



Toray Composite Materials America, Inc.

# M55J

## HIGH MODULUS CARBON FIBER

M55J carbon fiber is an MJ-type high modulus fiber with enhanced tensile and compressive strength as compared to M series fibers. Manufactured in Japan.

### PRODUCT DESIGNATION

M55J	B	6,000	5	0	B
Fiber Type	Twist*	Filament Count	Sizing Type	Surface Treatment	Sizing Amount

\* B: Untwisted

### FIBER PROPERTIES

PROPERTY	ENGLISH	METRIC	METHOD
Tensile Strength	583 ksi	4,020 MPa	TY-030B-01
Tensile Modulus	78.2 Msi	540 GPa	TY-030B-01
Strain at Failure		0.8%	TY-030B-01
Density		1.91 g/cm <sup>3</sup>	TY-030B-02
Filament Diameter		5 μm	
Yield	6K	218 g/1000m	TY-030B-03

### FUNCTIONAL PROPERTIES

PROPERTY	VALUE
CTE	-1.1 α · 10 <sup>-6</sup> /°C
Specific Heat	0.732 J/g · °C
Thermal Conductivity	1.556 J/(cm·s·°C)
Electric Resistivity	0.8 x 10 <sup>-3</sup> Ω·cm
Chemical Composition: Carbon	>99%
Na + K	<50 ppm

### RESIN SYSTEM COMPATIBILITY

SIZING TYPE & AMOUNT	RESIN SYSTEM COMPATIBILITY	METHOD
50B (1.0%)	Epoxy, phenolic, polyester, vinyl ester	TY-030B-05

### COMPOSITE PROPERTIES

PROPERTY	ENGLISH	METRIC	METHOD
Tensile Strength*	293 ksi	2,020 MPa	ASTM D-3039
Tensile Modulus*	49 Msi	338 GPa	ASTM D-3039
Tensile Strain		0.61%	ASTM D-3039
Compressive Strength*	129 ksi	890 MPa	SACMASRM1R-94
Flexural Strength*	171 ksi	1,180 MPa	ASTM D-790
Flexural Modulus*	40 Msi	274 GPa	ASTM D-790
ILSS	11 ksi	73.2 MPa	SACMASRM1R-94
In Plain Shear Strength	10 ksi	68 MPa	ASTM D-3518
90° Tensile Strength	5 ksi	37 MPa	ASTM D-3039

\*Normalized to 60% fiber volume. Cured with #2500 epoxy at 130 °C.

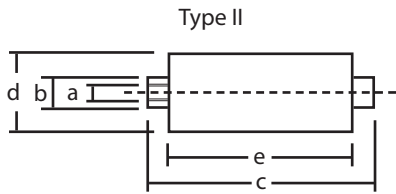


**PACKAGING**

The table below summarizes the tow sizes, twists, sizing types, and packaging available for standard material. Other bobbin sizes may be available on a limited basis.

TOW SIZES	BOBBIN NET WEIGHT (kg)	BOBBIN TYPE	BOBBIN SIZE (mm)					SPOOL PER CASE	CASE NET WEIGHT (kg)
			a	b	c	d	e		
6K	0.5	II	76	82	192	107	156	24	12

**Bobbin Type:**



Please refer to SDS for handling and disposal.

**For more information or purchasing inquiries:**  
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