

L-597

Crushed Core Phenolic Prepreg



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Product Data Sheet

Description

L-597 is a modified phenolic prepreg with low heat release properties designed for fast cure cycles in crushed core processing. L-597 is intended to be used as a single ply or multiple ply skin for aramid/phenolic honeycomb in aircraft interior honeycomb sandwich panels.

Advantages of L-597

- ❖ Creates sandwich panels by using the crushed core processing method for high volume applications requiring fast curing times.
- ❖ The L-597 system processes rapidly in most platen presses. With rapid open and close cycles, cure cycles as short as 10 minutes are possible using L-597.
- ❖ L-597 will allow the designer to create complex structure requiring flexible prepreg, capable of conforming to crushed core tooling.
- ❖ Meets stringent FAR burn requirements.

Physical Properties on 7781 Glass Fabric

- *Standard Weight:* 0.097 lbs/ft² (473 g/m²)
- *Standard Resin Content:* 38% by weight
- *Volatile Content:* 6% nominal
- *Standard Tack:* Low tack
- *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*
- *14 days at room temperature (75°F or 24°C)*

Cure Cycles

- *30 minutes minimum at 275°F (135°C), or*
- *10-12 minutes at 290°F (143°C) Plus.*

Flammability

- *Self Extinguishing per FAR part 25.853.*

Sandwich Properties*

Core: 1/8" (3.2 mm) cell Aramid Phenolic Honeycomb

Adhesive: None

Facings: 2 plies L-597-7781 each side

- *RT Flatwise Tensile Strength:* 140 PSI (0.965 MPa)
- *RT Sandwich Peel Strength:* 4 in lbs/in (18 N/25 mm).

*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.

Mechanical Data

PROPERTY	LAMINATE PROPERTIES	
	50 PSI (0.34 MPa) CURE	TEST METHOD
ULTIMATE TENSILE STRENGTH		
Room Temperature	51,000 PSI (352 MPa)	ASTM D638
160°F (71°C)	49,000 PSI (338 MPa)	ASTM D638
TENSILE MODULUS		
Room Temperature	3.5 MSI (24.1 GPa)	ASTM D638
160°F (71°C)	3.5 MSI (24.1 GPa)	ASTM D638
ULTIMATE COMPRESSION STRENGTH		
Room Temperature	55,000 PSI (379 MPa)	ASTM D695
160°F (71°C)	54,000 PSI (372 MPa)	ASTM D695
COMPRESSION MODULUS		
Room Temperature	3.5 MSI (24.1 GPa)	ASTM D695
160°F (71°C)	3.4 MSI (23.4 GPa)	ASTM D695
ULTIMATE FLEXURAL STRENGTH		
Room Temperature	65,000 PSI (448 MPa)	ASTM D790
160°F (71°C)	61,000 PSI (421 MPa)	ASTM D790
FLEXURAL MODULUS		
Room Temperature	3.5 MSI (24.1 GPa)	ASTM D790
160°F (71°C)	3.3 MSI (22.7 GPa)	ASTM D790

PROPERTY	SANDWICH PROPERTIES	
	CRUSHED CORED PANELS	TEST METHOD
FLATWISE TENSILE	140 PSI (0.96 MPa)	ASTM C297
LONG BEAM FLEXURAL STRENGTH	17,000 PSI (117 MPa)	ASTM C393

NOTICE:

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