

Tenax[®] - J HTS40 A23 12K 1420tex MC

HTS40 MC is a Nickel-Coated, high strength carbon fiber which combines the excellent mechanical properties of carbon fiber with the electrical conductivity of Nickel. Applications include conductive composites used for EMI shielding and lightning strike protection for aircraft. An organic size is applied to aid in handling.

Typical Fiber Properties	Inch-Pound	SI
Tensile strength*	400 ksi	2760 MPa
Tensile modulus*	31.2 Msi	215 GPa
Elongation*	1.28%	
Density with Ni	0.098 lb/in ³	2.7 g/cm ³
Linear density without sizing	345 yd/lb	1437 tex (g/km)
Sizing level w/w	A23 (A203)	1.25%
<u>Yarn / Tow Characteristics</u>		
Nominal filament diameter	7.5 x 10 ⁻⁶ m including Nickel layer approx 0.25µm thick, corresponding to 44% w/w Nickel.	
Twist	Never Twisted	
Specific resistivity	1 x 10 ⁻⁴ Ω-cm (Typical)	
Equivalent Yarn Cross Section	8.22 x 10 ⁻⁴ in ² (0.530 mm ²) Nominal	

* Toho Tenax Impregnated Strand Test Method. Based on JIS R7601

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RECOMMENDED STORAGE AND SHELF LIFE

A. HTS Carbon Fiber Properties

Filament tensile strength, modulus of elasticity, coefficient of expansion, electric and thermal conductivities and yield are inherent properties of the HTS fiber and have indefinite shelf life.

B. HTS Carbon Fiber Processing

The product should be stored indoors. The recommended storage conditions are 40°F-77°F (5°C-25°C) and less than 50 percent RH. Direct exposure to sunlight or rain should be avoided. The shrink wrap should not be removed until immediately prior to use.

If the roving is stored at high temperatures and/or high humidity conditions, it may become difficult to process. Roving that stiffens during storage should still be useable. However, a thorough evaluation of the processing characteristics (e.g., resin wet out, spreadability) relative to the customer's operation is strongly recommended.

STANDARD PACKAGING AND SPOOL BUILD

Spool designation	"Z"	
	Inch-Pound	Metric
Net Weight	1.1 lb	(0.5 kg)
Tube Length	11.0 in	(27.9 cm)
Tube I.D.	3.0 in	(7.6 cm)
Tube weight	6.0 oz	(170g)
Stroke	10.0 in	(25.4 cm)
Outside dia. (OD)	Varies	
Pallet Type	Carton	
Nominal length	Non-metered	
No. spools per carton	24	
Carton weight	Varies	
Carton dimensions (LxWxH)	24.8 x 20.1 x 11.6 in	63 x 51 x 29.5 cm
Pallet dimensions (LxWxH)	40.6 x 50.8 x 41.5 in	103x129x105 cm
Approx. Pallet weight	Varies	

Notes:

- "Z" spool is standard. These are not metered and the average weight will be less than 1.1 lb (0.5 kg)
- 12-14 cartons per pallet. Height of pallet not included in dimensions. The pallet size may be changed without notice.

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