Technical Data Sheet

Lineat Composites
Unit 3 Severn Link Distribution Centre
Newhouse Farm Industrial Estate
Chepstow NP16 6UN

AFFT™ ALIGNED FORMABLE FIBRE TECHNOLOGY

AFFT™ tapes are advanced uni-directional pre-preg tapes made with highly aligned short fibres. The highly aligned fibre architecture mimics virgin continuous fibre material and it can reach similar performance as equivalent continuous fibre materials, whilst adding unique moulding and draping characteristics to speed up manual and automated lay-up procedures. Tapes with custom (reclaimed) carbon fibres can be made to create strong recycled composite tapes that can substitute continuous fibre UD material.

OVERVIEW

Fibre type	rCF: Reclaimed standard modulus 4mm carbon fibre
Fibre aerial weight	33 gsm (typically +-3 gsm)
Resin system	Epoxy (SHD MTC400-1)
Resin aerial weight	50 gsm (typically +-10gsm)
Tape width	100 mm
Cured ply thickness	0.03 mm (typical)

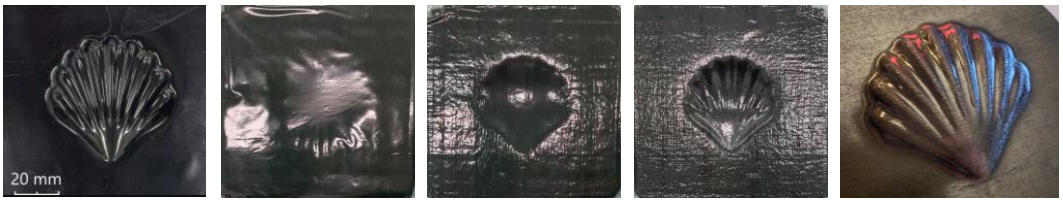
PROCESSING

Method	Vacuum / oven cure	Autoclave	Compression moulding
Consolidation pressure	1 bar	7 bar	10 bar+
Fibre volume fraction V_f	20 – 30 %	30 – 40 %	40 – 50 %

STORE FROZEN AT -18°C.
Cure temperature-time*:
85°C – 16 hours
100 °C – 4 hours
135 °C - 1 hour

Please see resin TDS for more detailed cure information.

In uncured state at elevated temperatures (40°C), AFFT tapes can stretch up to 20% strain, allowing easy draping around complex, double curved surfaces. To avoid excessive stretching behavior, use material at lower temperature (<18°C) during manual handling and lay-up to maintain fibre alignment and prevent unwanted tape stretching. Development pre-preg tapes are single-side impregnated with a resin rich side.
Higher consolidation pressures above 10 bar advised for maximum fibre volume fraction and best performance.



Scan for tape info, photos & videos.

www.lineat.co.uk – info@lineat.co.uk

TYPICAL COMPOSITE PROPERTIES

Processing conditions: Compression moulding at 90 bar. Estimated FVF of 46%.

Property	Unit	Value	Standard
Tensile Modulus	GPa	89.40	ISO 524-5
Tensile Strength	MPa	722.76	ISO 524-5
Flexural Modulus	GPa	89.40	ISO 14125
Flexural Strength	MPa	967.78	ISO 14125
Compressive Modulus	GPa	92.31	ISO 14126
Compressive Strength	MPa	928.03	ISO 14126
ILSS	MPa	89.17	ISO 14130
Density	g/cm^3	1.45	-