PMT TECHNICAL DATA SHEET

PMT-FormX

Commercial Bulk Molding Compound

Description:

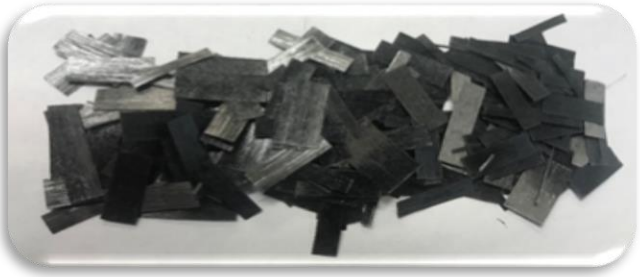
PMT-FormX is a family of molding compounds designed to rapidly produce complex composite structures with high performance properties. The systems consist of a low tack resin impregnated into high performance carbon fiber. The prepreg is slit and chopped into narrow ribbons to create the molding compound.

Applications:

PMT-FormX can be used to replace metal structures or inserted into applications designed specifically around the unique properties that can be obtained. The system works well for large volume complex parts that would be challenging to manufacture using standard layup techniques.

Material Processing:

Molding compounds can be processed in a multitude of ways. The simplest form of processing uses heat to reduce the viscosity of the material and then pressure to force the fiber and resin to flow evenly into a cavity.



PMT-FormX consists of continuous prepreg slit and chopped into a randomly distributed array of material. The molding compound is preformed into a charge of specific shape and weight.

The charge is placed into a metal, closed cavity tool to apply heat and pressure. After cure the part is ejected from the tool without reducing the tool temperature.

The ejected part can consist of complex geometries that would be impossible to manufacture using continuous fiber processes.

Threaded inserts can be co molded into the parts negating the need for secondary machining operations.

Material Systems and Properties:

	PMT-FormX
Resin	**PMT-F1M**
Fiber	**IM7**
Cured Density(g/cc)	**1.56**
Tg (°C) Dry	**160**
Tg (°C) Wet	**115**
Tensile Strength (Ksi)	**48**
Tensile Modulus (Msi)	**12.2**
SBS (Ksi)	**8.5**
Compression Strength (Ksi)	**38.1**
Compression Modulus (Msi)	**10**
#2-56 Bolt pull out strength (lbf)	**NA**
CTE-z- (um/mF)	**35.4**
CTE-x,y- (um/mF)	**1**
Cure Temperature (°C)	**150**
Cure Time (Min)	**10**

Storage:

PMT-FormX has a storage life of 1 year when stored at 0^{o}F and a handling life of 30 days when stored at 75^{o}F.