



# PRF

Composite Materials

## Fabric Reinforcement Selector Guide

A guide to PRF's fabric capabilities:

- Woven Fabrics
- Multiaxial Fabrics
- Narrow Tapes
- Non-woven Technical Veils
- Consumables

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### Fabric Reinforcement Selector Guide

This guide brings together not only our standard fabrics but also our reinforcement capabilities, including more speciality fabrics that are woven to order. In addition to this selection, we also offer a bespoke development service, where we work together with our customers to achieve the desired results in the end application. We can develop new woven designs to suit specific requirements, including new hybrids, thermoplastics, new weave patterns or using speciality materials, such as basalt, quartz and stainless steel. We can start this bespoke service with an order of just 7m to sample and test the fabric.

#### Woven Fabrics

1. Carbon
2. Aramid
3. Hybrids
4. Dyneema®
5. Glass
6. Diolen®
7. Glass Roving
8. Advanced Synchron Weave

#### Multiaxial Fabrics

9. Glass
10. Carbon

#### Narrow Tapes

11. Carbon, Aramid, Diolen® and Hybrids

#### Non-woven Technical Veils

12. Glass, Polyester, Aramid, Carbon, Nickel Coated Carbon, Stainless Steel

#### Consumables

12. Peel Ply, Release film, Breather/Bleeder Fabric, Vacuum Bags



## 1. WOVEN STANDARD MODULUS CARBON FABRICS

Style	Weave	Weight (g/m <sup>2</sup> )	Material	Yarn Tex		Setting th/cm		Thickness (mm)
				Warp	Weft	Warp	Weft	
<b>1K Carbon</b>								
C0490	Plain	120	1K	67	67	9	9	0.16
C0412	Twill 2/2	150	1K	67	67	12	10	0.20
<b>3K Carbon</b>								
C0447	Plain	160	3K	200	200	4	4	0.27
C0449	Plain	193	3K	200	200	4.9	4.8	0.29
C0450	Plain	200	3K	200	200	5	5	0.30
C0452	Twill 2/2	200	3K	200	200	5	5	0.32
C0474	Twill 4/4	285	3K	200	200	7	7	0.43
C0475	5H Satin	285	3K	200	200	7	7	0.45
C0414	Twill 4/4	405	3K	200	200	10	10	0.60
<b>6K Carbon</b>								
C0445	5H Satin	370	6K	400	400	4.5	4.5	0.58
<b>12K Carbon</b>								
C0435	Twill 2/2	645	12K	800	800	4.0	4.0	0.98
C0424	Twill 2/2	660	12K	800	800	4.1	4.1	0.95



## FABRIC REINFORCEMENT

### 2. WOVEN ARAMID FABRICS

Style	Weave	Weight (g/m <sup>2</sup> )	Material	Yarn Tex		Setting th/cm		Thickness (mm)
				Warp	Weft	Warp	Weft	
K0120	Plain	61	Kevlar® 49	22	22	13.5	13.5	0.12
K0140	Twill 2/2	110	Kevlar® 49	42	42	13	13	0.20
K0145	Plain	115	Kevlar® 49	42	42	13.4	13.4	0.20
K0281	Plain	170	Kevlar® 49	127	127	6.5	6.5	0.29
K0285	4H Satin	170	Kevlar® 49	127	127	6.5	6.5	0.32
K0332	Twill 2/2	195	Kevlar® 49	158	158	6	6	0.35
K0328	Plain	230	Kevlar® 49	158	158	7	7	0.35
K0335	4H Satin	230	Kevlar® 49	158	158	7	7	0.45
K0902	5H Satin	315	Kevlar® 49	240	240	6.3	6.3	0.58
K0900	5H Satin	335	Kevlar® 49	240	240	6.8	6.8	0.60
K1350	Basket 4/4	470	Kevlar® 49	240	240	10.5	8.5	0.78
K1356	Basket 4/4	470	Kevlar® 49	316	316	8	6.5	0.81
K1352	Twill 4/4	485	Kevlar® 49	235	235	10.5	8.5	0.85

