



Composites
Reinforcements

**CARBON RANGE
SELECTOR GUIDE**

CHOMARAT

C-WEAVE™

C-WEAVE™ is a bi-directional (0°/90°) warp and weft woven carbon fabric.

Fabric area weights range from 160 g/m² to 1200 g/m² in different weave patterns such as Plain, Twill, Harness Satin. Available carbon fiber tows are 3,6,12 or 24K and HS (High Strength), IM (Intermediate Modulus), HM (High Modulus).

C-WEAVE™ SP provides the highest visual quality with a unique spreading technology to ensure an optimised closure of the weave.

DESIGNATION	Total Weight (gsm)	Pattern	Construction		Width (cm)	Roll Length (lm)	Site
			Warp (ends/cm)	Weft (picks/cm)			
→ 3K FABRICS							
C-WEAVE 160P 3K HS	160	Plain	4,0	4,0	120 / 125	100	
C-WEAVE 198T 3K HS	198	Twill 2/2	4,9	4,9	127	100	US only
C-WEAVE 198P 3K HS	198	Plain	4,9	4,9	127	100	US only
C-WEAVE 200P 3K HS	200	Plain	4,9	4,9	125/127	100	
C-WEAVE 200T/3 3K HS	200	Twill 2/2	4,9	5,1	125	100	
C-WEAVE 205P 3K HS	205	Plain	5,1	5,1	127	100	US only
C-WEAVE 205T 3K HS	205	Twill 2/2	5,1	5,1	125/127	100	
C-WEAVE 205T 3K HS A6 (1 side with veil bonded)	211	Twill 2/2	5,1	5,1	127	91	US only
C-WEAVE 245T 3K HS	245	Twill 2/2	6,1	6,0	125/127	100	
C-WEAVE 245T 3K HS A6 (1 side with veil bonded)	251	Twill 2/2	6,1	6,0	127	91	US only
C-WEAVE 280T4 3K HS	280	Twill 4/4	7,0	7,0	125/127	100	
→ 6K FABRICS							
C-WEAVE 295T 6K HS	295	Twill 2/2	3,7	3,7	125	100	
C-WEAVE 295P 6K HS	295	Plain	3,7	3,7	125	100	
C-WEAVE 400T 6K HS	400	Twill 2/2	4,9	5,0	125	100	
C-WEAVE 416T 6K HS	416	Twill 2/2	5,2	5,2	125	100	
→ 6K IM/HM FABRICS							
C-WEAVE 200T T800HB 6K	200	Twill 2/2	4,4	4,4	125	100	
C-WEAVE 200T M46JB 6K	200	Twill 2/2	4,4	4,4	125	100	
C-WEAVE 280SA5 T800HB 6K	280	5 Harness satin	6,2	6,2	125	100	
C-WEAVE 280SA5 M46JB 6K	280	5 Harness satin	6,2	6,2	125	100	
→ 12K FABRICS							
C-WEAVE 380T 12K HS	380	Twill 2/2	2,4	2,3	125/127	100	
C-WEAVE 415T 12K HS	416	Twill 2/2	2,5	2,6	125	100	
C-WEAVE 600T 12K HS	600	Twill 2/2	3,7	3,7	125	80	
C-WEAVE 650T 12K HS	650	Twill 2/2	4,0	4,0	125	80	
C-WEAVE 670T 12K HS	670	Twill 2/2	4,1	4,1	127	100	US only
C-WEAVE 660T 12K 60E	660	Twill 2/2	4,1	4,1	127	100	
→ 24K FABRICS							
C-WEAVE 800T 24K 34-700WD	800	Twill 2/2	2,5	2,5	125	75	
C-WEAVE 1000T 24K 34-700WD	1000	Twill 2/2	3,1	3,1	125	50	
→ UD FABRICS							
C-WEAVE U150P F 6K HS	156	Plain	3,7	1,5	127	91	US only
C-WEAVE U300P F 12K HS	304	Plain	3,6	1,2	127	91	US only

* Other widths are available upon request up to 165 cm (65 inches)

C-WEAVE™ DESIGN

C-WEAVE™ DESIGN: Sports Equipment and Automotive Industries are looking for alternative carbon look with truly structural benefits. Relying on its industrial and creative expertise, CHOMARAT has developed a very selective new **C-WEAVE™** product.

→ C-WEAVE DESIGN

DESIGNATION	Total Weight (gsm)	Pattern	Construction		Width (cm)	Roll Length (lm)	
			Warp (ends/cm)	Weft (picks/cm)			
C-WEAVE DESIGN 176D1054 3K HS/INNEGRA	176	Hexagonal	6,1	5,0	125	100	

C-TAPE™

C-TAPE™ is a range of carbon woven tapes. Its particular weaving technology with a continuous weft prevents frayed edges.

