

TENAX® G30-500 12K HTS-7C

Tenax® G30-500 is a family of high strength carbon fibers for use as reinforcement in high performance composites. These fibers are produced from poly-[acrylonitrile] (PAN) precursor and are surface treated to promote adhesion to organic matrix polymers. Sizing materials are designed to aid in handling.

Typical Fiber Properties (Lot Average)		Inch-Pound	SI
Tensile strength*	Non-EP01	640 x 10 ³ psi	4,400 MPa
	EP01	600 x 10 ³ psi	4,135 MPa
Tensile modulus*		34.0 x 10 ⁶ psi	234 GPa
Elongation*	Non-EP01	1.90 %	1.90 %
	EP01	1.76 %	1.76 %
Density	Non-EP01 EP01	0.063 lb/in ³	1.75 g/cm ³
Linear density with sizing	EP03		810 tex 0.81 g/m
Yield with sizing	EP03	612 yd/lb	1,235 m/kg
Sizing level w/w	- Type EP03/EP01	1.3 %	1.3 %
	- Type F202	0.9 %	0.9 %
	- Type NS01 [§]	None	None
<u>Yarn / Tow Characteristics</u>			
Filament Diameter		7.0 x 10 ⁻⁶ m	
Twist		Never Twisted	
Equivalent Yarn Cross Section		7.04 x 10 ⁻⁴ in ² (0.455 mm ²) Nominal	
For Technical Assistance Contact		Toho Tenax America, Inc. 18552 MacArthur Boulevard, Suite 325 Irvine, CA 92612-1232, USA (949) 474-3278 Ext 25	

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

§ Unsized fiber only made to special order. Please consult your sales representative.

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RECOMMENDED STORAGE AND SHELF LIFE

A. HTA Carbon Fiber Properties

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

B. HTA Carbon Fiber Processing

Typically, the original processing characteristics of HTA EP01 and EP03 sized yarn will be essentially constant for at least one year from date of delivery. 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	A	B	H
Net Weight (lb)	2.2	4.41	8.82
Tube Length (in)	11	11	11
Tube I.D. (in)	3	3	3
Tube weight (oz)	6	6	6
Stroke (in)	10	10	10
External dia. (in)	4.75 ±0.2	5 ±0.25	6.4 ±0.3

"B" spool is standard for all except EP03 where "H" is standard. Other spool sizes may be available to special order. Please consult your sales representative.

Spool designation	A	B	H
Nominal length (yd)	1,390	2,790	5,550
No. spools per carton	20	12	6
Carton weight (lb)	44.1	52.9	52.9
Carton dimensions (in)	24.8 x 20.1 x 11.6 (H)	24.8 x 20.1 x 11.6 (H)	21.7 x 14.6 x 11.6 (H)
Pallet dimensions (in)	40.6 x 50.8 x 41.5 (H)	40.6 x 50.8 x 41.5 (H)	44.9 x 31.9 x 37.2 (H)
Approx. Pallet weight (lb)	529	635	635

12-14 cartons per pallet. Height of pallet not included in dimensions. The pallet size may be changed without notice.

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