MS-4A

280° F Cure Standard Modulus Compression Molding System

MS-4A is a carbon fiber/epoxy resin compression molding system based on standard modulus carbon fiber. MS-4A compression molding compound affords economical processing while providing good strength, stiffness, and moldability. MS-4A is available in fiber lengths ranging from ¼inch to 2 inch for custom applications.

TYPICAL MS-4A PROCESS PARAMETERS

- Pre-weigh the desired amount of molding compound.
- Pre-heat molding compound in 160° F ± 10° F oven for 10 minutes. Form mold charge to approximately fit cavity. Charge cavity with molding compound.
- Cure temperature: 280° F - 310° F, pinch pressure: 250 psi for 15 – 30 seconds. Close mold to 2000 psi, hold 30 minutes.

MS-4A AMBIENT/DRY MECHANICAL PROPERTIES

*Property**	*ASTM Method*	*Coupon Form*	*Avg. Value*
Tensile Strength (ksi)	D 3039	Net Molded	45
Tensile Modulus (msi)	D 3039	Net Molded	9
Compressive Strength (ksi)	D 3410	Net Molded	52
Compressive Modulus (msi)	D 3410	Net Molded	8
Flexural Strength (ksi)	D 790	Net Molded	93
Flexural Modulus (msi)	D 790	Net Molded	7
Notched Shear Strength (ksi)	D 5370	Machined	22
Notched Shear Modulus (msi)	D 5370	Machined	2
Bolt Bearing Str. (ksi) [Single Shear]	D 5961	Machined	141

* All properties normalized to 52% fiber volume.

MS-4A PHYSICAL PROPERTIES

Property	*Test Method*	*Average Value*
Fiber Length (inches)	N/A	1
Density (g/cm^3)		1.45 – 1.49
Thermal Expansion X,Y (ppm/°F)		3.5 – 4.5
Tg (° F), Post Cured @ 350° F	DSC	327

Actual molding technique and conditions, fiber length, and part geometry will affect properties obtained.

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