

Creating Material Change



Electrically Enhanced Prepreg Technical Data Sheet



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Electrically Enhanced Prepreg

Haydale's electrically enhanced prepreg has been specifically designed to enhance the electrical conductivity of the laminate in aerospace applications (both aviation and low earth orbit satellites). The enhanced resin provides improved performance for use in lightning strike, edge glow and electrical screening.

Product code:	GA-ELC
Cured ply thickness:	0.12mm
Fibres:	T700 UD 120gsm
Resin weight (nom):	34%
Fibre volume fraction:	54%
Tg, Storage Modulus Onset (DMA):	227°C
Tg. Delta Peak:	238°C
Prepreg width:	300mm, 600mm

Cure Temperature		Cure Time	Tg Onset
85°C	Minimum	16 hours	90°C
90°C		8 hours	100°C
100°C		4 hours	110°C
110°C		2 hours	120°C
135°C	Maximum	1 hour	145°C
180°C	Post cure	2 hours	225°C

Curing schedule is meant to be a guide only and is subject to local conditions, to avoid exotherm particular care must be taken with thick laminates. Ramp rates must not exceed 3.0°C per minute during initial cure. Ramp rates must not exceed 0.3°C per minute during post cure (free standing). Consult Haydale with respect to oven and Autoclave curing options.

Property Tested	Method Standard	Units	Value
Volume Conductivity	Gobin probe*	S/M	1.2117 x 10 ⁵
Volume Resistivity	ASTM D257	Ω.cm	7.42 x 10 ⁵
0° Flexural Strength	ISO 14125:1998+A1:2001	MPa	1901.3
0° Flexural Modulus		GPa	104.8
90° Flexural Strength		MPa	91.4
90° Flexural Modulus		GPa	7.08
0° Compressive Strength	ISO 14126:1999	MPa	1061
0° Compressive Modulus		GPa	96.58
90° Compressive Strength		MPa	193.6
90° Compressive Modulus		GPa	7.48
0° Interlaminar Shear Strength	ISO 14130:1998	MPa	88.32
90° Interlaminar Shear Strength		MPa	11.55
In-plane Shear Strength		MPa	64.85
In-plane Shear Modulus		GPa	6.33

* Gobin is an independent test conducted over a frequency range of 1kHz- 100MHz.

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