

## TF200 PEEK SEMI-PREG

TF200 is a polyetheretherketone (PEEK) fabric semi-preg that processes in the 700-750°F (370-400°C) temperature range. The materials are used in a variety of high performance, structural composite applications. PEEK is a high temperature semi-crystalline polymer with a good combination of toughness, chemical and solvent resistance, low moisture absorption and superior FST properties.

### FEATURES AND BENEFITS

- Superior mechanical properties at a wide range of service temperatures
- No refrigeration; fast cycle times
- Excellent wear resistance and moisture/chemical resistance
- Provides excellent toughness/impact properties, and fire/smoke performance
- Fabric drapeable for contoured parts

### PRODUCT FORMS

TF200 is available as one-sided or two-sided powder coated fabric (up to 86" width) in a variety of reinforcements, including carbon and glass. TF200 can also be made available in pre-consolidated sheet form.

### PHYSICAL PROPERTIES

Fiber Reinforcement Type	AS4 3k 5HS Carbon
Fiber Areal Weight (gsm)	280
Resin Content (% by wt.)	37 - 43
Cured per ply thickness	0.011" (0.3 mm)
Density (g/cm <sup>3</sup> )	1.30

### LAMINATE PROPERTIES

	Units	AS4 3k5HS Carbon
Cure Type for Evaluation		Press
Plain Tensile Strength	Ksi (MPa)	84 (581)
Plain Tensile Modulus	Msi (GPa)	6.7 (46)
Compression Strength	Ksi (MPa)	89 (615)
Compression Modulus	Msi (GPa)	9.6 (66)
In-plane Shear Strength	Ksi (MPa)	16.4 (113)
In-plane Shear Modulus	Msi (GPa)	0.75 (5.2)
Open Hole Tensile Strength	Ksi (MPa)	50 (345)
Open Hole Compression Strength	Ksi (MPa)	37 (258)
Flexural Strength	Ksi (MPa)	133 (917)
Flexural Modulus	Msi (GPa)	6.4 (44)

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

Note: The data presented herein has been developed under controlled manufacturing conditions. 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.



## PROCESS INFORMATION

The following are general recommendations for successful processing. Other consolidation cycles are possible. Temperatures listed are for in-part thermocouple readings. Adjustments may be required to achieve optimum results in your specific manufacturing environment.

### Press Cycle

- Heat part to 725-750°F (385-400°C)
- Increase pressure to 250 psi (17 bar)
- Hold for 30 min.
- Cool to room temp. at 10°F (5°C)/min.
- Do not remove pressure until temp. < 275°F (135°C)

### Autoclave Cycle

- Apply vacuum pressure
- Heat part to 725-750°F (385-400°C)
- Increase pressure to 150 - 250 psi (10 - 17 bar)
- Hold for 30 min.
- Cool to room temp. at 10°F (5°C)/min.
- Do not remove pressure until temp. < 275°F (135°C)

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

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