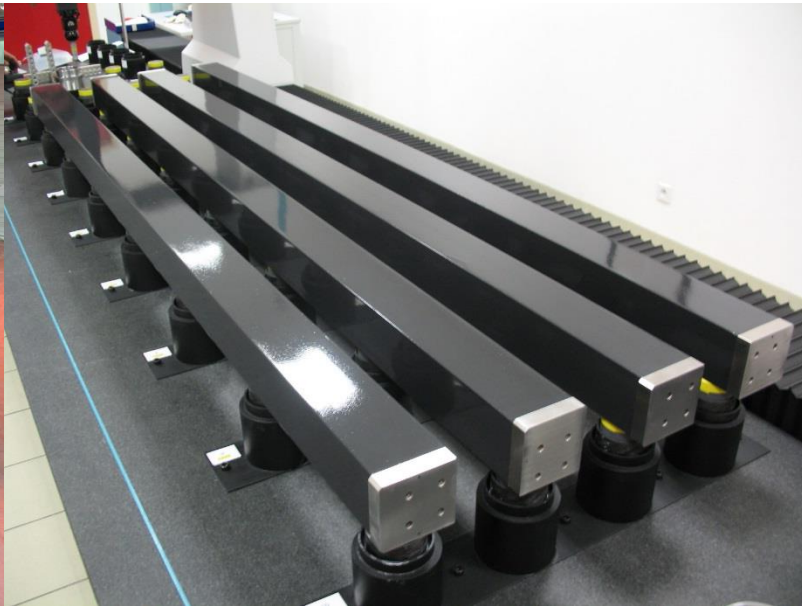


■ Flat laminates: supplied with 2 peel-ply

Product description			Outer diameter	Thickness	Weight
Carbolam® 50x1,2	UD	UHM	50,0 mm	1,2 mm	145 g/m
Carbolam® 50x1,2	UD	HS	50,0 mm	1,2 mm	125 g/m
Carbolam® 50x1,4	UD	HM	50,0 mm	1,4 mm	136 g/m
Carbolam® 50x1,4	UD	HS	50,0 mm	1,4 mm	136 g/m
Carbolam® 50x2	UD	UHM	50,0 mm	2,0 mm	209 g/m
Carbolam® 60x1,4	UD	HM	60,0 mm	1,4 mm	162 g/m
Carbolam® 80x1,2	UD	HS	80,0 mm	1,2 mm	191 g/m
Carbolam® 80x1,4	UD	HM	80,0 mm	1,4 mm	194 g/m
Carbolam® 80x1,4	UD	HS	80,0 mm	1,4 mm	217 g/m
Carbolam® 90x1,4	UD	HM	90,0 mm	1,4 mm	243 g/m
Carbolam® 100x1,2	UD	HS	100,0 mm	1,2 mm	242 g/m
Carbolam® 100x1,4	UD	HM	100,0 mm	1,4 mm	268 g/m
Carbolam® 100x1,4	UD	HS	100,0 mm	1,4 mm	263 g/m
Carbolam® 100x2	UD	UHM	100,0 mm	2,0 mm	423 g/m
Carbolam® 100x4	UD	UHM	100,0 mm	4,0 mm	797 g/m
Carbolam® 120x1,4	UD	HM	120,0 mm	1,4 mm	321 g/m
Carbolam® 120x1,4	UD	HS	120,0 mm	1,4 mm	315 g/m
Carbolam® 120x2	UD	HM	120,0 mm	2,0 mm	434 g/m
Carbolam® 150x1,4	UD	HS	150,0 mm	1,4 mm	396 g/m
Flat 142x4*	UD	HS	142,0 mm	4,3 mm	932 g/m
Flat 18x5 *	UD	HS	18,0 mm	5,0 mm	141 g/m

**Supplied without peel-ply*

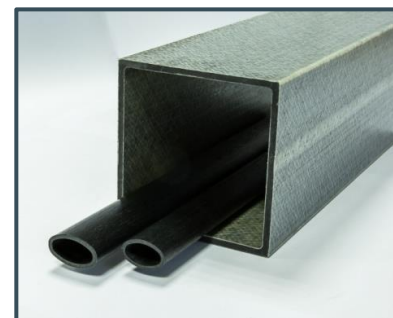




Special profiles

Product description			Outer diameter	Thickness	Weight
Oval tube 26x16x1,5	PWI	HS	4,0 mm	0,7 mm	110 g/m
Oval tube 26x16x2	PWI	HS	5,0 mm	0,9 mm	190 g/m
Oval tube 32x18x2,5	PWI	HS	5,5 mm	0,9 mm	210 g/m
Rectangular tube 27x20x2	PWE	HS	27,0 mm	2,0 mm	260 g/m
Square tube 30x30x2,5	PW	HS	6,0 mm	1,0 mm	230 g/m
Square tube* 101,6x101,6x4,25	PW	HS	8,0 mm	1,5 mm	500 g/m

**External galvanic protective layer (glass fiber)*



Rods

Product description			Outer diameter	Thickness	Weight
Rod Ø6	UD	HS	6,0 mm	6,0 mm	44 g/m
Rod Ø6,5	UD	HS	6,5 mm	6,5 mm	53 g/m
Rod Ø8	UD	HS	8,0 mm	8,0 mm	78 g/m
Rod Ø10	UD	HS	10,0 mm	10,0 mm	121 g/m
Rod Ø12	UD	HS	12,0 mm	12,0 mm	176 g/m
Rod Ø15	UD	HS	15,0 mm	15,0 mm	276 g/m
Rod Ø20	UD	HS	20,0 mm	20,0 mm	471 g/m
Carborod Ø8*	UD	UHM	8,0 mm	8,0 mm	90 g/m
Carborod Ø12*	UD	HS	10,0 mm	10,0 mm	144 g/m
Carborod Ø10*	UD	UHM	12,0 mm	12,0 mm	220 g/m

**Supplied without peel-ply*





Headquarters and manufacturing

FRANCE

EPSILON COMPOSITE
5 Route de Hourtin,
33340 GAILLAN EN
MEDOC

[Contact us](#)

Sale offices

JAPON

EPSILON JAPAN
160-0004 Tokyo-to,
Shinjuku-ku, Yotsuya 4-
25-5, KD Bld 7F

[Contact us](#)

AUTRICHE

EPSILON EUROPE
Lobengasse 24 - 2630
Ternitz

[Contact us](#)

MEXIQUE

EPSILON AMERICAS
Rancho contento
Carretera de nogales
45222 Zapopan, Jalisco

[Contact us](#)

Manufacturing capabilities

Epsilon Composite is a worldwide leader in Carbon Composite design and manufacturing. We offer custom high performance Carbon Composite solutions for most demanding professional applications, built on thirty years of experience and an exclusive composite know-how in industrial processes such as pultrusion, filament winding and traditional composite manufacturing processes (infusion, RTM, pre-preg layup, etc.)

From ultra-deep oil extraction to aircraft structural parts, from printing machines to architecture, Epsilon Composite products provide its customers worldwide, outstanding performance and weight savings in toughest environments. Epsilon's development teams manage complex projects from customer need to the final product, based on innovative designs and patented technologies.

