



Composite Reinforcements

Fabric and Tape Product Range

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Who we are

Colan is the only local manufacturer of composite reinforcement fabrics. For more than 50 years we've been weaving fibreglass and other composite fabrics for supply in to local and international markets.

What we do

In addition to our local manufacturing operation, we now house manufacturing operations offshore. This balance enables us to offer you, our customer, the best fabrics available at competitive prices.

How we can help you

When you buy Colan fabric, you buy quality. Over 50 years of manufacturing experience goes into every metre we produce. Our range of products is too huge to list in a catalogue. The range list in this catalogue will give you an idea of the range we stock and our manufacturing capabilities.

If we don't have it, we can make it.

Woven Fabric

Weaving is what our business was built on. We've been weaving composite reinforcement fabrics locally for more than 50 years.

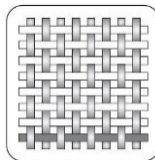
Throughout our time we have developed in excess of 800 different woven fabrics to ensure our customers get the right product. We offer a range of weaves, input fibres, weights widths and more.

The following range is indicative of our capabilities as a manufacturer. Should your application require a specification not available here, please contact our sales staff and ask about our tailored manufacturing solution.

WEAVE INFORMATION

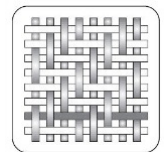
PLAIN WEAVE:

One warp end weaves over one weft thread and under the next. It is the basic and most common textile weave. It is firm and stable, allows fair porosity and uniform strength in all surface directions. It is ideally suited for covering large flat surfaces.



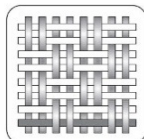
TWILL WEAVE:

Constructed with one or more warp ends weaving over and under two or more weft threads in a regular fashion to produce either a straight or broken diagonal line in the fabrics, e.g. 2/1, 2/2, 3/1 twills, etc. This weave is more pliable than plain weave and improves the folding, hanging and draping capacity allowing better coverage over curved surfaces.



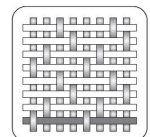
BASKET WEAVE:

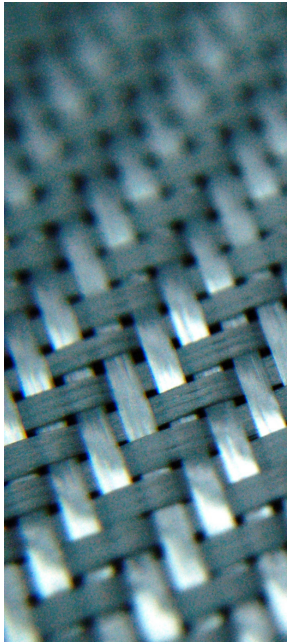
Constructed with two or more warp ends woven together over and under the same number of weft threads. This has all the characteristics of a coarse plain weave but with increased strength. Common basket weaves include 4/4 and 8/8.



SATIN WEAVE:

Each warp and weft thread weaves over three or more and under one crossing thread. Common styles include 4, 5 and 8 shaft satins. The cloth has distinct warp and weft faces with a relatively smooth surface. This weave shows excellent pliability and drape-ability over compound curves. It allows for high fabric density and high strength in all surface directions.





Woven Fibreglass E-glass

Fibreglass is by far the most widely used woven composite fabric. We specialise in the weaving of fibreglass fabrics, we are globally recognised for our quality.

Our Woven Fibreglass (E-glass) fabrics are woven using the highest quality German machinery, using only the highest quality fibreglass yarns. The yarns we use in our woven fibreglass fabrics are hi-clear, this ensures a high quality, clear finish for your laminate.

Woven Fibreglass Fabrics are suitable for a wide range of applications, including; Marine, Surf-craft and Aerospace.

BENEFITS:

Cost Effective
Strong
Versatile
Drapes Well

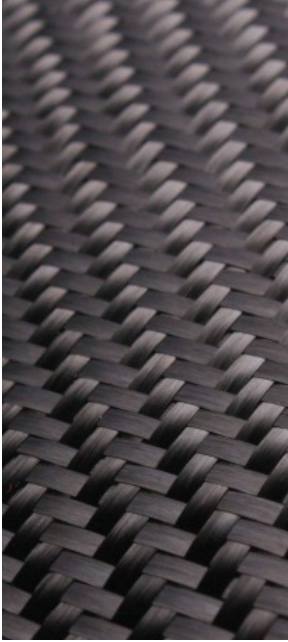
Our Range

Weave: Plain Weave, Twill Weave,
Basket Weave, Satin Weave
Width: 500mm – 2200mm
Weight: 25 g/m² - 690 g/m²

ITEM CODE	DESCRIPTION	WEAVE	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
AF 215	E-glass Woven Fabric	Plain	85 g/m ²	0.10 mm	1000 mm	100 mtrs
AF 268	E-glass Woven Fabric	Plain	120 g/m ²	0.18 mm	1000 mm	100 mtrs
AF 218	E-glass Woven Fabric	Plain	175 g/m ²	0.25 mm	1000 mm	100 mtrs
AF 251	E-glass Woven Fabric	Plain	195 g/m ²	0.28 mm	1000 mm	100 mtrs
AF 244	E-glass Woven Fabric	Plain	287 g/m ²	0.41 mm	1000 mm	100 mtrs
AF 252	E-glass Woven Fabric	Plain	308 g/m ²	0.42 mm	1000 mm	100 mtrs
AF 301	E-glass Woven Fabric	Crowsfoot	185 g/m ²	0.15 mm	1000 mm	100 mtrs
AF 296	E-glass Woven Fabric	Plain / Uni	230 g/m ²	0.20 mm	1270 mm	100 mtrs
AF303	E-glass Woven Fabric	2x2 Twill	285 g/m ²	0.28 mm	1270 mm	100 mtrs
AF 510 A	E-glass Woven Fabric	8 Shaft Satin	290 g/m ²	0.20 mm	1270 mm	100 mtrs
AF 297	E-glass Woven Fabric	2x2Twill	385 g/m ²	0.38 mm	1270 mm	100 mtrs
AF 310	E-glass Woven Fabric	2x2 Twill	690 g/m ²	0.60 mm	1000 mm	100 mtrs

SURFBOARD FABRIC RANGE

ITEM CODE	DESCRIPTION	WEAVE	WEIGHT	WIDTH	ROLL SIZE
AF 211	E-glass Hi Clear Woven Fabric	Plain	4 oz/yd ²	135 g/m ² 25" 640 mm	100 mtrs
AF 211	E-glass Hi Clear Woven Fabric	Plain	4 oz/yd ²	135 g/m ² 27" 685 mm	100 mtrs
AF 211	E-glass Hi Clear Woven Fabric	Plain	4 oz/yd ²	135 g/m ² 30" 760 mm	100 mtrs
AF 213	E-glass Hi Clear Woven Fabric	Plain	6 oz/yd ²	190 g/m ² 25" 640 mm	100 mtrs
AF 213	E-glass Hi Clear Woven Fabric	Plain	6 oz/yd ²	190 g/m ² 27" 685 mm	100 mtrs
AF 213	E-glass Hi Clear Woven Fabric	Plain	6 oz/yd ²	190 g/m ² 30" 760 mm	100 mtrs
AF 211 ACI	E-glass Woven Hybrid Fabric	Plain	4.3 oz/yd ²	145 g/m ² 30" 760 mm	100 mtrs



Woven Carbon Fibre

Woven Carbon fibre is most suitable for applications requiring a high strength-to-weight ratio. Carbon fibre is stiff and strong but remains very light.

