



# PRODUCT DATA SHEET

LC-E445T

Variable Temperature Cure  
Epoxy Tooling Prepreg

## Description

LC-E445T is a two-side coated, carbon epoxy tooling prepreg designed to provide a high-quality tool surface from a low temperature master mold. LC-E445T is ideal for both 250 °F (121 °C) and 350 °F (177 °C) tooling applications following post cure.

## Advantages

LC-E445T has excellent tack and drape for ease of layup within complex shapes. Low cost master molds can be utilized with the initial cure of 150 °F (65 °C) followed by various post cure options depending on service temperature requirements. LC-E445T is suitable for producing small to large tools.

## Physical Properties

Density: 1.23 G/cm<sup>3</sup> per ASTM D792  
Gel Time @ 250 °F (121 °C): 6-9 minutes  
Color: Black  
Tack: High

## Shelf Life/Out Life/Storage

Shelf Life: 4 months from certification date  
Out Life: 10 days @ 70 °F (21 °C)  
Storage Temp: 0 °F (-18 °C)

## Recommended Cure Cycles

10 hours @ 150 °F (65 °C)  
3 hours @ 175 °F (79 °C)  
90 minutes @ 250 °F (121 °C)

## Recommended Post Cure Cycle

1 hour @ 250 °F (121 °C)  
1 hour @ 325 °F (162 °C)  
8 hours @ 400 °F (204 °C)

## Processing/Cure Cycle Recommendations

LC-E445T can be processed at temperatures from 150 °F (65 °C) up to 400 °F (204 °C). The above recommended post cure will provide optimum T<sub>g</sub> of 384 °F (195 °C).

\*Please contact LCM Technical Dept. for further post cure options.

Mechanical Properties				
Property	Tested per Specification	R.T. (75 °F)	R.T. Wet	350 °F
Ultimate Tensile Strength (psi)	ASTM D3039	79,000	N/A	76,000
Tensile Modulus (PSI x 10E6)	ASTM D3039	8.7	N/A	8.4
Ultimate Compression Strength (psi)	ASTM D695	72,000	N/A	68,000
Compression Modulus (PSI x 10E6)	ASTM D695	8.6	N/A	8.2
Ultimate Flexural Strength (psi)	ASTM D790	90,000	N/A	81,000
Flexural Modulus (PSI x 10E6)	ASTM D790	7.9	N/A	7.5
Interlaminar Shear (psi)	ASTM D2344	8400	N/A	7900

\*RT (75 °F) Tests performed using 15 plies of LC-E445T-C101 @ 39% RC, press cured @ 175 °F (79 °C) for 3 hours followed by 2 hours @ 250 °F (121 °C).

\*350 °F Tests performed using 15 plies of LC-E445T-C101 @ 39% RC, press cured @ 175 °F (79 °C) for 3 hours followed by 90 minutes @ 250 °F (121 °C) and 8 hours @ 400 °F (204 °C).

LincolnCompositeMaterials.com

(714) 898-8350

Sales@LCMaterials.com

15422 Electronic Lane

Huntington Beach, CA 92649

Seller cannot anticipate all conditions under which seller's products, or the products of other manufacturers in combination with seller's products, may be used. Seller accepts no responsibility for results obtained by the application of seller's products or the safety and suitability of seller's products, either alone or in combination with other products. Users are advised to conduct their own tests to determine the safety and suitability of each such product or product combination for their own purposes. Unless otherwise agreed in writing, seller delivers the products without warranty of any nature, stated or implied, and buyers and users assume all responsibility and liability for loss or damage arising from the handling and use of said products, whether used alone or in combination with other products. Purchaser waives any claim against seller for direct, indirect, consequential or exemplary damages against seller, including without limitation, damage which may incur as a result of purchaser's use or misuse of the product or the product's failure to conform to any particular specification.