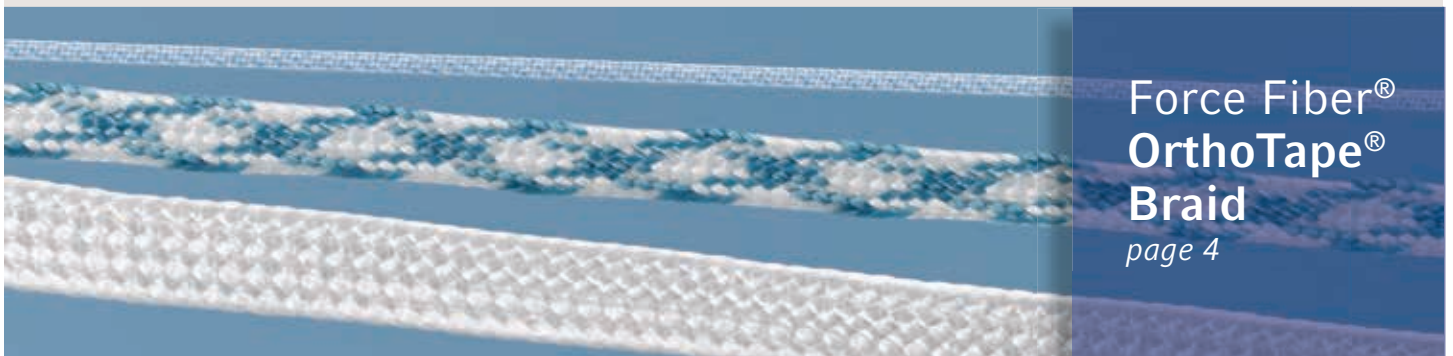
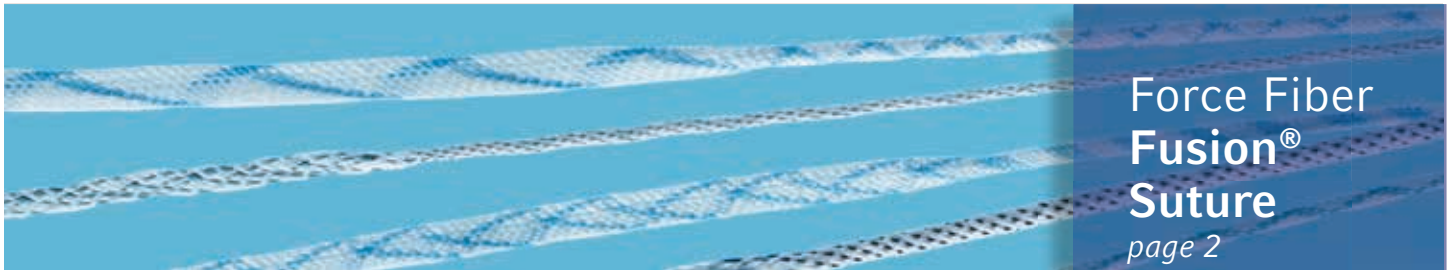


# Force Fiber<sup>®</sup> Sutures and Braids

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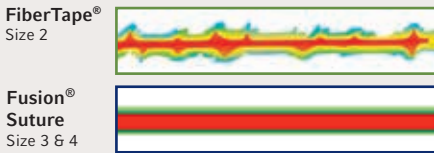
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*Work With The Experts*<sup>™</sup>



# Force Fiber Fusion® Suture

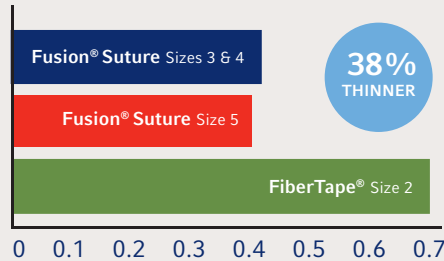
## PRESSURE DISTRIBUTION



The color changes indicate different pressure points measured in pounds per square inch (PSI).