Replacing steel in many applications, Carbon fibre is up to five times stronger and up to two thirds lighter.

Further to incredible strength and weight properties Carbon offers distinct aesthetic value. Colan offers a weave-set finish for applications requiring a high quality visual finish.

BENEFITS:

Ultra Light Weight
High Strength
High Tensile Modulus

OUR RANGE:

Weaves: Plain Weave, Twill Weave,
Unidirectional
Widths: 500mm, 1000mm and 1270mm
Weights: 90 g/m² - 410 g/m²

ITEM CODE	DESCRIPTION	WEAVE	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
AC 227	Carbon Fibre Woven Fabric (1K)	Plain	92 g/m ²	0.11 mm	1000 mm	100 mtrs
AC 151	Carbon Fibre Woven Fabric (1K)	2x2 Twill	155 g/m ²	0.21 mm	1000 mm	100 mtrs
CG H30	Carbon/E-glass Woven Fabric (3K)	2x2 Twill	180 g/m ²	0.25 mm	1200 mm	100 mtrs
AC 220	Carbon Fibre Woven Fabric (3K)	Plain	195 g/m ²	0.25 mm	1270 mm	100 mtrs
AC 221	Carbon Fibre Woven Fabric (3K)	2x2 Twill	195 g/m ²	0.25 mm	1270 mm	100 mtrs
AC 223	Carbon Fibre Woven Fabric (12K)	Plain	195 g/m ²	0.30 mm	1000 mm	100 mtrs
AC 236	Carbon Fibre Woven Fabric (12K)	Unidirectional	200 g/m ²	0.30 mm	500 mm	150 mtrs
AC 224	Carbon Fibre Woven Fabric (12K)	Unidirectional	300 g/m ²	0.40 mm	500 mm	150 mtrs
AC 450	Carbon Fibre Woven Fabric (12k)	Unidirectional	450 g/m ²	0.45 mm	500 mm	100 mtrs



Woven Aramid (Kevlar) Fabrics

Our range of Woven Aramid (Kevlar) fabrics are made from High modulus Composite grade Aramid fibres.

Aramid fabrics are suitable for laminates that require increased strength. Woven Kevlar fabrics offer a lighter, tougher and more damage tolerant laminate.

BENEFITS:

- Flame Resistant
- Corrosion Resistant
- Light Weight
- High Tensile Strength
- High Impact Resistance

OUR RANGE:

- Weaves: Plain, Twill, Satin, Basket
- Weights: 75 g/m² - 458 g/m²
- Widths: 1000mm – 1270mm

ITEM CODE	DESCRIPTION	WEAVE	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
AK 220	Para Aramid Woven Fabric	Plain	75 g/m ²	0.10 mm	1000 mm	50 mtrs
AK 342	Para Aramid Woven Fabric	Plain	115 g/m ²	0.25 mm	1200 mm	50 mtrs
AK 500	Para Aramid Woven Fabric	Plain	168 g/m ²	0.25 mm	1000 mm	50 mtrs
AK 500	Para Aramid Woven Fabric	Plain	168 g/m ²	0.25 mm	1270 mm	50 mtrs
AK 502	Para Aramid Woven Fabric	2X2 Twill	175 g/m ²	0.30 mm	1000 mm	50 mtrs
AK 900	Para Aramid Woven Fabric	5 Shaft Satin	320 g/m ²	0.53 mm	1270 mm	50 mtrs
AK 1350	Para Aramid Woven Fabric	4X4 Basket	458 g/m ²	0.62 mm	1270 mm	50 mtrs



Woven Innegra Fabrics

Innegra fabrics are manufactured using a high performance polypropylene fibre called Innegra S.

Innegra features outstanding impact and compression strength properties. It is very tough and very light compared with other fibres. Innegra is best used with other fibres in a hybrid fabric or hybrid laminate construction.

Benefits:

Increased Toughness
High Impact Resistance
Light weight
Cost effective

OUR RANGE:

Weaves: Plain, Twill, Satin
Weights: 68 g/m² - 380 g/m²
Widths: 500 mm – 1600 mm

ITEM CODE	DESCRIPTION	WEAVE	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
ANG 209	Innegra Woven Fabric	Plain	68 g/m ²	0.20 mm	760 mm	100 mtrs
ANG 209	Innegra Woven Fabric	Plain	68 g/m ²	0.20 mm	1000 mm	100 mtrs
ANG 208	Innegra Woven Fabric	Plain	135 g/m ²	0.35 mm	1100 mm	100 mtrs
ANG 410	Innegra Woven Fabric	4 Shaft Satin	135 g/m ²	0.34 mm	685 mm	100 mtrs
ANG 412	Innegra Woven Fabric	4 Shaft Satin	135 g/m ²	0.34 mm	1000 mm	100 mtrs
ANG 408	Innegra Woven Fabric	4 Shaft Satin	135 g/m ²	0.40 mm	1270 mm	100 mtrs
ANG150	Innegra Woven Fabric	Plain	150 g/m ²	0.35 mm	1600 mm	100 mtrs
ANG 380	Innegra Woven Fabric	Plain	380 g/m ²	1.10 mm	1600 mm	100 mtrs



Woven Roving (E-glass)

Our Fibreglass Woven Roving fabrics are the industry standard for quality and performance. Woven Rovings are made from continuous E-glass Rovings, loosely woven into a heavy fabric. The E-glass roving is finished with a Silane sizing enabling compatibility with most resin systems.

Woven Roving Fabrics are most suitable for hand lay applications where thickness and strength is required. The fabric offers good coverage, drape-ability, fast wet-out and is cost effective.

Typically offered in a plain weave, other weaves available upon request. Our range of Woven Roving is available between the following weights and widths.

Our most popular fabrics are the 630 g/m² and 830 g/m². Our locally made versions of these are certified to the Lloyd Register of shipping approval.

Benefits:

Cost effective
Large area coverage
Drapes well
Fast wet out

Our Range:

Width: 500 mm - 3000 mm
Weight: 250 g/m² - 1200 g/m²

Woven Roving Fabrics (Australian Made)

ITEM CODE	DESCRIPTION	WEAVE	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
AR 104	E-glass Woven Roving	Plain	250 g/m ²	0.23 mm	1000 mm	26.5 kg
AR 145	E-glass Woven Roving	Plain	398 g/m ²	0.50 mm	1000 mm	40.8 kg
AR 117	E-glass Woven Roving	Plain	450 g/m ²	0.50 mm	1000 mm	32.7 kg
AR 110	E-glass Woven Roving	Plain	620 g/m ²	0.50 mm	1000 mm	42.5 kg
AR 106	E-glass Woven Roving	Plain	630 g/m ²	0.60 mm	1000 mm	40.0 kg
AR 106	E-glass Woven Roving	Plain	630 g/m ²	0.60 mm	1400 mm	43.0 kg
AR 105	E-glass Woven Roving	Plain	830 g/m ²	0.85 mm	1000 mm	40.0 kg
AR 105	E-glass Woven Roving	Plain	830 g/m ²	0.85 mm	1400 mm	48.0 kg

Woven Roving Fabrics (Imported)

ITEM CODE	DESCRIPTION	WEAVE	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
AR 600	E-glass Woven Roving	Plain	630 g/m ²	0.50 mm	1000 mm	40.0 kg
AR 800	E-glass Woven Roving	Plain	800 g/m ²	0.70 mm	1000 mm	40.0 kg

Woven Tapes

Woven Tapes

Colan's range of Fibreglass and Carbon Fibre tape is the benchmark for quality. Our tape looms (weaving machines) are made with state of the art German technology allowing us to produce premium quality composite tapes.

