

Non-Crimp Fabrics (NCF) can be used in a variety of applications in the automotive, aerospace, construction, corrosive, industrial and marine industries. NCF is a composite reinforcing fabric in which fibres are organised into layers of plies of variable weight and orientation. The layers are stitched together. The result is a range of engineered fabrics with predictable, repeatable properties for the composite industry.

Triaxial Transverse (Weft Triaxial) Non-Crimp Fabrics are ideal for applications that require a combination of high transverse and shear strength and stiffness, and some longitudinal strength. The combination of straight, non-woven fibres and high glass volume fractions give superior properties at lower weight.

This triaxial product is suitable for hand lay-up, vacuum bagging of relatively flat components (minimum curvature radius approximately 15mm), vacuum injection and other RTM-processes.

TW0750 - 750gm Weft Triaxial E-Glass					
Layer Orientation	degrees (°)	0	+45	90	-45
Layer Weight	(gm/m <sup>2</sup> )	0	253	248	253
Material			E-Glass	E-Glass	E-Glass
Weight, knitting yarn (gm/m <sup>2</sup> )		8			
Material		PES			
Total weight (gm/m <sup>2</sup> )		762±3%			
Standard roll width (mm)		1270			

TYPICAL LAMINATE PROPERTIES					
Laminate thickness 0.114 per 100gm/m <sup>2</sup>			Fibre Fraction 50% by weight		
	Test Method	0°	+45°	90°	-45°
Tensile Strength	ISO 3268	37* MPa	181 MPa	199 MPa	181 MPa
Tensile Modulus	ISO 3268	9,650 MPa	14,500 MPa	15,860 MPa	14,500 MPa
Compressive Strength	BS 2782	131* MPa	141 MPa	160 MPa	141 MPa
Compressive Modulus	BS 2782	9,900 MPa	13,800 MPa	15,570 MPa	13,800 MPa
Flexural Strength		38* MPa		335 MPa	
Shear Strength, in plane	ASTM 4255-83	88 MPa	71 MPa	110 MPa	71 MPa
Shear Strength, interlamina	BS 2782				
Elongation at break		2.7%		3.4%	

\* Indicates resin dominated strength

NOTE: This data is provided as an aid to materials selection only. These results are theoretical estimates of average properties, based on limited mechanical test data. They should not be construed as either guaranteed minimum values, or design values. The properties of laminates will vary significantly with the resin system used and laminating process used, with many other factors being beyond the control of ATL Composites Pty Ltd.

Order Code	Description	Roll Width	Roll Length
TW0750	750gm Weft Triaxial E-Glass	1.27 m	41.3 Lm
TW750T100	750gm Weft Triaxial E-Glass Tape	100mm	41 Lm
TW750T150	750gm Weft Triaxial E-Glass Tape	150mm	41 Lm
TW750T200	750gm Weft Triaxial E-Glass Tape	200mm	41 Lm

## STORAGE

NCF Reinforcements should be stored on packaging roll, and kept dry and clean.

NOTE Our products are intended for sale to industrial and commercial customers. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. Nothing herein shall constitute a warranty, express or implied, including any warranty or merchantability or fitness, nor is protection from law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of our materials and in no event shall we be liable for special or consequential damages. 21/05/20



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