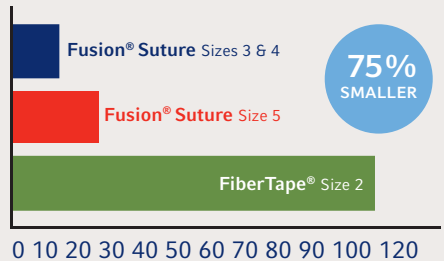
Force Fiber Fusion® Suture has a broad footprint with a more uniform pressure distribution compared to competitor's product.\*

## TAPE HEIGHT (MM)



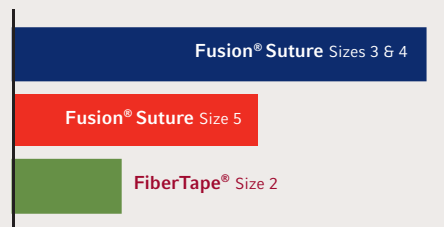
Force Fiber Fusion® Suture has a lower profile than competitor's product.\*

## KNOT PROFILE (MM)



Force Fiber Fusion® Suture has a smaller knot profile than competitor's product.\*

## PLIABILITY



Less Pliable More Pliable

Survey results indicate Force Fiber Fusion® Suture is more pliable than competitor's product.\*\*\*

## INGENIOUS SUTURE WITH OUTSTANDING PROPERTIES

- Fusion® Suture combines the performance characteristics of Force Fiber® Suture and Force Fiber® OrthoTape® Braid into a single strand.
- Fusion® Suture is braided using a proprietary, continuous process for seamless transitions from round suture to flat braid and back to round suture.
- Don't confuse Force Fiber Fusion® Suture with look-alike products that are simply a flat segment "sewn" onto two round sutures.
- Fusion® Suture has a broader footprint and more uniform distribution of pressure compared to similar sutures\*. This may reduce tissue strangulation and a "cutting effect" in applications where tissue pull-through may be concern.
- Lower knot profile than similar sized suture. Force Fiber Fusion® Suture's average knot height is 1/4 the size of similar suture.
- The height of Fusion® Suture's flat section is 38% thinner than similar products.

## HIGH-STRENGTH, EASY-TO-HANDLE SUTURE

- Force Fiber Fusion® Suture is softer and more pliable than similar products on the market.\*\*\*
- Suture gently contours and lies flat on the surface.
- Prepared from ultra-high molecular weight polyethylene (UHMWPE) to be strong, durable, and lubricious.
- Outstanding knot pull strength and knot security when compared to Force Fiber Suture®, size 2 (round).

## MORE COLOR, SIZE, AND PATTERN CHOICES, MORE POSSIBILITIES

- USP suture sizes 1 to 5.\*\*
- Force Fiber Fusion® Suture is available in more color and pattern options than similar products in the marketplace.
- Tracer strands, and criss cross and striped patterns allow for easy identification during the surgical procedures.
- Choose from solid color or multi-colored braid.

## WE ARE ALL ABOUT CUSTOMIZATION

- You can specify different lengths for each of the "flat" and "round" segments.
- Widths, lengths, and patterns can be customized to meet your requirements.

## INDICATIONS

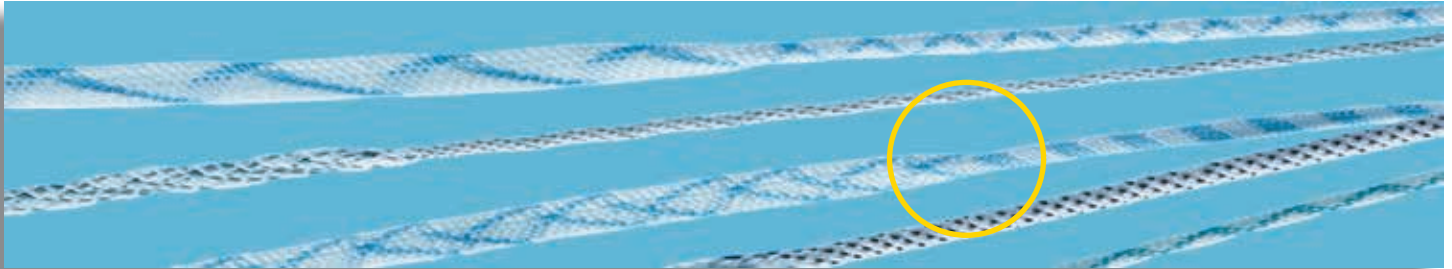
- Sterile Force Fiber Fusion® Suture is 510k cleared as a Class II device in the USA for approximation and/or ligation of soft tissue, including the use of allograft tissue for orthopedic surgeries.

\*Testing conducted on size 3 & 4, and 5 Force Fiber Fusion® Suture against comparable product in sterilized form. These tests may not be indicative of clinical performance. Data on file.

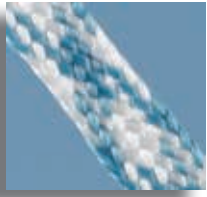
\*\*Force Fiber Fusion® Suture's round segments meets USP requirements for strength and needle attachment, but exceed USP for diameter. Flat segment differs from USP requirements.