Colan Fibreglass tapes are used in everything from Surf craft manufacture to aerospace. Our tapes have been specified in to some of the major global composite projects of our time.

Our capacity to weave tapes is extensive. We offer a wide range of weights and widths, input fibres and hybrid constructions.

OUR TAPE RANGE:

Weaves: Plain, Unidirectional Twill,

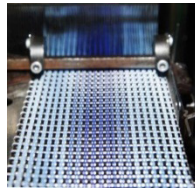
Weights: 115 g/m² - 1700 g/m²

Widths: 20 mm – 300 mm

Fibreglass Plain Tape



Carbon / Hybrid Tapes



Woven Roving Tape



Fibreglass Plain Tape

ITEM CODE	DESCRIPTION	WEAVE	WEIGHT	THICKNESS	WIDTH	ROLL SIZE	PACK SIZE
AT 311	E-glass Woven Tape	Plain	155 g/m ²	0.17 mm	25 mm	50 mtrs	6 rolls
AT 311	E-glass Woven Tape	Plain	155 g/m ²	0.17 mm	38 mm	50 mtrs	8 rolls
AT 312	E-glass Woven Tape	Plain	155 g/m ²	0.17 mm	50 mm	50 mtrs	6 rolls
AT 313 B	E-glass Woven Tape	Plain	155 g/m ²	0.17 mm	75 mm	50 mtrs	4 rolls
AT 313	E-glass Woven Tape	Plain	155 g/m ²	0.17 mm	75 mm	100 mtrs	4 rolls
AT 314 B	E-glass Woven Tape	Plain	155 g/m ²	0.17 mm	100 mm	50 mtrs	3 rolls
AT 314	E-glass Woven Tape	Plain	155 g/m ²	0.17 mm	100 mm	100 mtrs	3 rolls
AT 316	E-glass Woven Tape	Plain	155 g/m ²	0.17 mm	150 mm	100 mtrs	2 rolls

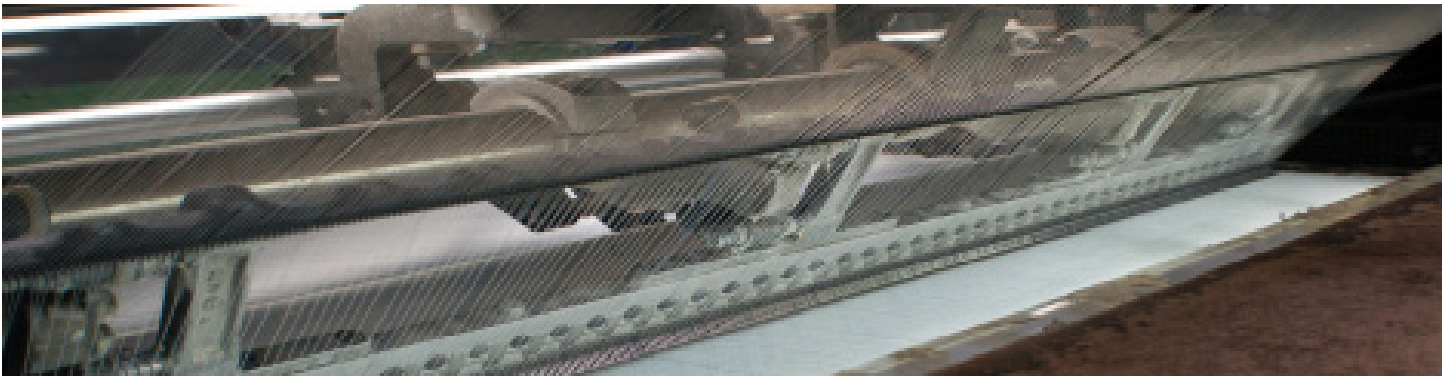
Woven Roving Tapes

ITEM CODE	DESCRIPTION	WEAVE	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
AT 106	E-glass Woven Roving Tape	Plain	630 g/m ²	0.60 mm	150 mm	6.0 kg
AT 106	E-glass Woven Roving Tape	Plain	630 g/m ²	0.60 mm	200 mm	8.0 kg
AT 106	E-glass Woven Roving Tape	Plain	630 g/m ²	0.60 mm	250 mm	10.0 kg
AT 106	E-glass Woven Roving Tape	Plain	630 g/m ²	0.60 mm	400 mm	16.0 kg
AT 106	E-glass Woven Roving Tape	Plain	630 g/m ²	0.60 mm	500 mm	20.0 kg
AT 105	E-glass Woven Roving Tape	Plain	830 g/m ²	0.85 mm	150 mm	6.0 kg
AT 105	E-glass Woven Roving Tape	Plain	830 g/m ²	0.85 mm	200 mm	8.0 kg
AT 105	E-glass Woven Roving Tape	Plain	830 g/m ²	0.85 mm	250 mm	10.0 kg
AT 105	E-glass Woven Roving Tape	Plain	830 g/m ²	0.85 mm	400 mm	16.0 kg
AT 105	E-glass Woven Roving Tape	Plain	830 g/m ²	0.85 mm	500 mm	20.0 kg
AT 133	E-glass Woven Roving Tape	Plain / Uni	410 g/m ²	0.62 mm	150 mm	3.3 kg
UNITAPE040	E-glass Woven Roving Tape	Plain / Uni	1000 g/m ²	0.80 mm	40 mm	2.2 kg
UNITAPE060	E-glass Woven Roving Tape	Plain / Uni	1000 g/m ²	0.80 mm	60 mm	3.3 kg
UNITAPE080	E-glass Woven Roving Tape	Plain / Uni	1000 g/m ²	0.80 mm	80 mm	4.4 kg
UNITAPE100	E-glass Woven Roving Tape	Plain / Uni	1000 g/m ²	0.80 mm	100 mm	5.5 kg
UNITAPE300	E-glass Woven Roving Tape	Plain / Uni	1000 g/m ²	0.80 mm	300 mm	16.5 kg
UNITAPE1440	E-glass Woven Roving Tape	Plain / Uni	1440 g/m ²	1.40 mm	105 mm	8.3 kg

Carbon Hybrid Tape (Surfboard Rail Tapes)

