

## TF300 PEKK SEMI-PREG

TF300 is a polyetherketoneketone (PEKK) fabric semi-preg that processes in the 670-700°F (355-370°C) temperature range. The materials are used in a variety of high performance, structural composite applications. PEKK 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
- Indefinite shelf life; fast cycle times
- Excellent wear and moisture/chemical resistance
- Provides excellent toughness/impact properties, and fire/smoke performance
- Fabric drapeable for contoured parts

### PRODUCT FORMS

- TF300 is available as a two-sided powder coated fabric in a variety of reinforcements, including carbon and glass. TF300 can also be made available in pre-consolidated sheet form.
- Standard fabric semi-preg width: 50"

### PHYSICAL PROPERTIES

Fiber Reinforcement Type	AS4C 3k 5HS Carbon
Fiber Areal Weight (gsm)	280
Resin Content (% by wt.)	40
Per ply thickness	0.012" (0.3 mm)
Tg (DSC)	324°F (162°C)
Density (g/cm <sup>3</sup> )	1.55

Note: Typical physical properties shown. Properties can be modified to different specifications.

### MECHANICAL PROPERTIES

	Units	AS4C 3k 5HS Carbon
Consolidation Type for Evaluation		Press
Tensile Strength	ksi (MPa)	124 (855)
Tensile Modulus	Msi (GPa)	8.4 (57.8)
Compression Strength	ksi (MPa)	103 (711)
Compression Modulus	Msi (GPa)	7.9 (54.5)
Flexural Strength	ksi (MPa)	137 (947)
Flexural Modulus	Msi (GPa)	7.8 (53.8)

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



## 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 700-725°F (370-385°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 700-725°F (370-385°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.

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.



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