

# L-597

## Crushed Core Phenolic Prepreg



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### Product Data Sheet

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#### 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/ft<sup>2</sup> (473 g/m<sup>2</sup>)
- *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 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.

## Mechanical Data

PROPERTY	LAMINATE PROPERTIES	
	50 PSI (0.34 MPa) CURE	TEST METHOD
<b>ULTIMATE TENSILE STRENGTH</b>		
Room Temperature	51,000 PSI (352 MPa)	ASTM D638
160°F (71°C)	49,000 PSI (338 MPa)	ASTM D638
<b>TENSILE MODULUS</b>		
Room Temperature	3.5 MSI (24.1 GPa)	ASTM D638
160°F (71°C)	3.5 MSI (24.1 GPa)	ASTM D638
<b>ULTIMATE COMPRESSION STRENGTH</b>		
Room Temperature	55,000 PSI (379 MPa)	ASTM D695
160°F (71°C)	54,000 PSI (372 MPa)	ASTM D695
<b>COMPRESSION MODULUS</b>		
Room Temperature	3.5 MSI (24.1 GPa)	ASTM D695
160°F (71°C)	3.4 MSI (23.4 GPa)	ASTM D695
<b>ULTIMATE FLEXURAL STRENGTH</b>		
Room Temperature	65,000 PSI (448 MPa)	ASTM D790
160°F (71°C)	61,000 PSI (421 MPa)	ASTM D790
<b>FLEXURAL MODULUS</b>		
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
<b>FLATWISE TENSILE</b>	140 PSI (0.96 MPa)	ASTM C297
<b>LONG BEAM FLEXURAL STRENGTH</b>	17,000 PSI (117 MPa)	ASTM C393

### NOTICE:

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