ITEM CODE	DESCRIPTION	TRACER	WEAVE	WEIGHT	WIDTH	ROLL SIZE
CAH 150	Carbon/Kevlar Hybrid Tape	-	Unidirectional	4.4 oz/yd ²	150 g/m ²	65 mm 50 mtrs
CGH 175	Carbon/E-glass Hybrid Tape	-	Plain	5.2 oz/yd ²	175 g/m ²	80 mm 50 mtrs
CGH 175 RT	Carbon/E-glass Hybrid Tape	RED	Plain	5.2 oz/yd ²	175 g/m ²	80 mm 50 mtrs
CGH 175 BT	Carbon/E-glass Hybrid Tape	BLUE	Plain	5.2 oz/yd ²	175 g/m ²	80 mm 50 mtrs
CGH 175 GT	Carbon/E-glass Hybrid Tape	GREEN	Plain	5.2 oz/yd ²	175 g/m ²	80 mm 50 mtrs
CNGHT 158	Carbon/innegra Hybrid Tape	-	Plain	4.7 oz/yd ²	160 g/m ²	80 mm 50 mtrs
AC 205	Carbon Unidirectional Tape	-	Unidirectional	5.9 oz/yd ²	200 g/m ²	40 mm 50 mtrs
AC 205	Carbon Unidirectional Tape	-	Unidirectional	5.9 oz/yd ²	200 g/m ²	50 mm 50 mtrs
AC 205	Carbon Unidirectional Tape	-	Unidirectional	5.9 oz/yd ²	200 g/m ²	65 mm 50 mtrs
AC 205	Carbon Unidirectional Tape	-	Unidirectional	5.9 oz/yd ²	200 g/m ²	75 mm 50 mtrs
AC 205	Carbon Unidirectional Tape	-	Unidirectional	5.9 oz/yd ²	200 g/m ²	100 mm 50 mtrs

Stitched Fabrics



Multiaxial fabrics

Multiaxial fabrics comprise of one or more layers of fibres, chopped strands and fabrics with varying orientation that are stitched together with a lightweight thread. These styles include Uni-directional, Double Bias, Biaxial, Triaxial, and Quadraxial. Multiaxial fabrics can be made in custom widths from 100 mm to 2540 mm and up to 3300mm for our Biaxial fabric. Weight ranges are from 260 g/m² to 1600 g/m² with or without chopped strand mat or tissue attached. Products manufactured in Australia are certified with Det Norske Veritas (DNV) approval.

Benefits:

Multi-axials maximise tensile modulus and with various orientations available strength can be focused where required.

As Glass fibres are laid parallel, resin pooling which often occurs in crimp (woven) fabrics is avoided. Thus, Multi-axial laminates achieve optimum reinforcement to resin ratio of up to about 70%.

Available Fibre

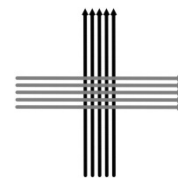
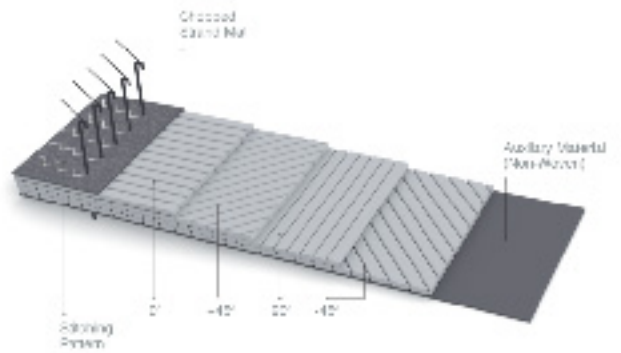
Multi axial fabrics are mainly produced in E-glass. Other fibre construction is available upon request including: S-glass, Basalt, Para Aramid or Carbon Fibre. Hybrid construction is also available.

Additional Layers

Additional layers may be stitched to multi-axial fabrics to provide lamination benefits.

These include:

- Chopped Strand mat (CSM)
- Continuous Filament Mat (CFM)
- Tissue / Veil
- Woven Fabrics
- Flow Medium
- Core Materials



Biaxial: 0 & 90



Double Bias: +/-45



Triaxial: 0°/90°, +45°, -45°



Quadraxial 0°, 90°, +45°, -45°



UNIDIRECTIONAL 0°, 90°



Biaxial (0°, 90°)

Our Biaxial fabric is a two (2) layer fabric with fibreglass roving laid down parallel in the 0° and 90° axis. Lightweight stitching holds these fibres together and parallel in each layer.

This modern-day woven roving replacement is used in many general laminate applications. The flat, crimp free nature of the biaxial provides improved directional modulus, strength and higher reinforcement content. A lighter stiffer laminate can be achieved. The cosmetic finish of the laminate is also improved by avoiding the undulating weave pattern associated with woven roving laminates.

Biaxial fabrics are also available with 225 g/m² chopped strand mat (CSM) stitched to the underside of the fabric for additional inter-laminar bonding requirements.

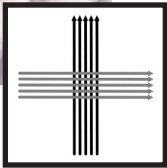
Key Features:

- Improves rigidity in rectangular composite panels.
- Excellent contouring for decks, cabin tops and flat structures
- Adds directional stiffness to laminates.
- Compatible with Epoxy, Vinyl Ester and Polyester resins.

Manufacturing Range

Weight: 200 g/m² - 2400 g/m²

Width: 100 mm – 3300 mm

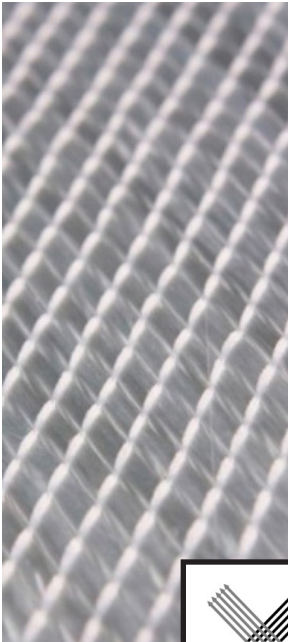


Australian Biaxial Range

ITEM CODE	DESCRIPTION	ORIENTATION	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
MB 4500 D	E-glass Stitched Fabric	Biaxial 0°, 90°	453 g/m ²	0.50 mm	1270 mm	46.0 kg
MB 6000 D	E-glass Stitched Fabric	Biaxial 0°, 90°	605 g/m ²	0.60 mm	1270 mm	47.6 kg
MB 8500 D	E-glass Stitched Fabric	Biaxial 0°, 90°	856 g/m ²	0.80 mm	1270 mm	50.0 kg
MB 1100 D	E-glass Stitched Fabric	Biaxial 0°, 90°	1100 g/m ²	1.00 mm	1270 mm	46.1 kg
MB 1200 D	E-glass Stitched Fabric	Biaxial 0°, 90°	1216 g/m ²	1.00 mm	1270 mm	50.5 kg
MB 1800 D	E-glass Stitched Fabric	Biaxial 0°, 90°	1811 g/m ²	1.40 mm	1270 mm	50.5 kg
MB 4508 D	E-glass Stitched Fabric + CSM	Biaxial 0°, 90°	453 + 225 g/m ²	0.90 mm	1270 mm	38.8 kg
MB 6008 D	E-glass Stitched Fabric + CSM	Biaxial 0°, 90°	605 + 225 g/m ²	1.10 mm	1270 mm	46.4 kg
MB 8508 D	E-glass Stitched Fabric + CSM	Biaxial 0°, 90°	856 + 225 g/m ²	1.10 mm	1270 mm	49.4 kg
MB 1809 D	E-glass Stitched Fabric + CSM	Biaxial 0°, 90°	1811 + 225 g/m ²	1.60 mm	1270 mm	51.5 kg

