

**STS 24K F301**

**Tenax® STS 24K F301** is a high strength carbon fiber for use in today's most demanding applications, particularly where cost performance is paramount. This is not an aerospace grade, and Toho Tenax reserves the right upgrade manufacturing processes/sites and raw materials without notice, in compliance with our approach on continuous product improvement. The fiber is produced from poly[acrylonitrile] (PAN) precursor and is surface treated to promote adhesion to organic matrix polymers. The sizing materials are designed to aid in handling.

"Tenax-J" - Made in Japan

"Tenax-E" - Made in Germany

Typical Fiber Properties (Lot Average)		Inch-Pound	SI
Tensile strength*		590 x 10 <sup>3</sup> psi	4,070 MPa
Tensile modulus*		34.9 x 10 <sup>6</sup> psi	240 GPa
Elongation*		1.7 %	1.7 %
Density		0.063 lb/in <sup>3</sup>	1.75 g/cm <sup>3</sup>
Linear density with sizing	F301		1,600 tex 1.6 g/m
Yield with sizing	F301	310 yd/lb	625 m/kg
Sizing level w/w	F301	1.0 %	1.0 %
<b>Yarn / Tow Characteristics</b>			
Filament Diameter		7 x 10 <sup>-6</sup> m	
Twist		Never Twisted	
Equivalent Yarn Cross Section		13.85 x 10 <sup>-4</sup> in <sup>2</sup> (0.89 mm <sup>2</sup> ) 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 or DIN 29965

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RECOMMENDED STORAGE AND SHELF LIFE

A. STS Carbon Fiber Properties

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

B. STS Carbon Fiber Processing

Typically, the original processing characteristics of the 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	B	H	M
Net Weight (lb)	4.41	8.82	13.25
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)	5 ±0.2	6.4 ±0.3	7.6 ±0.3

"H" spool is standard for STS 24k. Other spool sizes may be available to special order. Please consult your sales representative.

Spool designation	B	H	M
Nominal length (yd)	1,370	2,735	4,100
No. spools per carton	12	6	6
Carton weight (lb)	52.9	52.9	52.9
Carton dimensions (in)	24.8 x 20.1 x 11.6 (H)	21.7 x 14.6 x 11.6 (H)	24.8 x 20.1 x 11.6 (H)
Pallet dimensions (in)	40.6 x 50.8 x 41.5 (H)	44.9 x 31.9 x 37.2 (H)	40.6 x 50.8 x 41.5 (H)
Approx. Pallet weight (lb)	635	635	955

Height of pallet included in dimensions. The pallet size may be changed without notice. Standard full pallet contains 12 cartons, 14 cartons per pallet is maximum.

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