



High Modulus Carbon Flex Core

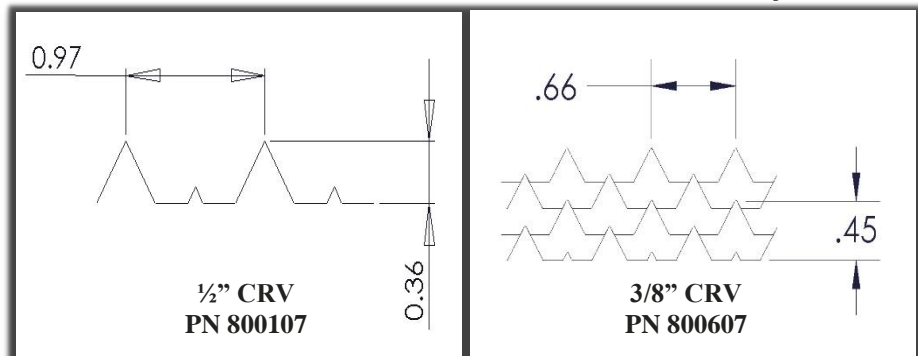
PMT-F7C/YSH50A-75, 1/2"CRV & 3/8"CRV

PMT Part No. 800107 & 800607

A cellular core material for high performance structures.

This high-strength, low-density cellular-core utilizes style - YSH50A-75 carbon fiber fabric and PMT's F7C epoxy resin system. Designed for use in space-based reflectors, where mass, CTE, modulus, and temperature performance are all critical factors. It features gas-permeable cell-walls for applications that require venting or pressure-equalization. The unique geometry of the cell allows the material to conform to complex shapes with far less splicing. The interlocking design makes it possible to create seamless installations (No potted seams) simply by bonding individual panels together node-to-node. With an impressive strength to weight ratio, low outgassing, and inherent gas-permeability, High Modulus Carbon Flex Core is an ideal solution for space-based structures of any shape. It features PMT's flexible 1/2"CRV or 3/8"CRV cell geometries and has a nominal density of 2.0lbs/ft³ and 3.2lbs/ft³ respectively.

Size Chart and Geometry



STRENGTH

The unique manufacturing process allows for high strength and modulus at low densities.

RESILIENCE

The carbon fiber and epoxy combination resists moisture creating a stable structure in harsh environments.

FORMABILITY

The unique cellular geometry allows **High Modulus Carbon Flex Core** to conform to curved surfaces

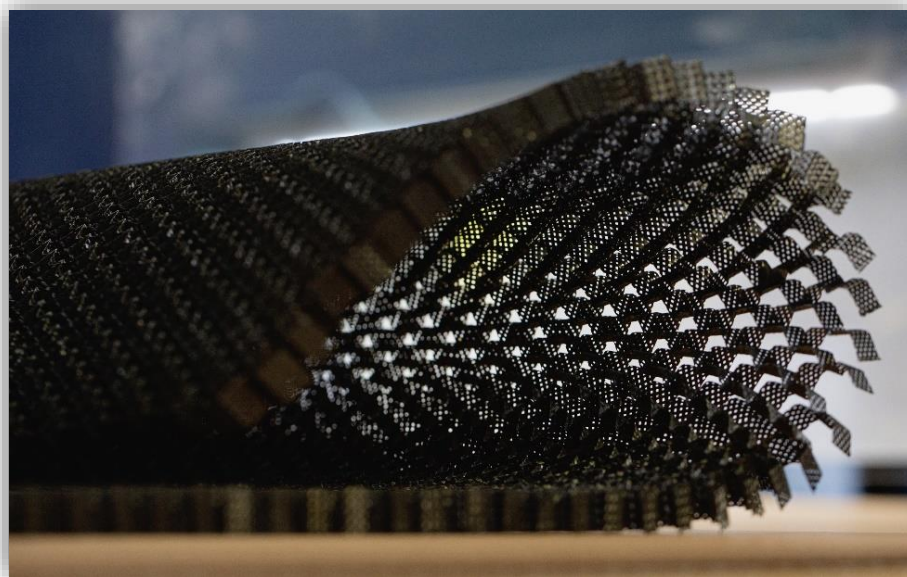
Sheet Dimensions	Minimum (in)	Maximum (in)	Tolerance (in)
Thickness (T)	0.125	18	0.005
Length (L)	12	96	0.5
Width (W)	12	48	0.5

Mechanical Properties

Examination or Test	Typical Result, 2lb** PN 800107	Typical Result, 3lb** PN 800607	Test Method
Density	2.0 lb/ft ³	3.2 lb/ft ³	ASTM C271
Glass Transition Temperature (DMA Tg)	356°F	356°F	ASTM D7028
Compression Strength*	180 psi	275 psi	ASTM C365
Shear Strength*			
L-Direction	145 psi	210 psi	ASTM C 273
W-Direction	145 psi	170 psi	
Shear Modulus*			
L-Direction	25.0 ksi	40.0 ksi	ASTM C 273
W-Direction	14.0 ksi	20.0 ksi	
Max. Radius of Curvature*	3 inches	3 inches	NA

* Tested at 0.25-inch thickness

**Properties are nominal and may differ for specific lots



Manufactured by **Patz Materials and Technologies**
For custom orders contact Orders@PatzMandT.com