Imported Biaxial Range

ITEM CODE	DESCRIPTION	ORIENTATION	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
MB 4500 G	E-glass Stitched Fabric	Biaxial 0°, 90°	453 g/m ²	0.50 mm	1270 mm	56.2 kg
MB 6000 G	E-glass Stitched Fabric	Biaxial 0°, 90°	601 g/m ²	0.60 mm	1270 mm	49.6 kg
MB 8500 G	E-glass Stitched Fabric	Biaxial 0°, 90°	855 g/m ²	0.80 mm	1270 mm	49.4 kg
MB 8508 G	E-glass Stitched Fabric	Biaxial 0°, 90°	855 + 225 g/m ²	1.10 mm	1270 mm	49.4 kg
MB 1200 G	E-glass Stitched Fabric	Biaxial 0°, 90°	1191 g/m ²	1.00 mm	1270 mm	62.2 kg



Double Bias (+45°, -45°)

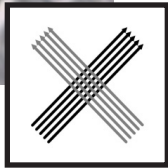
Our Double Bias fabric is a two (2) layer fabric with fibreglass roving laid down parallel in the – 45° and + 45° axis. Lightweight stitching holds these fibres together and parallel in each layer.

Double Bias fabrics are used where complex contours and curved surfaces make other fabrics hard to laminate. These fabrics adds good structural support to square composite panels and provide stability in long laminates, which may experience torsional twist. Double Bias fabrics are often cut into strips for joining hulls, decks and bulkheads.

Double Bias fabrics are also available with 225 g/m² chopped strand mat (CSM) stitched to the top side of the fabric for additional bonding requirements.

Key Features:

- Conforms to complex shapes easily. Excellent for strip planked structures.
- Excellent for joining up laminates such as bulkheads and hull.
- Compatible with Epoxy, Vinyl Ester and Polyester resins.
- Binderless chopped strand mat available



Manufacturing Range

Weight: 265 g/m² - 1500 g/m²

Width: 100 mm – 1270 mm

Australian Made Double Bias Range

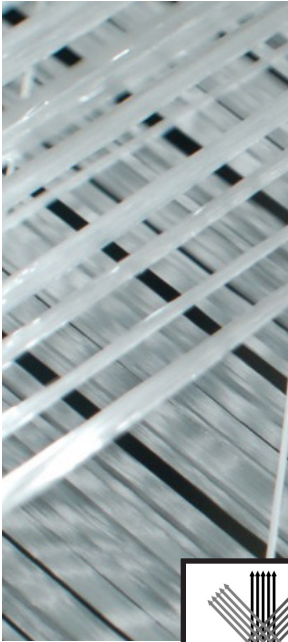
ITEM CODE	DESCRIPTION	ORIENTATION	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
MX 2600 D	E-glass Stitched Fabric	Double Bias ±45°	265 g/m ²	0.35 mm	1270 mm	50.0 kg
MX 4200 D	E-glass Stitched Fabric	Double Bias ±45°	420 g/m ²	0.45 mm	1270 mm	50.4 kg
MX 4500 D	E-glass Stitched Fabric	Double Bias ±45°	457 g/m ²	0.50 mm	1270 mm	47.6 kg
MX 6000 D	E-glass Stitched Fabric	Double Bias ±45°	617 g/m ²	0.58 mm	1270 mm	50.9 kg
MX 8000 D	E-glass Stitched Fabric	Double Bias ±45°	807 g/m ²	0.70 mm	1270 mm	50.2 kg
MX 9000 D	E-glass Stitched Fabric	Double Bias ±45°	906 g/m ²	0.78 mm	1270 mm	50.5 kg
MX 1200 D	E-glass Stitched Fabric	Double Bias ±45°	1203 g/m ²	1.00 mm	1270 mm	50.4 kg
MX 4208 D	E-glass Stitched Fabric + CSM	Double Bias ±45°	435 + 225 g/m ²	0.75 mm	1270 mm	43.5 kg
MX 6008 D	E-glass Stitched Fabric + CSM	Double Bias ±45°	616 + 225 g/m ²	0.87 mm	1270 mm	46.0 kg
MX 8008 D	E-glass Stitched Fabric + CSM	Double Bias ±45°	808 + 225 g/m ²	1.10 mm	1270 mm	49.8 kg
MX 9008 D	E-glass Stitched Fabric + CSM	Double Bias ±45°	906 + 225 g/m ²	1.08 mm	1270 mm	48.7 kg
MXC 1500 D	Carbon Fibre Stitched Fabric (6K)	Double Bias ±45°	150 g/m ²	0.20 mm	1270 mm	100 mtrs
MXC 2000 D	Carbon Fibre Stitched Fabric (12K)	Double Bias ±45°	200 g/m ²	0.30 mm	1270 mm	100 mtrs
MXC 3000 D	Carbon Fibre Stitched Fabric (6K)	Double Bias ±45°	302 g/m ²	0.35 mm	1270 mm	100 mtrs
MXC 4000 D	Carbon Fibre Stitched Fabric (12K)	Double Bias ±45°	408 g/m ²	0.45 mm	1270 mm	100 mtrs

Imported Double Bias Range

ITEM CODE	DESCRIPTION	ORIENTATION	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
MX 4200 G	E-glass Stitched Fabric	Double Bias ±45°	420 g/m ²	0.45 mm	1270 mm	58.8 kg
MX 4500 G	E-glass Stitched Fabric	Double Bias ±45°	467 g/m ²	0.50 mm	1270 mm	59.7 kg
MX 6000 G	E-glass Stitched Fabric	Double Bias ±45°	617 g/m ²	0.58 mm	1270 mm	63.7 kg

Imported Double Bias Range *(continued)*

MX 9000 G	E-glass Stitched Fabric	Double Bias $\pm 45^\circ$	985 g/m ²	0.78 mm	1270 mm	67.4 kg
MX 6008 G	E-glass Stitched Fabric	Double Bias $\pm 45^\circ$ +CSM	617 + 225 g/m ²	0.87 mm	1270 mm	68.3 kg

**Triaxial (0°/90°, +45°, -45°)**

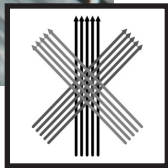
This three (3) layer fabric has fibreglass roving laid down parallel in the -45° , $+45^\circ$ and 0° or 90° axis. The 0° or 90° axis generally contains approximately 30 % of the fibre content, but is also available with 50 % of fibre content in this direction. Lightweight stitching holds these fibres together and parallel in each layer. This stitching is non-structural.

This fabric gives the builder the ability to control the amount of fibre concentration in the areas requiring it. The 0° or 90° fibres add strength across the hull with the 45° fibres adding additional cross bracing and torsional stability.

Also available in weft direction Triaxial and with 225 g/m² chopped strand mat (CSM) stitched to the top side of the fabric for additional inter-laminar bonding requirements.