DESIGNATION	Total Weight (gsm)	Pattern	Construction		Width (cm)	Roll Length (lm)	Remarks
			Warp (ends/cm)	Weft (picks/cm)			
C-TAPE U88P/F	91	Plain	Carbon 6K & glass sillionne 34 tex 1,6 for the carbon	Fixed PES 1,8	6	100	Fixed Thread
C-TAPE U300P 12K HS FT	310	Plain	Carbon 12K 3,7	Fixed glass 70tex 1	30 / 20 / 10 / 5	100	Fixed in weft
C-TAPE U300P 12K HS	318	Plain	Carbon 12K 3,7	glass 34tex 2,6	30 / 20 / 10 / 5	100	Non fixed
C-TAPE U600P 24K HS FT	606	Plain	Carbon 24K 3,7	Fixed glass 70tex 1	30 / 20 / 10 / 5	100	Fixed in weft
C-TAPE U600P 24K HS	651	Plain	Carbon 24K 3,7	Glass 136tex 2	30 / 20 / 10 / 5	100	Non fixed
C-TAPE U1000P 24K HS FT	1006	Plain	Carbon 24K 3,1 x 2	Fixed glass 70tex 1	30 / 20 / 10 / 5	100	Fixed in weft
C-TAPE U1000P 24K HS	1064	Plain	Carbon 24K 3,3 x 2	Glass 68tex 1	30 / 20 / 10 / 5	100	Non fixed
C-TAPE U1000P 50K HS FT	1040	Plain	Carbon 50K 2,7	Fixed glass 70tex 1	30 / 20 / 10 / 5	100	Fixed in weft

* FOE fiber available upon request
Other widths upon request - max 50 cm (19.6 inches)

DIAGOTEX™

DIAGOTEX™ is a diagonally woven reinforcement with a fixed angle of 30° to 60°. Fiber orientation is optimized to improve bending and torsional strength.

DESIGNATION	Weight (g/ml)	Angle (°)	Width (mm)
DIAGOTEX D988	45,4	44	150
DIAGOTEX D960	122	45	350

* Other tapes and braided reinforcements are available upon request



C-PLY™ is a range of carbon multi-axial or non-crimp (NCF) reinforcements developed using the most advanced technology and tow spreading processes.

C-PLY™ products are uni-directional or multi-directional stitched plies from 50-600 gsm/ply. Carbon tows used are 12, 18, 24, 50, 60 K in HS (High Strength), IM (Intermediate Modulus) or HM (High Modulus) grades.

C-PLY™ HEXAGONAL is a premium quality appearance product with toughening and visual stitching yarn.

STYLE	Fiber Designation	Total Weight (gsm)	Ply Orientation	Weight/Ply (gsm)	Width (cm)	Roll Length (lm)
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→ CONVENTIONAL ANGLES, HS FIBER

C-PLY SP BX 100 BC3,4 12K HS	T700 SC 12K 50C	100	+45°/-45°	50	127	100
C-PLY SP BX 150 C3,4 12K HS	T700 SC 12K 50C	150	+45°/-45°	75	127	200
C-PLY SP BX 200 C3,4 12K HS	T700 SC 12K 50C	200	+45°/-45°	100	127	150
C-PLY SP BX 300 T3,3 24K HS	T700 SC 24K 50C	300	+45°/-45°	150	127	100
C-PLY SP BX 240 T3,3 50K HS	50K HS	240	+45°/-45°	120	127	100
C-PLY SP BX 300 T3,3 50K HS	50K HS	300	+45°/-45°	150	127	100
C-PLY SP BT 300 CT3 50K HS	50K HS	300	0°/90°	150	125	100
C-PLY SP BX 400 BC3,4 24K HS	24K HS	400	+45°/-45°	200	127	100
C-PLY SP BX 400 C3,4 50K HS	50K HS	400	+45°/-45°	200	127	100
C-PLY SP BT 400 CT3,4 50K HS	50K HS	400	0°/90°	200	125	100
C-PLY SP BX 600 BC3,4 24K HS	24K HS	600	+45°/-45°	300	127	100
C-PLY SP BX 600 BC3,4 48K HS	48K HS	600	+45°/-45°	300	127	100
C-PLY SP BX 600 C3,4 50K HS	50K HS	600	+45°/-45°	300	127	100
C-PLY SP BT 600 CT4,5 50K HS	50K HS	600	0°/90°	300	125	100
C-PLY SP Q 600 CT3,4 50K HS	50K HS	600	0°/+45°/90°/-45°	150	125	100
C-PLY SP QX 785 BCT3,2 24K HS	24K HS	785	0°/+45°/90°/-45°	195	125	50
C-PLY SP TL 225 BCT3,2 12K HS	12K HS	225	0°/+45°/-45°	75	125	100
C-PLY BT600 T2,5 50K TRW40	50K TRW40	600	0°/90°	300	125	100
C-PLY BT400 T2,5 50K TRW40	50K TRW40	400	0°/90°	200	125	100
C-PLY BX600 C2,5 50K TRW40	50K TRW40	600	+45°/-45°	300	127	100
C-PLY BX400 C2,5 50K TRW40	50K TRW40	400	+45°/-45°	200	127	100
C-PLY Q800 T2,5 50K TRW40	50K TRW40	800	0°/+45°/90°/-45	200	125	100

