



# PRODUCT DATA SHEET

LC-E439

Variable Temperature Cure  
Clear Epoxy Carbon Prepreg

### Description

LC-E439 is a single or two side coated, clear epoxy carbon prepreg exhibiting high gloss and clarity with initial cure temperatures at 175°F (79°C) with service temperatures up to 350°F (176°C) upon full post cure.

### Advantages

LC-E439 has excellent tack and drape for ease of layup within complex shapes. A wide variety of cure cycles allow the user to produce parts from low temperature tools with various options of free standing post cures pending service temperature requirements.

### Physical Properties

Density: 1.19 G/cm<sup>3</sup> per ASTM D792  
Gel Time @ 175°F (79°C): 18-23 minutes  
Gel Time @ 250°F (135°C): 4-7 minutes  
Color: Clear  
Tack: High

### Recommended Post Cure

30 minutes @ 300° F (148° C)  
8 hours @ 375° F (190° C)

### Shelf Life/Out Life/Storage

Shelf Life: 2 months from certification date  
Out Life: 3 days @ 70°F (21°C)  
Storage Temp: 0° (-18°C) F

### Processing/Cure Cycle Recommendations

LC-E439 can be processed at temperatures from 175°F (79°C) for 3 hours to 250°F. (121°C) for 60 minutes. A 375°F (190°C) post-cure for 8 hours will provide optimum Tg of 358°F (181° C). Please contact LCM Technical Dept. for further post cure recommendations.

Mechanical Properties				
Property	Tested per Specification	R.T. (75 °F)	R.T. Wet	350 °F
Ultimate Tensile Strength (psi)	FTMS 406	75,000	N/A	71,000
Tensile Modulus (PSI x 10E6)	FTMS 406	8.7	N/A	8.4
Ultimate Compression Strength (psi)	FTMS 406	72,000	N/A	65,000
Compression Modulus (PSI x 10E6)	FTMS 406	8.6	N/A	8.2
Ultimate Flexural Strength (psi)	FTMS 406	90,000	N/A	81,000
Flexural Modulus (PSI x 10E6)	FTMS 406	7.9	N/A	7.5
Horizontal Shear (psi)	FTMS 406	8400	N/A	7900

\*Tests performed using 12 plies LC-E439-C101 @ 39% RC, press cured @ at 250° F (121° C), 25 psi pressure for 60 minutes.

LincolnCompositeMaterials.com

(714) 898-8350

Sales@LCMaterials.com

15422 Electronic Lane

Huntington Beach, CA 92649

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