

L-952

Laminating Graphite Prepreg, High Temperature



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Product Data Sheet

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Description

L-952 is an excellent high temperature modified epoxy prepreg which exhibits outstanding performance at temperatures up to 400°F (204°C). L-952 is ideally suited for applications on light weight advanced aircraft for fairings, inlet ducting, leading edges, control surfaces, pylons, and radomes. L-952 is moisture resistant and has excellent compatibility with other graphite/epoxy systems.

Advantages of L-952

- ❖ L-952 has an excellent balance between toughness, high temperature strength and weatherability.
- ❖ L-952 may be co-cured with many of today's epoxy adhesive systems to form load transfer interfaces.
- ❖ L-952 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 Carbon Plain Weave

- *Standard Weight:* 0.095 lbs/ft² (464 g/m²)
- *Standard Resin Content:* 36% by weight
- *Volatile Content:* Less than 0.5%
- *Standard Tack:* Slightly tacky on one side
- *Cured Ply Thickness:* 0.007" (0.178 mm)
- *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)*

Shelf Life

- *6 months at 40°F (4°C) or below*
- *30 days at Room Temperature (70°F or 21°C)*

Cure Cycles

- *60 minutes at 350°F (177°C)*

Optional Cure Cycles:

- *90 minutes at 300°F (149°C), or*
- *2 hours at 275°F (135°C).*



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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-952 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-552 for dissimilar metal protection against metallic details or metal honeycomb. In addition, a layer of L-552 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		
	85 PSI (0.59 MPa) CURE	VACUUM BAG CURE	TEST METHOD
ULTIMATE TENSILE STRENGTH			
Room Temperature (RT)	78 KSI (538 MPa)	71 KSI (490 MPa)	ASTM D638
250°F (121°C)	75 KSI (517 MPa)	67 KSI (462 MPa)	ASTM D638
350°F (177°C)	72 KSI (497 MPa)	-	ASTM D638
TENSILE MODULUS			
Room Temperature (RT)	10.1 MSI (70 GPa)	9.9 MSI (68 GPa)	ASTM D638
250°F (121°C)	10.0 MSI (69 GPa)	9.7 MSI (67 GPa)	ASTM D638
350°F (177°C)	9.8 MSI (68 GPa)	-	ASTM D638
ULTIMATE COMPRESSION STRENGTH			
Room Temperature (RT)	72 KSI (497 MPa)	67 KSI (462 MPa)	ASTM D695
250°F (121°C)	69 KSI (476 MPa)	-	ASTM D695
350°F (177°C)	59 KSI (407 MPa)	-	ASTM D695
COMPRESSION MODULUS			
Room Temperature (RT)	9.0 MSI (62 GPa)	8.8 MSI (61 GPa)	ASTM D695
250°F (121°C)	9.0 MSI (62 GPa)	-	ASTM D695
350°F (177°C)	8.7 MSI (60 GPa)	-	ASTM D695
ULTIMATE FLEXURAL STRENGTH			
Room Temperature (RT)	105 KSI (724 MPa)	97 KSI (669 MPa)	ASTM D790
250°F (121°C)	96 KSI (662 MPa)	-	ASTM D790
350°F (177°C)	80 KSI (552 MPa)	-	ASTM D790
FLEXURAL MODULUS			
Room Temperature (RT)	9.0 MSI (62 GPa)	8.7 MSI (60 GPa)	ASTM D790
250°F (121°C)	8.4 MSI (58 GPa)	-	ASTM D790
350°F (177°C)	8.1 MSI (56 GPa)	-	ASTM D790

NOTICE:

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