

# M35J DATA SHEET

MJ type high modulus fiber with enhanced tensile and compressive strength over M series fibers. Mainly used for sporting goods products.

## FIBER PROPERTIES

		English	Metric	Test Method
Tensile Strength		683 ksi	4,700 MPa	TY-030B-01
Tensile Modulus		49.8 Msi	343 GPa	TY-030B-01
Strain		1.4 %	1.4 %	TY-030B-01
Density		0.063 lbs/in <sup>3</sup>	1.75 g/cm <sup>3</sup>	TY-030B-02
Filament Diameter		2.0E-04 in.	5 μm	
Yield	6K	6,620 ft/lbs	225 g/1000m	TY-030B-03
	12K	3,310 ft/lbs	450 g/1000m	TY-030B-03
Sizing Type & Amount	50B		1.0 %	TY-030B-05
	Twist	Untwisted		

## FUNCTIONAL PROPERTIES

CTE	-0.73 $\alpha \cdot 10^{-6}/^{\circ}\text{C}$
Specific Heat	0.17 Cal/g $\cdot^{\circ}\text{C}$
Thermal Conductivity	0.0933 Cal/cm $\cdot\text{s}\cdot^{\circ}\text{C}$
Electric Resistivity	1.1 $\times 10^{-3} \Omega \cdot \text{cm}$
Chemical Composition: Carbon	>99 %
Na + K	<50 ppm

## COMPOSITE PROPERTIES \*

Tensile Strength	360 ksi	2,450 MPa	ASTM D-3039
Tensile Modulus	30.0 Msi	205 GPa	ASTM D-3039
Tensile Strain	1.1 %	1.1 %	ASTM D-3039
Compressive Strength	185 ksi	1,270 MPa	ASTM D-695
Flexural Strength	220 ksi	1,520 MPa	ASTM D-790
Flexural Modulus	26.5 Msi	180 GPa	ASTM D-790
ILSS	13 ksi	9 kgf/mm <sup>2</sup>	ASTM D-2344
90° Tensile Strength	7.0 ksi	49 MPa	ASTM D-3039

\* Toray 250°F Epoxy Resin. Normalized to 60% fiber volume.

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## COMPOSITE PROPERTIES \* \*

Tensile Strength	360 ksi	2,450 MPa	ASTM D-3039
Tensile Modulus	30.0 Msi	205 GPa	ASTM D-3039
Tensile Strain	1.1 %	1.1 %	ASTM D-3039
Compressive Strength	185 ksi	1,275 MPa	ASTM D-695
Compressive Modulus	--- Msi	--- GPa	ASTM D-695
In-Plane Shear Strength	--- ksi	--- MPa	ASTM D-3518
ILSS	--- ksi	--- kgf/mm <sup>2</sup>	ASTM D-2344
90° Tensile Strength	7.0 ksi	50 MPa	ASTM D-3039

\*\* Toray Semi-Toughened 350°F Epoxy Resin. Normalized to 60% fiber volume.

See Section 4 for Safety & Handling information. The above properties do not constitute any warranty or guarantee of values.

These values are for material selection purposes only. For applications requiring guaranteed values, contact our sales and technical team to establish a material specification document.

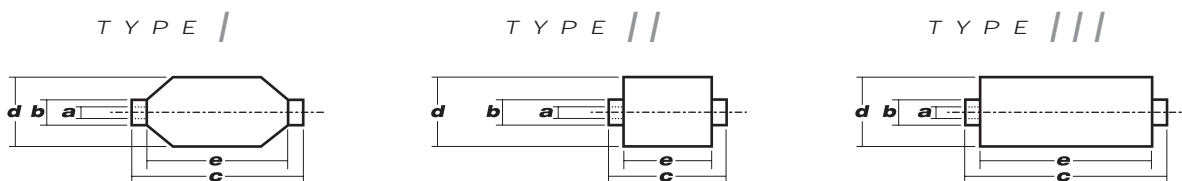
## PACKAGING

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	Twist <sup>1</sup>	Sizing	Bobbin Net Weight (kg)	Bobbin Type <sup>2</sup>	Bobbin Size (mm)					Spools per Case	Case Net Weight (kg)
					a	b	c	d	e		
6K	B	50B	1.0	//	76	82	192	126	156	16	16
12K	B	50B	2.0	//	76	82	192	157	156	12	24

<sup>1</sup> **Twist** A: Twisted yarn B: Untwisted yarn made from a twisted yarn through an untwisting process C: Never twisted yarn

<sup>2</sup> **Bobbin Type** See Diagram below



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