Key Features:

- Conforms to complex contours and drapes easily.
- Commonly used as a main component of hull and deck laminates.
- Compatible with Epoxy, Vinyl Ester and Polyester resins.
- Binder-less chopped strand mat available.

**Manufacturing Range**

Weight: 180 g/m² - 1800 g/m²

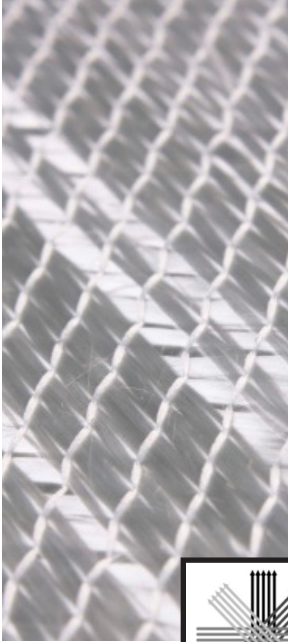
Width: 100 mm – 1270 mm

Australian Made Triaxial Range

ITEM CODE	DESCRIPTION	ORIENTATION	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
MT 5900 D	E-glass Stitched Fabric	Triaxial $0^\circ, \pm 45^\circ$	595 g/m ²	0.50 mm	1270 mm	50.2 kg
MT 7500 D	E-glass Stitched Fabric	Triaxial $0^\circ, \pm 45^\circ$	757 g/m ²	0.80 mm	1270 mm	49.6 kg
MT 9000 D	E-glass Stitched Fabric	Triaxial $0^\circ, \pm 45^\circ$	917 g/m ²	0.80 mm	1270 mm	44.3 kg
MT 1150 D	E-glass Stitched Fabric	Triaxial $0^\circ, \pm 45^\circ$	1151 g/m ²	1.10 mm	1270 mm	50.2 kg
MT 1800 D	E-glass Stitched Fabric	Triaxial $0^\circ, \pm 45^\circ$	1813 g/m ²	1.35 mm	1270 mm	52.0 kg
MZ 6000 D	E-glass Stitched Fabric	Triaxial $90^\circ, \pm 45^\circ$	610 g/m ²	0.60 mm	1270 mm	50.3 kg
MZ 7500 D	E-glass Stitched Fabric	Triaxial $90^\circ, \pm 45^\circ$	759 g/m ²	0.70 mm	1270 mm	50.2 kg
MZ 9000 D	E-glass Stitched Fabric	Triaxial $90^\circ, \pm 45^\circ$	918 g/m ²	0.80 mm	1270 mm	50.7 kg
MZ 1150 D	E-glass Stitched Fabric	Triaxial $90^\circ, \pm 45^\circ$	1152 g/m ²	1.09 mm	1270 mm	51.2 kg
MZ 1158 D	E-glass Stitched Fabric	Triaxial $90^\circ, \pm 45^\circ$	1152 + 225 g/m ²	1.20 mm	1270 mm	50.9 kg

Imported Triaxial Range

ITEM CODE	DESCRIPTION	ORIENTATION	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
MT 7500 G	E-glass Stitched Fabric	Triaxial $90^\circ, \pm 45^\circ$	757 g/m ²	0.80 mm	1270 mm	53.425 kg



Quadraxial (0°,90°,+45°,-45°)

This four (4) layer fabric has fibreglass roving laid down parallel in the 0°, -45°, +45° and 90° axes. Lightweight stitching holds these fibres together and parallel in each layer. This stitching is non-structural.

This fabric allows the builder to apply multiple layers simultaneously and adds excellent structural support and stiffness to the laminate. The 0° and 90° fibres add strength across the hull with the 45° fibres adding additional cross bracing and torsional stability.

Also available with chopped strand mat (CSM) stitched to the top side of the fabric for additional bonding requirements.

Key Features:

- Cost effective solution for reducing labour in layup process.
- Commonly used as a main component of hull and deck laminates.
- Compatible with Epoxy, Vinyl Ester and Polyester resins.
- Binder-less chopped strand mat available.

Manufacturing Range

Weight: 600 g/m² - 2400 g/m²

Width: 100 mm – 1270 mm

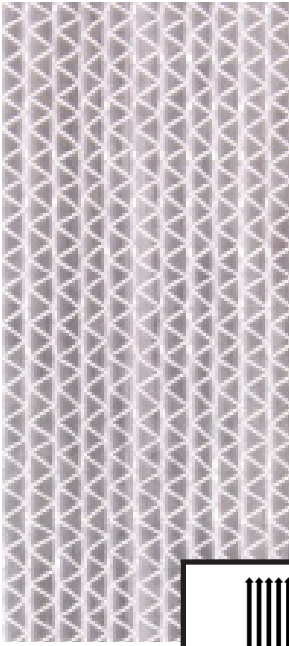


Australian Made Quadraxial Fabrics

ITEM CODE	DESCRIPTION	ORIENTATION	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
MQ 6000 D	E-glass Stitched Fabric	0°, 90°, ±45°	607 g/m ²	0.60 mm	1270 mm	49.6 kg
MQ 8500 D	E-glass Stitched Fabric	0°, 90°, ±45°	858 g/m ²	0.70 mm	1270 mm	50.0 kg
MQ 1200 D	E-glass Stitched Fabric	0°, 90°, ±45°	1205 g/m ²	1.10 mm	1270 mm	50.0 kg
MQ 6008 D	E-glass Stitched Fabric + CSM	0°, 90°, ±45°	607 + 225 g/m ²	0.90 mm	1270 mm	38.5 kg
MQ 8008 D	E-glass Stitched Fabric + CSM	0°, 90°, ±45°	813 + 225 g/m ²	1.20 mm	1270 mm	50.0 kg
MQ 1208 D	E-glass Stitched Fabric + CSM	0°, 90°, ±45°	1205 + 225 g/m ²	1.40 mm	1270 mm	48.6 kg

Imported range

ITEM CODE	DESCRIPTION	ORIENTATION	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
MQ 8500 G	E-glass Stitched Fabric	0°, 90°, ±45°	868 g/m ²	0.70 mm	1270 mm	56.2 kg
MQ 1200 G	E-glass Stitched Fabric	0°, 90°, ±45°	1200 g/m ²	1.10 mm	1270 mm	60.6 kg



Unidirectional (0°,90°)

Fibreglass roving is laid down in the 0° or 90° axis and is held parallel by lightweight stitching. This stitching is non-structural.

This fabric is used to add directional stability to structures in one specific direction. Often used to build up strength in frames, such as ring frames and beam type structures such as engine girders or keel girders etc.

Also available with 225 g/m² chopped strand mat (CSM) stitched to the underside of fabric for additional inter-laminar bonding requirements.

