

**E4-195** is a toughened thermosetting epoxy prepreg resin system designed specifically for a wide range of structural components in automotive, aerospace and industrial applications.

**E4-195** has a good tack and handleability over its 6-week out life. It offers a flexible processing window with cure temperatures ranged from 80 to 160°C.

**E4-195** offers great Tg after suitable cure cycles, a DMA Tg onset over 200°C can be obtained after a standard cure.

**E4-195** prepregs exhibit excellent mechanical performance combined with good impact resistance.

### PRODUCT VARIANTS

**E4-195:** Hotmelt version

### SHELF LIFE



OUT LIFE  
42 days @ 21 °C



STORAGE LIFE  
12 months @ -18 °C

### TYPICAL APPLICATIONS



AUTOMOTIVE



AEROSPACE



INDUSTRIAL

### FEATURES



GOOD TACK AND HANDLEABILITY



FLEXIBLE TEMPERATURE CURE



GREAT Tg DEVELOPMENT



EXCELLENT MECHANICAL PERFORMANCE

NOTE: All technical information contained in this document are given in good faith and are based on tests believed to be reliable, but their accuracy and completeness are not guaranteed. They do not constitute an offer to any person and shall not be deemed to form the basis of any contract. Accordingly, the user shall determine the suitability of the products for their intended use prior to purchase and shall assume all risk and liability in connection therewith. The information contained herein is under constant review and liable to be modified. All products are sold subject to Microtex Composites Srl terms and conditions of sale. Copyright 2020 - Microtex Composites Srl. All rights reserved worldwide. All trademarks or registered trademarks are the property of their respective owners.

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TDS Prepreg E4-195 ENG v2.2



Quality system certified  
**ISO 9001:2015**  
by TUV Italia s.r.l.  
cert. no. 50 100 12429

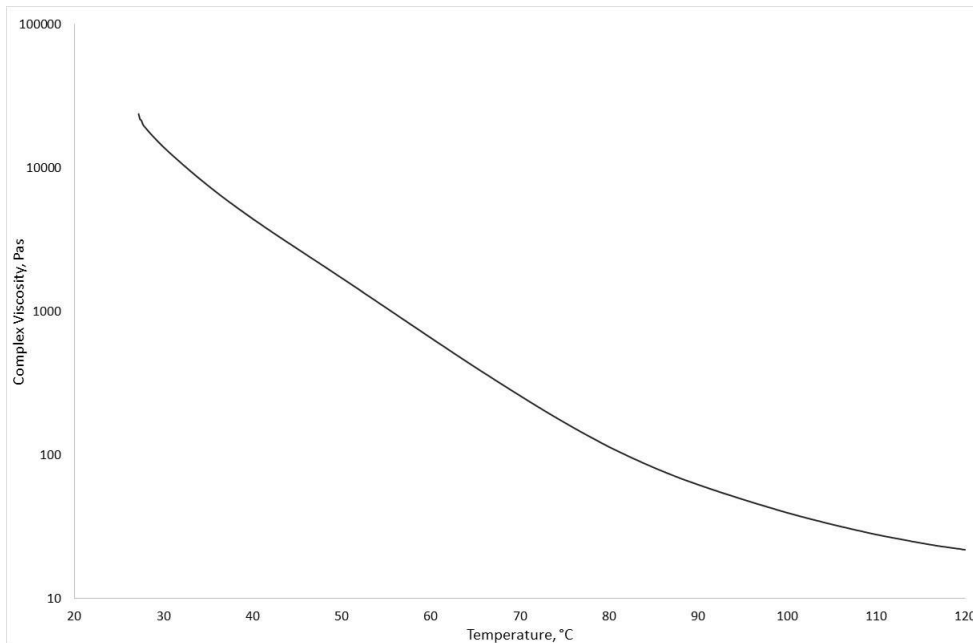


Quality system certified  
**IATF 16949:16**  
by TUV SUD Management Service GmbH  
cert. no. 0447526

## MATRIX PROPERTIES

**Cured resin density @ RT:** (average value) 1.20 g/cm<sup>3</sup>.

**Resin viscosity:** ramp rate = 2 °C/min,  $\nu$  = 10 rad/sec.



## Recommended cure cycle

1. Apply full vacuum (min -0.85bar);
2. Hold vacuum for at least 4 hours before increasing temperature.
3. Heat to 135°C ± 5°C at between 1°C /min and 2°C /min;
4. Hold for 90 minutes;
5. Cool to 60°C at between 1°C /min and 5°C /min;
6. Release pressure.

Above is the suggested standard cure cycle. For advice on bespoke cure cycles for specific components, please consult Microtex Composites technical service.

## THERMAL PROPERTIES

E4-195/GG380T	
Cure cycle	DMA Tg onset /PTD (°C)
90 min @ 135°C	201 / 221
120 min @ 135°C	204 / 221
180 min @ 135°C	206 / 220

## MECHANICAL PROPERTIES

E4-195 - 90 min @ 135 °C, 6 bar		GG380T-40
Property	Test Method	Value*
0° Tensile strength [MPa]	ASTM D3039	1391
0° Tensile modulus [GPa]		86
90° Tensile strength [MPa]	ASTM D3039	1316
90° Tensile modulus [GPa]		73
0° Compressive strength [MPa]	SACMA SRM 1R-94	745
0° Compressive modulus [GPa]	ASTM D6641	55
90° Compressive strength [MPa]	SACMA SRM 1R-94	810
90° Compressive modulus [GPa]	ASTM D6641	66
0° ILSS [MPa]	ASTM D2344	57
In-Plane Shear Strength [MPa]	ASTM D3518	74
0° Flexural strength [MPa]	ASTM D790	1115
0° Flexural modulus [GPa]		70

\* Test conditions: room temperature, dry. Normalized values at 55% VF.

# Carbon fabric 380 gsm twill 2/2 24K T800, RC 38%.

## AVAILABILITY

E4-195 series prepregs are available in a wide range of reinforcing fabrics, including carbon, aramid, glass and special fabrics.

## STORAGE CONDITIONS

This prepreg should be stored as received in a cool dry place or in a refrigerator.

After removal from refrigerated storage, prepreg should be allowed to reach room temperature before opening the polyethylene bag, thus preventing condensation (a full roll in its packaging can take more than 1 day).

## PRECAUTIONS FOR USE

The usual precautions when handling uncured resins and fibrous materials should be observed, and a Safety Data Sheet is available for this product.

SDS Reference Codes: E4-195: SDS-470