Kevlar® is a registered trademark of DuPont



## 3. WOVEN HYBRID FABRICS

Style	Weave	Weight (g/m <sup>2</sup> )	Material	Yarn Tex		Setting th/cm		Thickness (mm)
				Warp	Weft	Warp	Weft	
Aramid / E-glass								
H0585	Twill 2/2	215	Aramid / E-Glass 55% / 45%	127 / 204	127 / 204	6.7	6.7	0.34
Carbon / Aramid								
H0638	Plain	110	Carbon / Aramid 84% / 16%	67 / 42 7 : 2	67 / 42 6 : 2	9	9	0.18
H0642	Plain	150	Carbon / Aramid 61% / 39%	200 / 127 2 : 1	200 / 127 1 : 2	4.5	4.5	0.29
H0666	Plain	165	Carbon / Aramid 60% / 40%	200 / 127 2 : 1	200 / 127 1 : 2	5	5.5	0.30
H0636	Plain	180	Carbon / Aramid 56% / 44%	200 / 158 2 : 1	200 / 158 1 : 2	5	5	0.31
H0635	Twill 3/1	210	Carbon / Aramid 61% / 39%	200 / 127 1 : 1	200 / 127 1 : 1	6.5	6	0.37
H0633	Twill 2/2	240	Carbon / Aramid 39% / 61%	200 / 158 1 : 2	200 / 158 1 : 2	6.7	6.7	0.40
H0634	Twill 2/2	256	Carbon / Aramid 72% / 28%	200 / 158 2 : 1	200 / 158 2 : 1	6.7	6.7	0.40
Aramid / Diolen®								
H0520	303/2	510	Aramid / Diolen® 50% / 50%	325 / 330 1 : 1	325 / 330 1 : 1	7.8	7.8	1.15



## FABRIC REINFORCEMENT

### 4. WOVEN DYNEEMA® (polyethylene) FABRICS

Style	Weave	Weight (g/m <sup>2</sup> )	Material	Yarn Tex		Setting th/cm		Thickness (mm)
				Warp	Weft	Warp	Weft	
Dyneema®								
D0352	Twill 2/2	160	Dyneema® SK 65	44	44	18	18	0.40
D0351	4H Satin	180	Dyneema® SK 65	132	132	6.7	6.7	0.50
Dyneema® / Carbon								
H0688	Twill 2/2	190	Dyneema® SK 65 / Carbon 47% / 53%	176 / 200 2 : 2	176 / 200 2 : 2	5	5	0.47
H0681	Plain	210	Dyneema® SK 65 / Carbon 57% / 43%	132 / 200 2 : 1	132 / 200 2 : 1	6.5	6.5	0.43



## 5. WOVEN E-GLASS FABRICS

Style	Weave	Weight (g/m <sup>2</sup> )	Material	Yarn Tex		Setting th/cm		Thickness (mm)
				Warp	Weft	Warp	Weft	
E0810	Plain	78	EC - 9	33	33	12.9	11	0.09
E0821	Plain	197	EC - 9	134	134	7.1	7.1	0.22
E0808	Plain	206	EC - 9	66	66	17.3	12.6	0.17
E0824	8H Satin	295	EC - 6	66	66	22.5	20.9	0.28
E0833	Plain	334	EC - 9	134 x 2	134 x 2	6.3	5.5	0.36
E0814	Plain	25	EC - 5	5.5	5.5	22.2	22.2	0.035
E0844	Plain	197	EC - 9	66 x 2	66 x 2	7.1	7.1	0.21
E0828	Plain	48	EC - 5	11	11	23.6	18.6	0.06
E0830	Plain	280	EC - 9	68 x 3	204	7.0	6.5	0.30
E0850	Twill 2/2	391	EC - 9	68 x 5 t0	272	6.0	6.6	0.39



## FABRIC REINFORCEMENT

### 6. WOVEN DIOLEN® (polyester) FABRICS

Style	Weave	Weight (g/m <sup>2</sup> )	Material	Yarn Tex		Setting th/cm		Thickness (mm)
				Warp	Weft	Warp	Weft	
P3939	Plain	265	Diolen® 164S	330	330	3.9	3.9	0.43
P025K	303/2	520	Diolen® 164S	330	330	7.8	7.8	1.14
P3939 BLACK	Basket	265	Diolen® 178T Black	167	167	7.8	7.8	0.43
P23K	Twill 2/2	265	Diolen® 164S	330	330	3.9	3.9	0.50
P024K	303/2	850	Diolen® 164S	330	330	12.0	12.0	1.69





## 7. ROVING FABRICS E-GLASS

Style	Weave	Weight (g/m <sup>2</sup> )	Thickness (mm)
ER001	Plain	296	
ER004	Plain	450	0.49
ER005	Basket 2/2	530	0.56
ER006	Plain	570	0.59
ER002	Basket 1/2	610	0.59
ER007	Basket 2/2	750	0.93
ER003	Basket 2/2	820	1.00



## FABRIC REINFORCEMENT

### 8. ADVANCED SYNCHRON WEAVE FABRICS

Style	Weave	Weight (g/m <sup>2</sup> )	Material	Yarn Tex		Setting th/cm		Thickness (mm)
				Warp	Weft	Warp	Weft	
AS102	ASW	350	Carbon / PES	200 / 28 2 : 1	200 / 28 1 : 1	18 12 + 6	8 4 + 4	0.60
AS111	ASW	660	Carbon / PES	400 / 28 2 : 1	800 / 28 1 : 1	12 8 + 4	8 4 + 4	1.00
AS502	ASW	1850	Glass / PES	1200 / 28 4 : 1	1200 / 28 1 : 1	15 12 + 3	6 3 + 3	1.60



