

L-956

Laminating Woven Graphite Prepreg



851 W. 18th Street
Costa Mesa, CA 92627
(949) 650-8106 Fax:(949) 631-6190
www.jdlincoln.com

Product Data Sheet

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Description

L-956 is an excellent high temperature modified epoxy prepreg which exhibits outstanding performance at temperatures up to 400°F (204°C). L-956 is ideally suited for applications on light weight advanced aircraft for fairings, inlet ducting, leading edges, control surfaces, pylons, and radomes. L-956 is moisture resistance and has excellent compatibility with other graphite/epoxy systems.

Advantages of L-956

- ❖ L-956 has an excellent balance between toughness, high temperature strength and weatherability.
- ❖ L-956 may be co-cured with many of today's epoxy adhesives systems to form load transfer interfaces.
- ❖ L-956 is also supplied on light weight fiberglass fabric for use as a surfacing ply for graphite/epoxy laminates and facesheets to improve their damage tolerance.

Physical Properties on 3K Plain Weave

- *Standard Weight:* 0.070 lbs/ft² (342 g/m²)
- *Standard Resin Content:* 36% by weight
- *Volatile Content:* Less than 5.0%
- *Standard Tack:* Medium
- *Cured Ply Thickness:* 0.008-0.009" (0.203-0.229mm)
- *Other Weights, Resin Contents, and Fabrics are Available.*

Availability

- *Up to 60" width in rolls up to 100 yards long (152 cm x 91 m)*
- *Standard widths: 42" and 50" (107 cm and 127 cm)*

Shelf Life

- *12 months at 0°F (-18°C)*
- *10 days at Room Temperature (70°F or 21°C)*

Cure Cycles

Step Cure as follows:

- *200°F (93°C) for 1 hour followed by 250°F (121°C) for 1 hour followed by 350°F (177°C) for 2 hours (rate of temperature rise = 5°F/minute) (2°C/minute approximately).*



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To enhance the high temperature properties, a post cure may be used:

- 2 hours at 300°F (149°C) followed by 2 hours at 375°F (191°C)
- ❖ L-956 may be bonded into various structures using L-313 high temperature adhesive and L-309 corrosion inhibiting primer. 350°F (177°C) flatwise tension values with L-313 adhesive exceed 950 PSI (6.6 MPa) against 1/8" (3.175 mm) cell aluminum core.
- ❖ Typical construction techniques utilize a layer of fiberglass prepreg such as L-556 for dissimilar metal protection against metallic details or metal honeycomb. In addition a layer of L-556 may be used to provide softening of graphite to metal joints where local loads need to be distributed to avoid local metal overload failure.

Mechanical Data

PROPERTY	LAMINATE PROPERTIES			TEST METHOD
	3K Carbon 8Harness Satin	3K Carbon Plain Weave	145 UD	
TENSILE STRENGTH				
Room Temp.	104 KSI (717 MPa)	71 KSI (483 MPa)	299 KSI (2.1 GPa)	ASTM D638
250°F (121°C)	98 KSI (676 MPa)	68 KSI (469 MPa)	-	ASTM D638
300°F (149°C)	95 KSI (655 MPa)	-	285 KSI (2.0 GPa)	ASTM D638
TENSILE MODULUS				
Room Temp.	9.1 MSI (63 GPa)	9.0 MSI (62 GPa)	18.6 MSI (128 GPa)	ASTM D638
250°F (121°C)	8.7 MSI (60 GPa)	8.7 MSI (60 GPa)	-	ASTM D638
300°F (149°C)	8.0 MSI (55 GPa)	-	17.5 MSI (121 GPa)	ASTM D638
COMPRESSIVE STRENGTH				
Room Temp.	85 KSI (586 MPa)	73 KSI (503 MPa)	184 KSI (1.3 GPa)	ASTM D695
300°F (149°C)	68 KSI (469 MPa)	-	152 KSI (1.0 GPa)	ASTM D695
COMPRESSIVE MODULUS				
Room Temp.	8.6 MSI (59 GPa)	8.6 MSI (59 GPa)	14.5 MSI (100 GPa)	ASTM D695
300°F (149°C)	8.5 MSI (59 GPa)	-	14.1 MSI (97 GPa)	ASTM D695
SHORT BEAM SHEAR				
Room Temp.	9.2 KSI (63 MPa)	-	16.4 KSI (113 MPa)	ASTM D2344
300°F (149°C)	7.6 KSI (52 MPa)	-	9.0 KSI (62 MPa)	ASTM D2344

NOTICE:

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