\*\*\*According to a survey conducted of subject matter experts which compared and ranked size 3 & 4, and 5 Force Fiber Fusion® Suture against a comparable product, FiberTape® size 2.

*Look Closely! Force Fiber Fusion® Suture Has Both Round and Flat Structures. Our Proprietary, Continuous Braiding Process Creates a Construct with Seamless Transitions Between the Segments.*

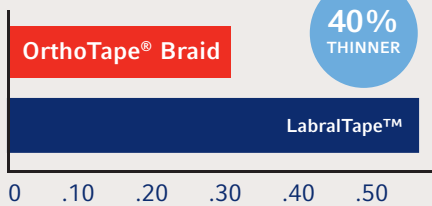


Sizes** (approximate)	1	2	3 & 4	5	
Average Round Width (mm)	19.00 - 25.00	22.00 - 28.00	27.00 - 33.00	30.00 - 36.00	Additional sizes can be evaluated upon request. The lengths of round and flat segments can be customized upon request.
Average Flat Width (mm)	0.90 - 1.35	1.10 - 1.50	1.35 - 1.70	1.50 - 2.00	
Average Round Knot Pull (lbs)	19.70	22.04	28.80	34.81	
Average Flat Knot Pull (lbs)	20.60	25.10	31.86	38.17	
<b>Solid</b>					
White	■	■	■	■	Undyed UHMWPE
Blue			■	■	Blue-dyed UHMWPE
<b>Multi-Colored</b>					
Development times may vary. Evaluated upon request.					
White/Blue	■	■	■	■	Cobraid of undyed and blue UHMWPE
White/Green	■	■	■	■	Cobraid of undyed UHMWPE and green polyester (PET)
White/Blue	■	■	■	■	Cobraid of undyed UHMWPE and blue polypropylene (PP)
White/Black	■	■	■	■	Cobraid of undyed UHMWPE and black nylon 6,6
<b>Patterns</b>					
Criss-Cross, Striped, or Tracer Strands	■	■	■	■	Custom patterns evaluated upon request.
<b>Configurations</b>					
Spools, 250 yards	■	■	■	■	Non-sterile
Cut Length (Heat Stiffened, Tipped)	■	■	■	■	Sterile or Non-sterile
Needled	■	■	■	■	Sterile or Non-sterile
Private Labeled	■	■	■	■	Sterile



# Force Fiber OrthoTape® Braid

## TAPE HEIGHT (MM)



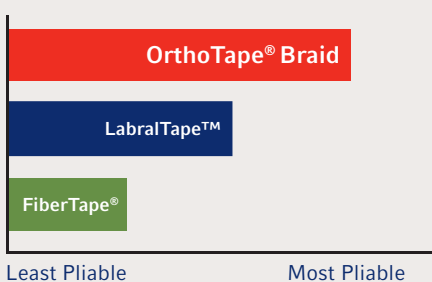
Force Fiber® OrthoTape® Braid has a lower profile than competitor's product.\*\*

## PULL THROUGH (LBS)



OrthoTape® Braid won't pull through as easily as a round suture.\*\*

## PLIABILITY RANKINGS



Force Fiber® OrthoTape® Braid is more pliable than competitors' products.\*\*

\*\*Testing conducted on size 1.5mm OrthoTape® Braid against comparable products in sterilized form. Data on file.

## OUTSTANDING PERFORMANCE CHARACTERISTICS

- OrthoTape® Braid is flatter than similar tapes on the market...its profile is 40% thinner!\*\*
- The braid gently contours and lays flat against the surface.
- OrthoTape® Braid will not pull through tissue or bone as easily as suture of similar size and composition. It is ideal for applications where tissue pull through may be a concern.
- Force Fiber OrthoTape® Braid has a broad footprint for a uniform level of pressure over the surface area.

## STRONGER THAN SUTURE

- OrthoTape® Braid is prepared from an ultra-high molecular weight polyethylene (UHMWPE) fiber that is strong, durable, and pliable.
- The braid is stronger than suture of a similar size and material.\*\*
- The braid has a silk-like feel that is gentle on tissue and gloves.

## INDICATIONS

- Sterile Force Fiber® OrthoTape® Braid is 510k cleared as a Class II device in the USA for approximation and/or ligation of soft tissue, including the use of allograft tissue for orthopedic surgeries.

## MULTIPLE WIDTH, COLOR AND PATTERN OPTIONS

- OrthoTape® Braid is available in a variety of widths ranging from 1mm to 5mm.
- Multiple color and pattern options, including criss cross and tracer strands, allow easy identification during the procedure.
- Custom patterns can be developed for your application.

