



## LC196 Phenolic Prepreg

LC196 is an advanced, **snap curing** phenolic prepreg system that is self-adhesive to aramid/phenolic and aluminum honeycomb core. LC196 offers very good and consistent adhesion property values (climbing drum peel strength) over a wide range of cure/laminating conditions. LC196 is self-extinguishing, and meets flammability requirements for use in aircraft interiors.

### Properties of LC196 7781 Glass Fabric

|                                                     |                  |
|-----------------------------------------------------|------------------|
| <b>Flexural Strength, psi</b>                       | <b>90,000</b>    |
| <b>Flexural Modulus, psi</b>                        | <b>3,200,000</b> |
| <b>Tensile Strength, psi</b>                        | <b>73,000</b>    |
| <b>Tensile Modulus, psi</b>                         | <b>3,400,000</b> |
| <b>Compressive Strength, psi</b>                    | <b>70,000</b>    |
| <b>Compressive Modulus, psi</b>                     | <b>4,600,000</b> |
| <b>Short Beam Shear Strength, psi</b>               | <b>4,500</b>     |
| <b>Climbing Drum Peel, in-lbs/inch width</b>        | <b>12 – 16</b>   |
| <b>OSU, Peak Heat Release Rate, kWm</b>             | <b>30 - 38</b>   |
| <b>OSU, Total Heat Release Rate, kWm</b>            | <b>15 - 30</b>   |
| <b>Specific Optical Density, Ds, (ASTM E662-96)</b> | <b>4 – 11</b>    |

Climbing Drum Peel and OSU specimens tested with two plies per side on aramid honeycomb, 0.5" thick, 3.0 pcf, 1/8" cell

Specific Optical Density tested with two plies per side on aramid honeycomb, 0.25" thick, 3.0 pcf, 1/8" cell

### LEWCOTT CORPORATION

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## **Properties of Single ply LC196 7781 on 1/8" thick, 3.0 pcf, 1/8" cell aramid honeycomb**

### **Bare Panel**

|                                                     |           |
|-----------------------------------------------------|-----------|
| <b>OSU, Peak Heat Release Rate, kWm</b>             | <b>39</b> |
| <b>OSU, Total Heat Release Rate, kWm</b>            | <b>37</b> |
| <b>Specific Optical Density, Ds, (ASTM E662-96)</b> | <b>1</b>  |

### **With Decorative**

|                                                     |           |
|-----------------------------------------------------|-----------|
| <b>OSU, Peak Heat Release Rate, kWm</b>             | <b>54</b> |
| <b>OSU, Total Heat Release Rate, kWm</b>            | <b>58</b> |
| <b>Specific Optical Density, Ds, (ASTM E662-96)</b> | <b>79</b> |

### **Climbing Drum Peel**

|                                            |                           |
|--------------------------------------------|---------------------------|
| <b>Crushed, 265°F, 15 minutes</b>          | <b>13 in lbs/in width</b> |
| <b>Molded at 60 psi, 265°F, 15 minutes</b> | <b>12 in lbs/in width</b> |

## **Process Information**

### **Press Molding Lay-up**

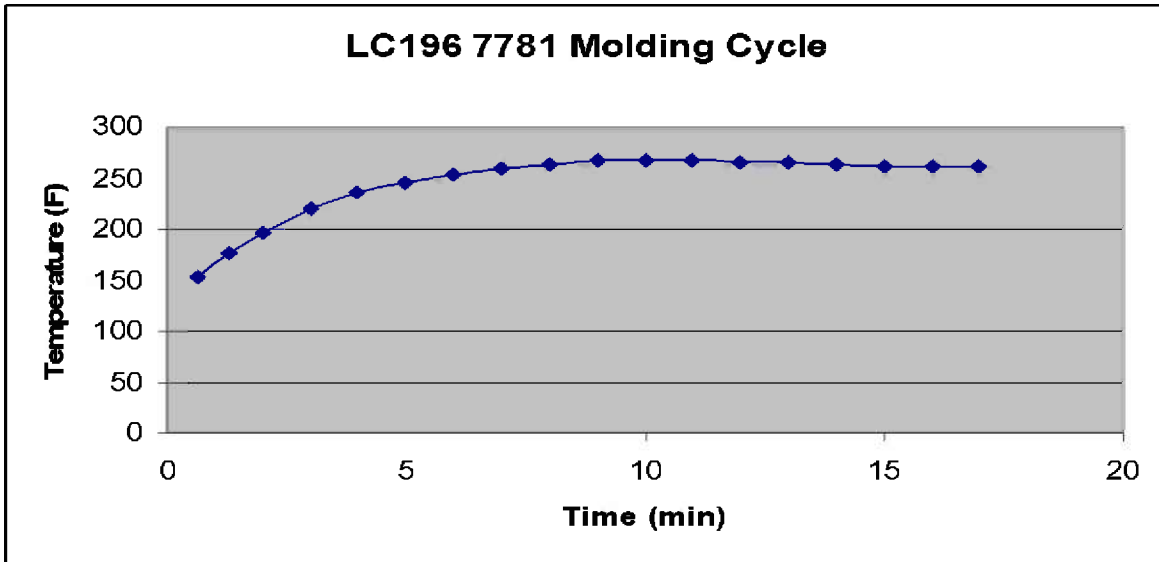
- 5 plies of Kraft paper
- 1/8" thick steel caul plate
- Release film
- 2 plies of LC196-7781
- Nomex honeycomb
- 2 plies of LC196-7781
- Release film
- 1/8" thick steel caul plate
- 5 plies Kraft paper

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## Press Molding Process

- Press Temperature 265°F
- Press Pressure 45 psi
- Bumps 40, 80 and 120 seconds
- Time in press 15 – 17 minutes
- In hot out hot
- Allow the assembly to cool to less than 150°F before breakdown



Temperatures Measured via implanted thermocouple

## Shelf Life Information

|                         |          |
|-------------------------|----------|
| Room Temperature (77°F) | 2 weeks  |
| 0°F                     | 6 months |

**NOTE:** LC196 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 and test conditions and is considered accurate. 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.

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