TU200
PEEK TAPE

TU200 is a polyetheretherketone (PEEK) fiber-reinforced uni-directional tape that processes in the 700-750°F (370-400°C) temperature range. The prepreg is 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
- Indefinite shelf life; no special storage conditions
- Fast cycle times
- Excellent wear resistance and moisture/chemical resistance
- Provides excellent toughness/impact properties, and fire/smoke performance
- Low void content

PRODUCT FORMS

TU200 is available as a uni-directional tape in a wide variety of reinforcements including carbon, ceramic and S-glass fiber. Resin content, aerial weight and other specifications can be tailored as per customer requirements.

- Uni-directional tape up to 12" (305 mm) wide; slit widths available for automated tape lay-up or fiber placement applications
- Powder coated fabric forms (TF200) are also available

PHYSICAL PROPERTIES

Fiber Reinforcement Type	AS4 / AS4D / IM7 12k	Nextel 610
Fiber Areal Weight (gsm)	145	308
Resin Content (% by wt.)	34	25
Per ply thickness	0.0054" (0.14 mm)	0.0062" (0.16 mm)
Tg (DSC)	289°F (143°C)	289°F (143°C)
Density (g/cm^3)	1.58	2.59

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

MECHANICAL PROPERTIES

	Units	AS4 12k	AS4D 12k	IM7 12k	Nextel 610
Consolidation Type for Evaluation		Press	Press	Press	Press
Tensile Strength (0°)	ksi (MPa)	330 (2,275)	365 (2,424)	387 (2,669)	132 (910)
Tensile Modulus (0°)	Msi (GPa)	19.3 (133)	20.0 (133)	25.3 (174)	26.3 (181)
Tensile Strength (90°)	ksi (MPa)	10.0 (69)	10.0 (69)		
Tensile Modulus (90°)	Msi (GPa)	1.3 (9)	1.4 (10)		
Compression Strength (0°)	ksi (MPa)	190 (1,310)	201 (1,386)		90 (621)
Compression Modulus (0°)	Msi (GPa)	18.9 (126)	18.0 (124)		25.8 (178)
Compression Strength (90°)	ksi (MPa)	29.3 (202)	30.2 (208)		
Compression Modulus (90°)	Msi (GPa)	1.6 (11)	1.6 (11)		
Flexural Strength (0°)	ksi (MPa)		300 (2,068)	281 (1,937)	
Flexural Modulus (0°)	Msi (GPa)		21.0 (145)	24.2 (167)	
Flexural Strength (90°)	ksi (MPa)			25.3 (174)	
Flexural Modulus (90°)	Msi (GPa)			1.4 (10)	
Short Beam Shear Strength (0°)	ksi (MPa)	18.7 (129)	17.2 (119)		

Note: Room temperature dry condition unless otherwise noted. Tensile, compression and flexural values normalized to a fiber volume fraction of 60%. Values are average and do not constitute a specification.

86 Providence Rd.
Millbury, MA 01527
www.barrday.com

75 Moorefield Street
Cambridge, ON N1T 1S2

1450 West Pointe Drive, UnitC
Charlotte, NC 28214

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.

86 Providence Rd.
Millbury, MA 01527
www.barrday.com

75 Moorefield Street
Cambridge, ON N1T 1S2

1450 West Pointe Drive, UnitC
Charlotte, NC 28214