## CONFIGURATIONS

- Non-Sterile
  - Spools (250 yards)
  - Cut lengths (tipped, heat-stiffened)
  - Needled
- Sterile
  - Cut lengths (tipped, heat-stiffened)
  - Needled

*Low Profile. Broad Footprint. Ultra Strong, Yet Gentle.  
Our Tape's Performance Characteristics: Outstanding!*



Sizes	1mm	1.5mm	2mm	2.5mm	3.5mm	4mm	5mm	
Average Width	0.70 - 1.10mm	1.30 - 1.60mm	1.70 - 2.20mm	2.10 - 2.70mm	3.20 - 3.60mm	3.40 - 4.10mm	4.50 - 5.40mm	
Average Height	0.08 - 0.45mm	0.12 - 0.52mm	0.26 - 0.60mm	0.10 - 1.00mm	0.23 - 1.12mm	0.40 - 1.40mm	0.40 - 1.80mm	
Average Min. Knot Pull	≥ 10 lbs	≥ 14 lbs	≥ 20 lbs	≥ 28 lbs	≥ 34 lbs	≥ 120lbs*	≥ 150 lbs*	*Pass/fail test
<b>Solid</b>								
White	■	■	■	■	■	■	■	Undyed UHMWPE
Blue	■	■	■					Blue-dyed UHMWPE
<b>Multi-Colored</b>								
White/Blue		■						Cobraid of undyed and blue UHMWPE
White/Green		■	■	■	■			Cobraid of undyed UHMWPE and green polyester (PET)
<b>Patterns</b>								
Criss Cross or Tracer Strands		■	■	■	■			Custom patterns evaluated upon request



# Force Fiber<sup>®</sup> Suture

## LAYS RIGHT/TIES RIGHT

- Patented, coreless braid configuration, developed by Teleflex Medical OEM, creates a pliable, easy-to-handle suture.
- Force Fiber<sup>®</sup> Suture allows tighter loop security during the tying process and superior knot break strength.\*
- The suture's low knot profile allows precise knot placement and a smooth tie down.
- This lubricious suture is flexible, nonabrasive, and has a silk-like feel that is gentle on tissue and gloves.

## PROVEN TO BE STRONG

- Force Fiber<sup>®</sup> Suture is prepared from an ultra-high molecular weight polyethylene (UHMWPE) material that is incredibly strong and durable.

- The suture significantly outperforms polyblend suture of comparable size for straight tensile and knot tensile strength.\*

## MULTIPLE SIZE, COLOR, AND PATTERN OPTIONS

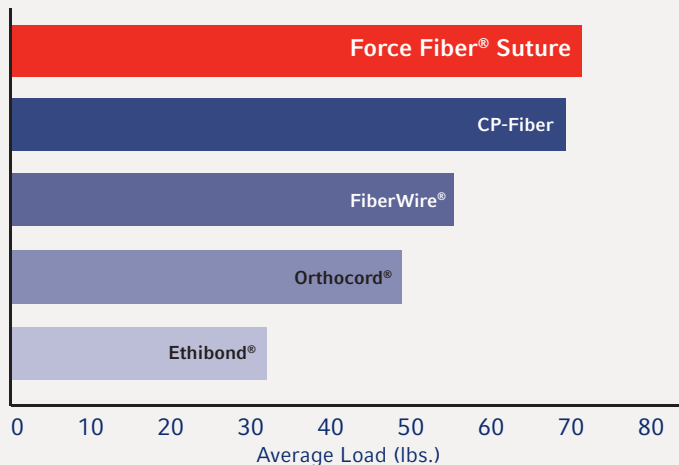
- Multiple color and pattern options make Force Fiber<sup>®</sup> Suture ideal for complex, multi-strand procedures where better visibility and suture differentiation is a must.
- Force Fiber<sup>®</sup> Suture can be preloaded into your assembled medical device.

