



PMT-F6

Description

PMT-F6 is a toughened cyanate ester resin system designed for high performance space and aerospace applications. The resin can be impregnated into numerous reinforcements and imparts a medium/dry tack.

Resin Properties

Property	Value
Density	1.19 g/cm ³
Outgassing (TML)	0.18%
Outgassing (VCM)	0.00%
Water absorption	< 1.2%
Dielectric Constant @ 3GHz	Dk/Df= 2.75/0.003
Toughness Kic	0.75 in-lb/in ²

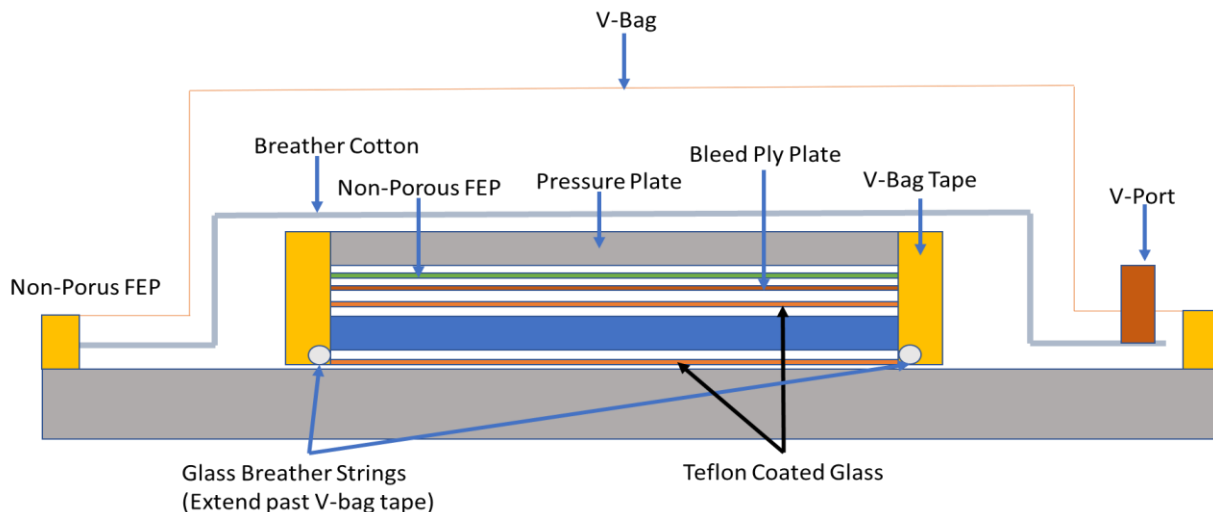
Property	Value
Tg , standard cure	396 °F
Tg, 400°F Post Cure	435 °F
Tension Strength	8.23 Ksi
Tension Modulus	0.56 Msi
Compression Strength	21.5 Ksi
Compression Modulus	0.66 Msi

Storage

PMT-F6 should be stored in a desiccated sealed bag. PMT-F6 has a storage life of 1 year when stored at 10°F and a handling life of 30 days when stored at 70°F or below.

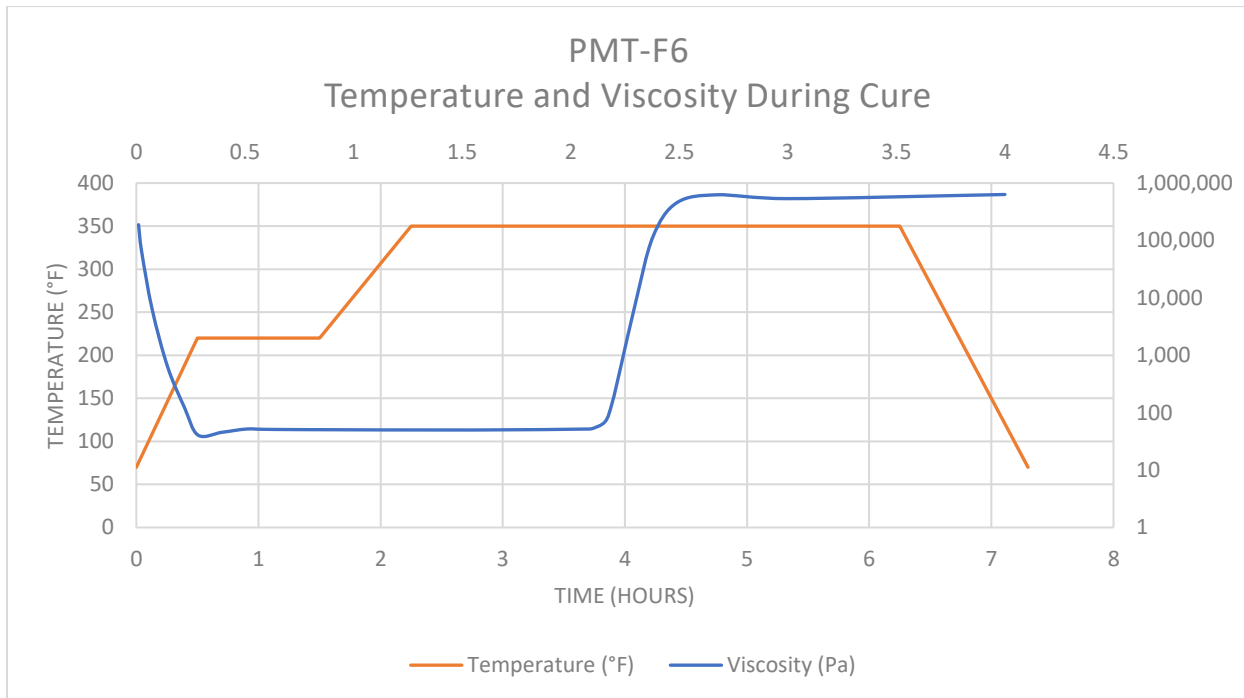
Recommended Bagging Procedure

PMT-F6 requires heat and pressure for consolidation. There are many different layup and cure procedures that will yield successful structures. As a base line PMT recommends using the following bagging sequence.





Cure Cycle



- Stage 1 – Ramp 5°F/min to 220°F under vacuum bag pressure.
- Stage 2 – Switch to 80 psi autoclave pressure then dwell 220°F for 0.5 hours
- Stage 3 – Ramp 5°F/ min to 350°F
- Stage 4 – Dwell at 350°F for 4 hours
- Stage 5 – Ramp 5°F/ min to RT and remove pressure

Lamina Mechanical Properties

Property*	ASTM Test Method	PMT-F6/M55J UDP	PMT-F6/HM63 UDP	PMT-F6/IM7 UDP
0° Tensile Strength, Ksi	D3039	308.7	414.8	361.8
0° Tensile Modulus, Msi	D3039	49.8	43.4	25.2
90° Tensile Strength, Ksi	D3039	4.44	4.52	6.67
90° Tensile Modulus, Msi	D3039	1.22	1.18	1.36
0° Compression Strength, Ksi	D6641	131.9	154.8	208.3
0° Compression Modulus, Msi	D6641	51.3	33.4	23.2
Short Beam Shear Strength, Ksi	D2344	10.8	12.4	14.7