

L-701

Woven Aramid Adhesive Prepreg



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Product Data Sheet

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Description

L-701 is a 250°F (121°C) curing, high peel strength, flame retardant, epoxy prepreg available on aramid fabrics such as 285 style or other styles as requested. L-701 is intended to be used as a single ply or multiple ply skin for aramid/phenolic honeycomb, aluminum honeycomb or PVC foam core sandwich panels.

Advantages of L-701

- ❖ No adhesive is required because of the high peel strength and high toughness of the L-701 resin matrix. L-701 can be bonded directly to a variety of core materials.
- ❖ Easy processing is another major advantage. L-701 can be cured with vacuum bag, press or autoclave type cures from 90 minutes at 235°F (113°C) or in just 40 minutes at 275°F (135°C) with contact pressure (235°F (113°C) cure temperatures are recommended for urethane or PVC core).
- ❖ L-701 is also an excellent laminating prepreg when high impact strength and toughness are required.

Physical Properties on 285 Style Aramid Fabric

- *Standard Weight:* 0.080 lbs/ft² (391 g/m²)
- *Standard Resin Content:* 60% by weight
- *Volatile Content:* Less than 0.5%
- *Standard Tack:* Slightly tacky on one side
- *Cured Ply Thickness:* 0.010" (0.254 mm)
- *Other Weights, Resin Contents, and Fabrics are Available*

Flammability

- *Self Extinguishing per FAR part 25.853*

Availability

- Up to 60" width in rolls up to 100 yards long (152 cm x 91m)

Cure Cycles

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

Shelf Life

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

Sandwich Properties*

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

Facings: 2 plies L-701-285 each side

- *RT Flatwise Tensile Strength:* 800 PSI (5.5 MPa)
- *RT Sandwich Peel Strength:* 8 in lb/in (36 Nm/m)

*Sandwich peel strength varies with the orientation of fibers directly against the core and 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-701-285 sandwich peel strength ranges from 5-10 in lb/in (22-44 Nm/m).

Mechanical Data

PROPERTY	LAMINATE PROPERTIES		
	25 PSI (0.17 MPa) CURE	VACUUM BAG CURE	TEST METHOD
ULTIMATE TENSILE STRENGTH			
Room Temperature (RT)	60 KSI (414 MPa)	54 KSI (372 MPa)	ASTM D638
160°F (71°C)	58 KSI (400 MPa)	-	ASTM D638
RT(WET)	58 KSI (400 MPa)	-	ASTM D638
TENSILE MODULUS			
Room Temperature (RT)	3.5 MSI (24 GPa)	3.3 (23 GPa)	ASTM D638
160°F (71°C)	3.3 MSI (23 GPa)	-	ASTM D638
ULTIMATE COMPRESSION STRENGTH			
Room Temperature (RT)	22 KSI (152 GPa)	20 KSI (138 GPa)	ASTM D695
160°F (71°C)	16 KSI (110 GPa)	-	ASTM D695
RT(WET)	18 KSI (124 GPa)	-	ASTM D695
COMPRESSION MODULUS			
Room Temperature (RT)	3.2 MSI (22 GPa)	3.2 (22 GPa)	ASTM D695
160°F (71°C)	3.1 MSI (21 GPa)	-	ASTM D695
ULTIMATE FLEXURAL STRENGTH			
Room Temperature (RT)	55 KSI (349 MPa)	-	ASTM D790
160°F (71°C)	42 KSI (290 MPa)	-	ASTM D790
FLEXURAL MODULUS			
Room Temperature (RT)	3.2 MSI (22 GPa)	-	ASTM D790
INTERLAMINAR SHEAR STRENGTH			
Room Temperature (RT)	2.2 KSI (15 MPa)	-	ASTM D2344

NOTICE:

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