## INDICATIONS

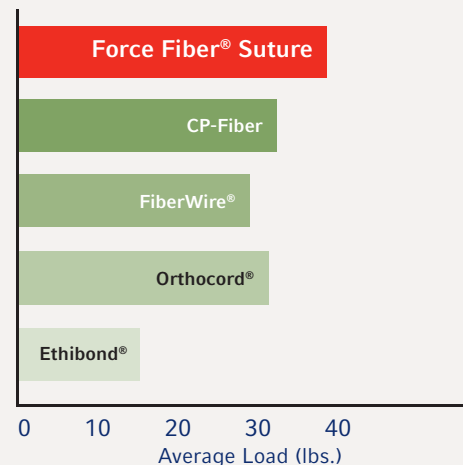
- Sterile Force Fiber<sup>®</sup> Suture is 510k cleared as a Class II device in the USA for approximation and/or ligation of soft tissue, including the use in cardiovascular surgeries and use of allograft tissue for orthopedic surgeries.
- Sterile Force Fiber<sup>®</sup> Suture is also CE marked in the EU as a class IIb device and licensed in Canada as a class III device for approximation and/or ligation of soft tissue including the use of allograft tissue for orthopedic surgeries.
- Sterile Force Fiber<sup>®</sup> Suture is contraindicated in the European Union and Canada for cardiovascular use.

## STRENGTH OF FORCE FIBER<sup>®</sup> SUTURE

### Straight-Pull Tensile Strength\*



### Knot Tensile Strength\*



\*Testing conducted on size 2, white Force Fiber<sup>®</sup> Suture against comparable suture in sterilized form. Data on file.

*Durable. Pliable. Lubricious. Non-Abrasive. Strong...Very Strong.  
That's Force Fiber® Suture!*



USP Sizes	5-0	4-0	3-0	2-0	0	1	2	3/4	5	
<b>Solids</b>										
Blue					■	■	■			
White	■	■	■	■	■	■	■	■	■	
<b>Multi-Colored</b>										
Green					■	■	■			Green is a cobraid of UHMWPE and polyester
Green/White							■			Green/White is a cobraid of UHMWPE and polyester
White/Blue	■	■	■	■	■	■	■	■	■	White/Blue is a cobraid of UHMWPE and blue polypropylene
White/Black	■	■	■	■	■	■	■	■	■	White/Black is a cobraid of UHMWPE and black nylon 6,6
White/Green					■	■	■			White/Green is a cobraid of UHMWPE and polyester
<b>Configurations</b>										
Spools, 500 yards	■	■	■	■	■	■	■	■	■	• Non-sterile
Cut length	■	■	■	■	■	■	■	■	■	• Sterile or non-sterile • Private label: sterile only
Cut length, tipping	■	■	■	■	■	■	■	■	■	• Sterile private label • Non-sterile bulk
Needled	■	■	■	■	■	■	■	■	■	• Sterile private label • Non-sterile bulk

# Work With The Suture Experts™

## **INNOVATION LIVES HERE**

Make your suture or fiber-based product concept a reality with Teleflex Medical OEM. We are one of the world's few, vertically integrated, full-line suture and fiber producers with the expertise and resources to customize product performance to your specific applications. Our ability to take your project from resin to fiber to component to suture to finished device makes Teleflex Medical OEM a true single source solution.

## **EVERYTHING TO MAKE YOUR PROJECT A SUCCESS**

Teleflex Medical OEM has a history of innovation and technical expertise. We draw on our extensive range of materials (both absorbable and non-absorbable), sizes (USP/EP and custom), and coatings to meet your specific requirements for strength, flexibility, and handling. We also offer a large assortment of colors and patterns that allows for enhanced visibility and differentiation. In addition, our expertise at modifying PIC counts allows the design of advanced constructs.

## **THERE IS ONE WORD FOR OUR INTEGRATED CAPABILITIES: COMPREHENSIVE**

Teleflex Medical OEM has what you need for each critical phase of product development and manufacturing, including:

- Product concept development
- Engineering
- Design for manufacturability
- Regulatory services
- Material selection and formulation
- Prototyping, testing, and validation
- Production process development
- Custom tooling
- Manufacturing, both small and large scale volumes
- Finishing operations
- Assembly and packaging
- Private labeling
- Sterilization

## **EXPERT TEAM WORKS WITH YOU EVERY STEP OF THE WAY**

Our team of highly-qualified engineers, material and polymer experts, and skilled technicians makes Teleflex Medical OEM stand above the rest. We can polymerize, extrude, braid, and tip in-house. In addition, we can develop unique compounds and coatings. Many projects incorporate proprietary materials and our unique braid constructions for greater tensile strength, increased lubricity, and outstanding knot break strength.

## **LET'S GET TO WORK ON YOUR NEXT PROJECT**

Great work is what drives us and what we deliver for our customers. You can count on Teleflex Medical OEM to enhance your design, utilize the latest technologies and materials, and scale up for manufacturing.

- Phone: 1.800.474.0178 or 1.508.964.6021
- Email: [oeminfo@teleflex.com](mailto:oeminfo@teleflex.com)
- Web: [www.teleflexmedicaloem.com](http://www.teleflexmedicaloem.com)

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