

TU1100 PVDF TAPE

TU1100 is a polyvinylidene fluoride (PVDF) fiber-reinforced uni-directional tape that processes in the 350–400°F (175–200°C) temperature range. The prepreg is designed for oil & gas composite pipe and down-hole applications. PVDF is a semi-crystalline polymer with a good combination of strength, toughness, chemical and solvent resistance.

FEATURES AND BENEFITS

- High thermal stability
- Indefinite shelf life; no special storage conditions
- Excellent chemical and wear resistance
- Low permeability to hydrocarbons
- Flexible tape thickness to optimize lay-up
- Low void content

PRODUCT FORMS

TU1100 is available as a carbon fiber uni-directional tape. 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 applications

PHYSICAL PROPERTIES

Fiber Reinforcement Type	Std. Modulus 12k
Resin Content (% by wt.)	50
Tg (DSC)	-40°F (-40°C)
Density (g/cm ³)	1.78

Note: Material has been produced in thickness ranging from 0.2-0.35mm. Properties can be modified to different specifications.

MECHANICAL PROPERTIES

	Units	AS4D
Cure Type for Evaluation		Press
Tensile Strength (0°)	ksi (MPa)	243 (1,675)
Tensile Modulus (0°)	Msi (GPa)	19.1 (132)
Compression Strength (0°)	ksi (MPa)	79.9 (551)
Compression Modulus (0°)	Msi (GPa)	17.9 (123)
Flexural Strength (0°)	ksi (MPa)	106 (731)
Flexural Modulus (0°)	Msi (GPa)	16.7 (115)
Flexural Strength (90°)	ksi (MPa)	10.3 (71.0)
Flexural Modulus (90°)	Msi (GPa)	0.8 (5.5)
Short Beam Shear Strength (0°)	ksi (MPa)	5.4 (37.2)
In Plane Shear Strength	ksi (MPa)	12.1 (83.4)

Note: Room temperature dry condition. 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.

