

L-802

Fiberply Facesheet



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Product Data Sheet

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Description

Fiberply L-802 is a unique facesheet material consisting of cross-plyed carbon prepreg with a fiberglass surface impregnated with flame retardant phenolic resin and comes with our proprietary thin film adhesive for bonding to core materials. Fiberply L-802 is designed as a one sheet facing for honeycomb core where high strength and stiffness are a criteria coupled with the desire to make a panel as light as possible and still meet the stringent burn requirements of today's modern commercial aircraft.

Advantages of Fiberply

- ❖ Superior mechanical properties over fiberglass/phenolic systems used in aircraft interior construction.
- ❖ Improved stiffness by employing carbon fibers with superior flexural modulus.
- ❖ L-802 has been tested and proven superior in panel designs requiring good impact resistance and toughness.
- ❖ Preplied materials reduce the labor content of bonded sandwich panels.
- ❖ L-802 has the highest strength to weight ratio for interior materials requiring damage tolerance to normal aircraft interior abuse such as impact damage from passenger carry-on luggage storage.
- ❖ Less resin is required for unidirectional fibers than is needed for an equivalent woven product thus reducing weight.
- ❖ Lower overall cost because all of the other panel components can be down-sized due to the improved strength and stiffness in the fiberply L-802 facesheet.
- ❖ Over 10 years of service on aircraft in Commercial Airline Service.

Physical Properties

Grade A:

- *Weight:* 0.080 ± 0.005 lbs/ft² (391 ± 24 g/m²)
- *Thickness:* 0.009" (0.229 mm)

Grade B:

- *Weight:* 0.095 ± 0.005 lbs/ft² (464 ± 24 g/m²)
- *Thickness:* 0.010" (0.254 mm)

Grade C:

- *Weight:* 0.125 ± 0.005 lbs/ft² (610 ± 24 g/m²)
- *Thickness:* 0.013" (0.330 mm)

Grade D:

- *Weight:* 0.155 ± 0.005 lbs/ft² (757 ± 24 g/m²)
- *Thickness:* 0.015" (0.381 mm)

Grade E:

- *Weight:* 0.140 ± 0.005 lbs/ft² (684 ± 24 g/m²)
- *Thickness:* 0.014" (0.356 mm)

Other ply build-ups are available.

Availability

- 50" x 122" sheets (127 cm x 310 cm)
- 50" x 147" sheets (127 cm x 373 cm)
- Other sizes are available

Shelf Life

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

Cure Cycle

- 70 minutes at 285°F (141°C) at 45 PSI (0.31 MPa) with degassing bumps for press cures

Typical Applications

- Aircraft Bulkhead Panels
- Aircraft Galley Panels
- Aircraft Lavatory Panels
- Aircraft Closet Modules
- Aircraft Baggage Bins
- Aircraft Ceiling Panels

Mechanical Data

PROPERTY	LAMINATE PROPERTIES			
	L-802, Grade B	3K70P Carbon 1 Ply Facings	7781 Glass 1 Ply Facings	7781 Glass 2 Ply Facings
Facing Weight (lbs/ft ²)	0.095	0.102	0.103	0.196
Facing Weight (g/m ²)	464	498	503	957
Facing Thickness (inches)	0.010	0.010	0.010	0.020
Facing Thickness (mm)	0.254	0.254	0.254	0.254
Aramid Phenolic Honeycomb (in.-lb/ft ³)	0.125-3	0.125-3	0.125-3	0.125-3
Aramid Phenolic Honeycomb (mm-kg/m ³)	3.18-48	3.18-48	3.18-48	3.18-48
Panel Weight (lbs/ft ²)	0.285	0.299	0.301	0.487
Panel Weight (g/m ²)	1392	1460	1470	2378
Panel Thickness (inches)	0.400	0.400	0.400	0.400
Panel Thickness (mm)	10.2	10.2	10.2	10.2
Long Beam Flexure (lbf)	150	118	88	175
Long Beam Flexure (N)	667	525	391	778
Climbing Drum Peel (in-lbs/3 in)	15	15	15	15
Climbing Drum Peel (N/76.2 mm)	67	67	67	67
1" Dia Impact (in-lbs)	125	25	35	75
1" Dia Impact (N)	556	111	156	334
Facing Stress Ultimate (KSI)	38	30	22	22
Facing Stress Ultimate (MPa)	0.26	0.21	0.15	0.15
Facing Modulus (MSI)	10	8	3	3
Facing Modulus (GPa)	69	55	21	21
Insert Pullout (lbf)	250	190	190	275
Insert Pullout (N)	1112	845	845	1223
Insert Bearing (lbf)	275	200	200	300
Insert Bearing (N)	1223	890	890	1334
OSU Burn Average (kW/m ²)	54	59	50	45
OSU Burn Peak (kW/m ²)	48	63	50	45

NOTICE:

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