

L-751

Woven Epoxy Laminating Prepreg, Aramid



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Product Data Sheet

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Description

L-751 is a laminating grade, 250°F (121°C) curing woven aramid prepreg which utilizes a 100% solids modified epoxy resin matrix. L-751 is flame retardant per FAR part 25.853 and is suitable for construction of light weight aircraft components such as air conditioning ducts, fairings, door facings, and interior panels. L-751 can be cured over a broad spectrum of times, temperatures, and pressures.

Advantages of L-751

- ❖ The designer is given a high strength to weight ratio to optimize the design of aircraft components.
- ❖ L-751 uses a 100% solids resin system with less than 0.5% volatile content resulting in dense, void free laminates.
- ❖ L-751 has excellent resistance to most fluids encountered in the aerospace environment.
- ❖ L-751 is compatible with many adhesives and prepregs utilized in the aerospace industry today, enabling to be co-cured into final assemblies with ease.

Physical Properties on 285 Aramid Fabric

- *Standard Weight:* 0.072 lbs/ft² (352 g/m²)
- *Standard Resin Content:* 50% by weight
- *Standard Tack:* Slightly tacky on one side
- *Cured Ply Thickness:* 0.010" (0.254 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*
- *7 days at Room Temperature (70°F or 21°C)*



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Cure Cycles

- 20 minutes at 275°F (135°C), or
- 60 minutes at 250°F (121°C), or
- 90 minutes at 235°F (113°C).

Flammability

- Self Extinguishing per FAR part 25.853

Sandwich Properties*

Core: ¼" cell x 0.004" (6.35 mm cell x 0.10 mm) Aluminum Foil

Facings: 2 plies L-751-285 each side

- RT Flatwise Tensile Strength: 710 PSI (4.9 MPa)
 - RT Sandwich Peel Strength: 6 in lb/in (27 Nm/m)
- ❖ *Sandwich peel strength varies with the orientation of the fibers directly against the core and the test direction.
- ❖ Fibers laid up parallel with the test direction produce minimum strengths.
- ❖ Fibers laid up perpendicular to the test direction produce maximum strengths.
- ❖ L-751-285 sandwich peel strength ranges from 5-9 in lb/in (22-40 Nm/m).

Mechanical Data

PROPERTY	LAMINATE PROPERTIES		
	30 PSI (0.24 MPa) CURE	VACUUM BAG CURE	TEST METHOD
ULTIMATE TENSILE STRENGTH			
Room Temperature (RT)	69 KSI (476 MPa)	67 KSI (462 MPa)	ASTM D638
160°F (71°C)	61 KSI (421 MPa)	59 KSI (407 MPa)	ASTM D638
RT(WET)	67 KSI (462 MPa)	64 KSI (441 MPa)	ASTM D638
TENSILE MODULUS			
Room Temperature (RT)	3.9 MSI (27 GPa)	3.8 MSI (26 GPa)	ASTM D638
160°F (71°C)	3.4 MSI (23 GPa)	3.3 MSI (23 GPa)	ASTM D638
RT(WET)	3.7 MSI (26 GPa)	3.6 MSI (25 GPa)	ASTM D638
ULTIMATE COMPRESSION STRENGTH			
Room Temperature (RT)	22 KSI (152 MPa)	21 KSI (145 MPa)	ASTM D695
160°F (71°C)	16 KSI (110 MPa)	15 KSI (103 MPa)	ASTM D695
RT(WET)	21 KSI (145 MPa)	20 KSI (138 MPa)	ASTM D695
COMPRESSION MODULUS			
Room Temperature (RT)	3.0 MSI (21 GPa)	2.9 MSI (20 GPa)	ASTM D695
160°F (71°C)	2.9 MSI (20 GPa)	2.7 MSI (19 GPa)	ASTM D695
RT(WET)	2.9 MSI (20 GPa)	2.7 MSI (19 GPa)	ASTM D695
ULTIMATE FLEXURAL STRENGTH			
Room Temperature (RT)	44 KSI (303 MPa)	42 KSI (290 MPa)	ASTM D790
160°F (71°C)	23 KSI (159 MPa)	21 KSI (145 MPa)	ASTM D790
FLEXURAL MODULUS			
Room Temperature (RT)	3.1 MSI (21 GPa)	3.0 MSI (21 GPa)	ASTM D790
160°F (71°C)	3.0 MSI (21 GPa)	2.9 MSI (20 GPa)	ASTM D790
INTERLAMINAR SHEAR STRENGTH			
Room Temperature (RT)	2.7 KSI (19 MPa)	2.6 KSI (18 MPa)	ASTM D2344

NOTICE:

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