Key Features:

- Maximised properties in one direction
- Forms to convex and concave surfaces easily
- Compatible with Epoxy, Vinyl Ester and Polyester resins
- Binderless chopped strand mat available

Manufacturing Range

Weight: 400 g/m² - 1700 g/m²

Width: 100 mm – 3300 mm

Australian Made Unidirectional Range

ITEM CODE	DESCRIPTION	ORIENTATION	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
MU 4500 D	E-glass Stitched Fabric	Unidirectional 0°	480 g/m ²	0.50 mm	1270 mm	45.7 kg
MU 5600 D	E-glass Stitched Fabric	Unidirectional 0°	599 g/m ²	0.50 mm	1270 mm	45.6 kg
MU 5601 D	E-glass Stitched Fabric + Tissue	Unidirectional 0°	627 + 28 g/m ²	0.80 mm	1270 mm	43.8 kg
MU 8800 D	E-glass Stitched Fabric	Unidirectional 0°	907 g/m ²	0.80 mm	1270 mm	50.7 kg
MU 8809 D	E-glass Stitched Fabric + CSM	Unidirectional 0°	907 + 225 g/m ²	1.00 mm	1270 mm	43.1 kg
MW 6000 D	E-glass Stitched Fabric	Unidirectional 90°	610 g/m ²	0.60 mm	1270 mm	50.4 kg
MW 7850 D	E-glass Stitched Fabric	Unidirectional 90°	806 g/m ²	0.80 mm	1270 mm	50.2 kg

Imported Unidirectional Range

ITEM CODE	DESCRIPTION	ORIENTATION	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
MU 4500 G	E-glass Stitched Fabric	Unidirectional 0°	475 g/m ²	0.50 mm	1270 mm	55.2 kg
MU 8800 G	E-glass Stitched Fabric	Unidirectional 0°	906 g/m ²	0.80 mm	1270 mm	58.6 kg
MU 8808 G	E-glass Stitched Fabric	Unidirectional 0°	906 + 225 g/m ²	1.00 mm	1270 mm	43.1 kg



Flow Mat (infusion Mat)

Colan's Flowmat is a special reinforcement specifically designed for use in closed mould systems such as RTM and Vacuum Infusion.

This three (3) layer fabric consists of chopped strands of E-glass fibre which are stitched together with a porous elastic layer in between. This stitching is non-structural. The middle layer is a core material made from polypropylene which provides increased resin flow properties along with good surface quality.

Key Features:

- Binderless construction gives excellent drapeability
- Suitable for use in complicated mould shapes
- Quicker and easier lay-up reducing labour
- Very fast wet out capability reducing fill time
- Increased control of finished part thickness
- Able to withstand higher RTM pressures
- Lower resin requirement to fill larger moulds

Manufacturing Range

Weight: 584 g/m² - 1455 g/m²

Width: 100 mm – 1270 mm

ITEM CODE	DESCRIPTION	ORIENTATION (CSM/PP/CSM)	WEIGHT	THICKNESS	WIDTH	ROLL LENGTH
FM 5860 EZ	Infusion Mat	200 / 180 / 200	584 g/m ²	2.4 mm	720 mm	40 mtrs
FM 7860 EZ	Infusion Mat	300 / 180 / 300	780 g/m ²	2.5 mm	1270 mm	40 mtrs
FM 1095 EZ	Infusion Mat	300 / 180 / 300	780 g/m ²	2.5 mm	1270 mm	40 mtrs
FM 1095 EZ	Infusion Mat	450 / 180 / 450	1084 g/m ²	2.7 mm	1480 mm	40 mtrs
FM 1165 EZ	Infusion Mat	450 / 250 / 450	1155 g/m ²	3.6 mm	820 mm	40 mtrs
FM1395 EZ	Infusion Mat	600 / 180 / 600	1385 g/m ²	3.6 mm	1270 mm	40 mtrs
FM 1465 EZ	Infusion Mat	600 / 250 / 600	1455 g/m ²	4.0 mm	1270 mm	40 mtrs



Combination Mat (Duomat)

Colan's Duomat is a two (2) layer fabric consisting of a layer of Woven Roving and a layer of Chopped Strand Mat stitched together. Combining these two fabrics creates an easy to handle thick fabric suitable for hand lay up or infusion.

Key Features:

- Easy to handle
- Quicker and easier lay-up reducing labour
- Suitable for infusion processes
- Increased control of finished part thickness
- Fabric is pre-formable

Manufacturing Range

Weight: 180 g/m² - 1800 g/m²

Width: 100 mm – 3300 mm

ITEM CODE	DESCRIPTION	WEAVE	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
DUOMAT550	E-glass Woven Roving + CSM	Plain	400 + 150 g/m ²	0.60 mm	1240 mm	51.8 kg
DUOMAT620	E-glass Woven Roving + CSM	Plain	320 + 300 g/m ²	0.80 mm	1240 mm	48.0 kg
DUOMAT625	E-glass Woven Roving + CSM	Plain	400 + 225 g/m ²	0.80 mm	1240 mm	48.5 kg
DUOMAT750	E-glass Woven Roving + CSM	Plain	600 + 150 g/m ²	0.80 mm	1240 mm	50.5 kg
DUOMAT900	E-glass Woven Roving + CSM	Plain	600 + 300 g/m ²	0.90 mm	1240 mm	44.3 kg
DUOMAT1080	E-glass Woven Roving + CSM	Plain	630 + 450 g/m ²	1.20 mm	1240 mm	49.5 kg
DUOMAT1280	E-glass Woven Roving + CSM	Plain	830 + 450 g/m ²	1.10 mm	1240 mm	47.6 kg
DUOMAT1810	E-glass Woven Roving + CSM	Twill	1510 + 310 g/m ²	2.00 mm	1240 mm	55.6 kg

Imported Unidirectional Range

ITEM CODE	DESCRIPTION	WEAVE	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
DUOMAT 1090	E-glass Woven Roving + CSM	Plain	630 + 450 g/m ²	1.80 mm	1240 mm	51.8 kg
DUOMAT 1290	E-glass Woven Roving + CSM	Plain	830 + 450 g/m ²	1.10 mm	1240 mm	48.0 kg



CSM

Colan's imported range of Chopped Strand Mat (CSM) is made up of chopped strands of glass fibre laid randomly and held together with a binder or stitching. CSM is designed to cover a wide range of layup techniques. It easily conforms to moulds and has fast wet out properties.

Key Features:

- Suitable for use in complicated mould shapes
- Quicker and easier lay-up reducing labour
- Very fast wet out capability reducing fill time
- Increased control of finished part thickness
- Able to withstand high RTM pressures
- Lower resin requirement to fill larger moulds
- Available in a variety of weight combinations and widths.

Manufacturing Range

Weight: 225 g/m² - 900 g/m²

Width: 100 mm – 1270 mm

Available Fibre

Chopped Strand Mat is mainly produced in E-glass but is also available in ECR glass (**Corrosion resistant**).

Binder Options

Chopped Strand Mat can be chemically or mechanically bound. Chemical binders include Emulsion and Powder. Both chemical binders are highly soluble and work well with different resin systems. Emulsion is suitable for use with polyester while the Powder binder is more suited to Vinyl-ester, Epoxy and corrosion resistant resins.