## 9. E-GLASS MULTIAXIAL FABRICS

Style	Fabric Type	Weight (g/m <sup>2</sup> )	Material	Yarn Weight g/m <sup>2</sup> / Orientation			
				0	45	90	-45
<b>Uniaxial E-Glass</b>							
EL001	L 500	525	E Glass	472	0	43	0
EL003	L 900	879	E Glass	826	0	43	0
EL005	L 1200	1258	E Glass	1200	0	50	0
<b>Biaxial E-Glass</b>							
EX200	DB 300	310	E Glass	0	148	8	148
EX201	DB 400	420	E Glass	0	199	8	199
EX203	DB 600	602	E Glass	0	294	8	294
EX205	DB 800	791	E Glass	0	388	8	388
EX207	LT 600	602	E Glass	295	0	293	0
EX212	DB 900	911	E Glass	0	451	0	451
EX211	LT 1000	981	E Glass	472	0	495	0
<b>Triaxial E-Glass</b>							
EX300	DBL 400	416	E-Glass	107	148	0	148
EX301	DBL 600	603	E-Glass	295	148	0	148
EX308	DBT 800	793	E-Glass	0	199	389	199
EX302	DBL 800	829	E-Glass	413	199	8	199
<b>Quadriaxial E-Glass</b>							
EX400	DBLT 850	859	E-Glass	236	204	204	204
EX404	DBLT 1150	1149	E-Glass	295	280	283	280
EX407	DBLT 1200	1200	E Glass	300	300	300	300

The above fabrics also include polyester stitching thread of between 7 - 10g/m<sup>2</sup>. All values are nominal.



## FABRIC REINFORCEMENT

### 10. CARBON MULTIAXIAL FABRICS

Style	Fabric Type	Weight (g/m <sup>2</sup> )	Material	Yarn Weight g/m <sup>2</sup> / Orientation			
				0	45	90	-45
<b>Uniaxial Carbon</b>							
CL003	L450	475	0° - T700 / UTS 90° - glass	411	0	50	0
CL001	L450	476	T700/UTS	441	0	14	0
<b>Biaxial Carbon</b>							
CX009	DB 450	468	T700 / UTS	0	227	0	227
CX006	DB 550	542	T700 / UTS	0	267	0	267
CX001	DB 150	150	T700 / UTS	5	75	0	75
CX003	DB 300	300	T700 / UTS	0	148	0	148
CX016	DB 400	400	T700 / UTS	8	200	0	200

The above fabrics also include polyester stitching thread of between 7 - 10g/m<sup>2</sup>. All values are nominal.



## 11. NARROW WOVEN TAPES

Style	Weave	Weight (g/m <sup>2</sup> )	Material	Yarn tex		Setting (th/cm)	
				Warp	Weft	Warp	Weft
<b>Carbon fibre</b>							
TC6488	Plain	130	Carbon 1K	67	67	9	9
TC6303	Plain	195	Carbon 3K	200	200	4.5	4.5
TC6507	UD - Plain	250	Carbon 6K / E-Glass weft - E Glass	400 / 22 1 : 1	22 x 2	11 5.5 + 5.5	3
TC6670	UD - Plain	325	Carbon 6K / PES	400	15 x 2	8	4.5
TC6510	UD - Plain	330	Carbon 12K / E Glass weft - E Glass	800 / 22 1 : 1	22 x 2	7 3.5 + 3.5	3
<b>Kevlar® - Diolen® Hybrids</b>							
TK6301	Plain	210	Aramid	161	161 x 2	6	3.5
TP6100	Plain	320	Polyester	330	330	4.5	4.5
TH6287	Plain	250	Polyester / Aramid	330	158	4.5	4.5
TH6291	Plain	160	Aramid / Carbon	161 / 200 1 : 1	161	4.5	4.5
TH6887	Plain	100	Carbon / Aramid	67	42	9	9
<b>Glass fibre</b>							
TE6431	Plain	100	E-Glass	34	34 x 2	15.5	6
TE6624	UD - Plain	500	E-Glass	600	34 x 2	7.5	3
TE6621	UD - Plain	630	E-Glass	600 x 4	68 x 2	2.3	2.3



## FABRIC REINFORCEMENT

### 12. NON-WOVEN TECHNICAL VEILS

#### Material options

Glass

Polyester

Aramid

Quartz

Available from 4 g/m<sup>2</sup> to 200 g/m<sup>2</sup>

Carbon

Nickel Coated Carbon

Stainless Steel

### CONSUMABLES

#### Material options

Nylon peel ply

Polyester peel ply

Release film

Breather / Bleeder Fabric

Vacuum Bags

# FABRIC REINFORCEMENT



## Important Notice

All statements, technical information and recommendations offered are only for consideration and evaluation. Whilst they are believed to be accurate they are not guaranteed and are provided without warranty of any kind. No undertaking is given that the goods/products supplied are fit for its particular purpose. The buyer/user shall assume all risks and liabilities in connection therewith.

All values are nominal.

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# Find out what PRF can do for your business

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