→ SHALLOW ANGLES, HS FIBER

C-PLY SP BX30 100 BC3,4 12K HS	T700SC 12K 50C	100	+30°/-30°	50	127	100
C-PLY SP BX30 150 C3,4 12K HS	T700SC 12K 50C	150	+30°/-30°	75	127	200
C-PLY SP BX60 150 C3,4 12K HS	T700SC 12K 50C	150	+60°/-60°	75	127	200
C-PLY SP TL60 580 BCT3,2 24K HS	24K HS	580	0°/+60°/-60°	195	125	100

* Other angles are possible upon request down to 22,5°

→ UNBALANCED ANGLES, HS FIBER

C-PLY SP 0/45 75/75 CT3,4 12K HS	T700SC 12K 50C	150	0°/+45°	75	125	100
C-PLY SP 0/-45 75/75 CT3,4 12K HS	T700SC 12K 50C	150	0°/-45°	75	125	100

* Other angles are possible upon request down to 22,5°

→ STITCHED UNIDIRECTIONAL, HS FIBER

C-PLY SP U100S5 CT3,4 12K HS	T700SC 12K 50C	100	0° UD	100	125	200
C-PLY SP U150S5 CT3,4 24K HS	T700SC 24K 50C	150	0° UD	150	125	200
C-PLY SP U150S5 CT3,4 50K HS	50 K HS	150	0° UD	150	125	100
C-PLY U300S7 CT3,4 24K HS	T700SC 24K 50C	300	0° UD	300	125	100
C-PLY U300S7 CT3,4 50K HS	50 K HS	300	0° UD	300	125	100
C-PLY U600S7 CT3,4 50K HS	50 K HS	600	0° UD	600	125	100

→ C-PLY™ DESIGN STITCHING

C-PLY SP BX150 X1 12K HS	T700SC 12K 50C	150	+45°/-45°	75	127	200
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* Other weights and stitching patterns available upon request

OPTIONS

→ EPOXY BINDER POWDERING

POWDER CODE	Preforming Type	Powder Softening temperature (°C)	Comments
P09 - P23	Reactive	~ 90-100°	Low Temperature Preforming, High stiffness, Curing processing: from 120 sec at 140°C to 45 sec at 180°C (indicative values)
P13 - P18	Reversible	~ 90-100°	Low Temperature Preforming, Fine particles
P11	Reversible	~ 150°	High Temperature Preforming

Powdering an epoxy binder will enhance products stability during cutting and preforming operations. The choice of a binder depends on the matrix compatibility and process conditions.

Powdering weight ranges from 5-30 g/m² and can be adapted to customer requirements (single side, double side) and product constructions.

→ VEIL AND WEB

Various Veil (PES, Glass,...) or thin Web (CoPa,...) can be heat set or stitched for **stability, aspect or preforming** purposes.

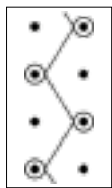
VEIL AND WEB CODE	Veil and web type	Areal weight range (gsm)	Purpose of use (according to weight and type of veil or web)
G	Glass	30 - 100	Stabilization, surface aspect improvement, anti-galvanic corrosion
C	Carbon	6 - 34	Stabilization or surface aspect improvement with black aspect
A	Polyamide	3 - 24	Stabilization, preforming, toughness improvement (CAI)
E	Polyester	4 - 37	Stabilization, preforming, surface aspect improvement

→ C-PLY™ STITCHING PATTERNS

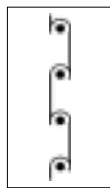
Standard Stitching for **C-PLY™**: Chain stitching (**C**), Tricot (**T**) and hybrid Chain-Tricot (**CT**) depending on application. For prepreg processing, a thin 0° glass yarn can be inserted during the stitching.

For a full «black» aspect, stitching is available also in black color.

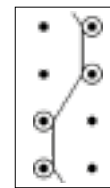
In the U.S., Black stitching is the standard. White stitching is available at an additional cost.



T = Tricot:
zig-zag pattern

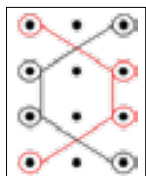


C = Chain:
straight pattern

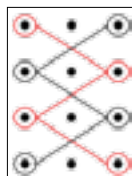


CT = Chain-Tricot:
a combination of both Chain and Tricot

Design stitching **X1** and **X2**: visual aspect inside the composites laminates.



X1 = Double
CT pattern



X2 = Double
Tricot pattern

→ SLITTING SERVICES

Online slitting capabilities as narrow as 14 cm (5.5").

→ VISUAL INSPECTION (VQ)

Offline Visual Inspection can be proposed on our carbon fabric range for customer requiring high visual quality.



CHOMARAT

CHOMARAT Textiles Industries

39 avenue de Chabannes
07160 Le Cheylard
FRANCE

Phone: +33 4 75 29 81 00

CHOMARAT North Africa

ZI de Grombalia
8030 Grombalia
TUNISIA

Phone: +216 722 55 412

CHOMARAT North America

160 Alliance Boulevard
Williamston, SC 29697
USA

Phone: +1 864 328 1700

CHOMARAT Engineered Textiles

36 Qingdao East Road - Taicang
215400, Jiangsu Province
PRC

Phone: +86 512 53737001

www.chomaraton.com

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