ITEM CODE	DESCRIPTION	BINDER	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
CSME 225	E-glass Chopped Strand Mat	Emulsion	225 g/m ²	0.40 mm	1040 mm	28.0 kg
CSME 300	E-glass Chopped Strand Mat	Emulsion	300 g/m ²	0.50 mm	1040 mm	30.0 kg
CSME 450	E-glass Chopped Strand Mat	Emulsion	450 g/m ²	0.50 mm	1040 mm	32.0 kg
CSME 600	E-glass Chopped Strand Mat	Emulsion	600 g/m ²	1.00 mm	1040 mm	32.0 kg
CSME 900	E-glass Chopped Strand Mat	Emulsion	900 g/m ²	2.00 mm	1040 mm	32.0 kg
CSMP 225	E-glass Chopped Strand Mat	Powder	225 g/m ²	0.40 mm	1040 mm	30.0 kg
CSMP 300	E-glass Chopped Strand Mat	Powder	300 g/m ²	0.50 mm	1040 mm	30.0 kg
CSMP 450	E-glass Chopped Strand Mat	Powder	450 g/m ²	0.50 mm	1040 mm	30.0 kg
CSMP 600	E-glass Chopped Strand Mat	Powder	600 g/m ²	1.00 mm	1040 mm	30.0 kg
CSMP 900	E-glass Chopped Strand Mat	Powder	900 g/m ²	2.00 mm	1040 mm	30.0 kg



Tissue / Veil

Colan Surfacing Tissue and Veil is a light weight non-woven fabric. It is designed for use as a surface layer in GRP or FRP laminates to provide a smooth finish and prevent print through.

Our range of Tissue and Veil are compatible with all types of vinyl ester, polyester and epoxy resins.

ITEM CODE	DESCRIPTION	WEIGHT	THICKNESS	WIDTH	ROLL SIZE
TISSUE22	C-glass Tissue	22 g/m ²	0.10 mm	1270 mm	100 mtrs
TISSUE27	C-glass Tissue	27 g/m ²	0.15 mm	1270 mm	100 mtrs
ACTISSUE034	Carbon Tissue	34 g/m ²	0.30 mm	901 mm	100 mtrs

INPUT FIBRE INFORMATION

E-GLASS FIBRE Colan styles AF

Calcium-Aluminium-Borosilicate is better known as electrical grade, low alkali, E-glass. E-glass has a softening point of 845°C and is drawn into filaments through a platinum bushing, coated with a special direct size, then wound onto packages as low twist roving. These rovings can be further twisted and plied into yarns. Both roving and yarn are suitable for weaving into fabrics. E-glass is by far the most widely used composite reinforcement due to its relative low cost.

Colan's direct size is AB7, meaning the fabrics need no further heat cleaning or treatment with a coupling agent. These additional treatments usually result in a 50% reduction in tensile strength which, in turn, transfers to a reduction in composite mechanical properties.

CARBON FIBRE Colan styles AC

Carbon fibres begin as polyacrylonitrile (PAN) fibres which are highly tensioned and slowly heated to over 1650°C. This process causes complete carbonization and results in a carbon fibre with high modulus and high strength. Varying the process conditions allows many types of carbon fibre to be produced with high strength (HS) and high modulus (HM) types being the most common.

An epoxy size (Colan finish EP) is applied to the fibre after carbonization, its role being to protect the filaments during processing and provide compatibility with epoxy resins.

Carbon fibre reinforced laminates exhibit high strength and very high modulus properties but are very susceptible to brittle failure and poor impact resistance.

HIGH MODULUS p-ARAMID (KEVLAR) Colan styles AK

p-Aromatic polyamide fibre (also known as p-Aramid) is a low density organic material having a high tensile strength and modulus and a characteristic yellow-gold colour.

p-Aramid reinforced composites show excellent fatigue resistance and impact strength although the compressive strength is considered poor. This combination of properties makes the composite damage tolerant and gives it a built-in safety factor so that mechanical failure will not be catastrophic.

p-Aramid fabrics are scoured (Colan finish SC) after weaving to remove lubricants used to protect the filaments during processing. The scoured fabric may be used with most resin systems although epoxy and vinylester are the commonly used. p-Aramid is very sensitive to UV light with a marked reduction in mechanical properties on exposure. This is not a problem in an opaque composite.

INNEGRA Colan styles ANG

Innegra S is a high performance polypropylene fibre. It is very light in weight and extremely tough. It is cost competitive compared to other high performance fibers, and has been effectively applied as a hybrid with Carbon, Aramid and Polyethylene fibers. The fibre was developed in 2004 by U.S Company Innegity. While still being tested in many applications Innegra S has found some success in the motorsport and surf craft industries.

BASALT Colan Styles AB

Basalt Fibre begins as Basalt rock, an igneous rock, originally beginning in a molten state. Basalt fibre is produced in a continuous process, similar to E-glass. In many ways the Basalt fibre out performs E-glass. It has superior strength, more akin to S-glass and has a much higher operating temperature up to 650°C, melting at 1450°C. Basalt fibre is priced accordingly falling into the range between E-glass and S-glass. With properties within the same range it is a viable alternative for many applications.

HYBRID FABRICS

These are fabrics which have been manufactured using different combinations of fibre types to improve specific performance characteristics at a cost effective level. The number of combinations is nearly limitless, considered that a multitude of fibres, in various weights, combinations and weaving techniques, can be used both in the warp (along the fabric) and the weft (across the fabric) directions. Common hybrids include Carbon/E-glass, E-glass/Aramid and Carbon/Aramid.

Fibre Comparison Charts

Table 1. Comparison of fibre properties

Property	E-glass		E-glass	E-glass	S-glass
	Direct Size	Colan AB7	Heat Treated Silane	Heat Treated Volan	Heat Treated Silane
Tensile Strength	523		394	349	563
Tensile Modulus	23.8		-	24.8	-
Flexural Strength	760		568	536	783
Flexural Modulus	23.7		24.1	24.4	27.6
Compressive Strength	419		427	334	453
Glass Content	63.7		62.5	63.8	65.6

Table 2. Comparison of Glass fibre reinforced composites

Property	Glass Fibre		p-Aramid (Kevlar) Fibre	Carbon Fibre		HM Polyethylene Fibre	Basalt Fibre	Polyester Fibre	Metals		
	E	S		HS	HM				Aluminium	Titanium	Steel
Density	2.54	2.46	1.45	1.76	1.80	0.97	2.66	1.38	2.80	4.50	7.80
Tensile Modulus	72	87	124	235	338	87	93	14	72	110	207
Tensile Strength	3400	4600	3600	3500	2480	2650	4500	1200	460	930	620
Specific Modulus	28	35	85	133	188	90	-	10	26	24	27
Specific Strength	1340	1870	2480	1990	1380	2730	-	870	164	205	80
Elongation at Break	4.8	5.4	2.0	1.2	0.5	3.5	3.1	13.5	8	16	23
Coefficient of thermal Expansion (+expand:-contract)	+5.0	+2.4	-3.5	-0.36	-0.54	-12.0	8.0	+60.0	+23.4	+10.1	+10.8

Table 3. Comparison of E-glass fibre reinforced composites with different yarn processing

Property	Random Fibre Chopped Strand Mat	0° / 90° Woven Roving	0° / 90° Knitted Bidirectional Roving
	Tensile Strength	105	250
Tensile Modulus	8.1	13.3	16.2
Flexural Strength	188	400	511
Flexural Modulus	6.8	12.1	15.2
Inter-laminar Shear Strength	21.5	25.0	26.5
Glass Content	31	50	50