

LC294 PHENOLIC PREPREG

LC294 is a phenolic prepreg system tailored to specific manufacturing and performance benefits for a variety of aircraft interior applications. LC294 provides extremely low OSU heat release combined with low smoke, self extinguishing, and excellent self adhesive properties and surface finish. LC294 is suitable for both press and bag molding operations.

FEATURES AND BENEFITS

- Self-extinguishing. Meets FAR 25-853 flammability requirements
- Extremely low heat release (30/30)
- Self-adhesive to aramid/phenolic honeycomb
- Superior surface finish

PRODUCT FORMS

- LC294 is available as a woven fabric prepreg in a wide variety of reinforcements including carbon and e-glass.
- Standard fabric prepreg widths: 36", 50", 60"

PHYSICAL PROPERTIES

Fiber Reinforcement Type	7781 E-Glass	6781 E-Glass	3K PW
Fiber Areal Weight (gsm)	301	303	193
Resin Content (% by wt.)	38-45	38-45	40-50
Volatiles (% max)	6	5	7
Cured per Ply Thickness	0.009" (0.23mm)	0.009" (0.23mm)	0.009" (0.23mm)

LAMINATE PROPERTIES

Fiber Reinforcement Type	Units	7781 E-Glass	3K PW
Cure Type for Evaluation		Press	Press
Tensile Strength	Ksi (MPa)	63 (434)	103 (710)
Tensile Modulus	Msi (GPa)	2.9 (20)	8.4 (57)
Compression Strength	Ksi (MPa)		52 (358)
Compression Modulus	Msi (GPa)		7.4 (51)
Flexural Strength	Ksi (MPa)		106 (730)
Flexural Modulus	Msi (GPa)		8.0 (55)
Short Beam Shear Strength	Ksi (MPa)	6.4 (44)	6.4 (44)
Long Beam Flexural Strength	Ksi (MPa)	30 (207)	
Climbing Drum Peel	in - lbs/inch width	5	
Flat Wise Tensile Strength	Ksi (MPa)	185 (1.3)	

Note: Room temperature, dry condition. Values are average and do not constitute a specification.



FLAMMABILITY PROPERTIES: LC294 - 7781

Fiber Reinforcement Type	Units	7781 E-Glass
OSU, Peak Heat Release Rate	kw/m ²	<30
OSU, Total Heat Release Rate	kw/min/m ²	<30
Specific Optimal Density (ASTM E662-96)	Ds	<10

Laminate Thickness	Inches	0.100"
30 Second 45° Ignition		
Extinguish time	seconds	0
Afterglow	seconds	0
Flame Penetration		None
60 Second Vertical Ignition		
Time to Extinguish	seconds	0
Burning Length	inches	2.5
Drip Extinguish time	seconds	No Drip

PROCESS INFORMATION

The following are general recommendations for successful processing. Adjustments may be required to achieve optimum results in your specific manufacturing environment.

Vacuum Bag in Oven Cycle

- Draw vacuum
- 3 - 5°F/min. ramp to 175°F
- Hold at 175°F for 30 min.
- 3 - 5°F/min. ramp to 250°F - 275°F
- Hold at 250°F - 275°F for 60 min.
- Cool to less than 150°F at 3 - 5°F/min.
- Release vacuum and demold

Press Cycle

- Apply 25 - 65 psi
- 250°F - 275°F for 45 - 60 min.
- Bumps no later than 2 min. into cycle, in hot/out hot

Shelf Life	
Room Temperature (77°F)	11 days
10°F or lower	12 months

Quality Certifications - Barrday Composite Solutions is ISO9001 and AS9100 certified.

Note: LC294 Prepreg is wound with a polyethylene film liner for easy release. The rolls are sealed in polyethylene film bags to protect prepreg from moisture and other contaminants. The bags should remain sealed while the prepreg is under refrigeration and only removed when the prepreg has had sufficient time to warm to room temperature. When not in use, the prepreg should be returned to refrigerated storage. Care should be exercised to limit out-time of the prepreg in order to insure maximum shelf life. Torn bags should be replaced. The data presented herein has been developed under controlled manufacturing. No warranty is expressed or implied regarding the accuracy or use of this data or the use of this product. It is the responsibility of the end user to determine suitability for use.

