

Bioabsorbable Sutures, Yarns, and Resins



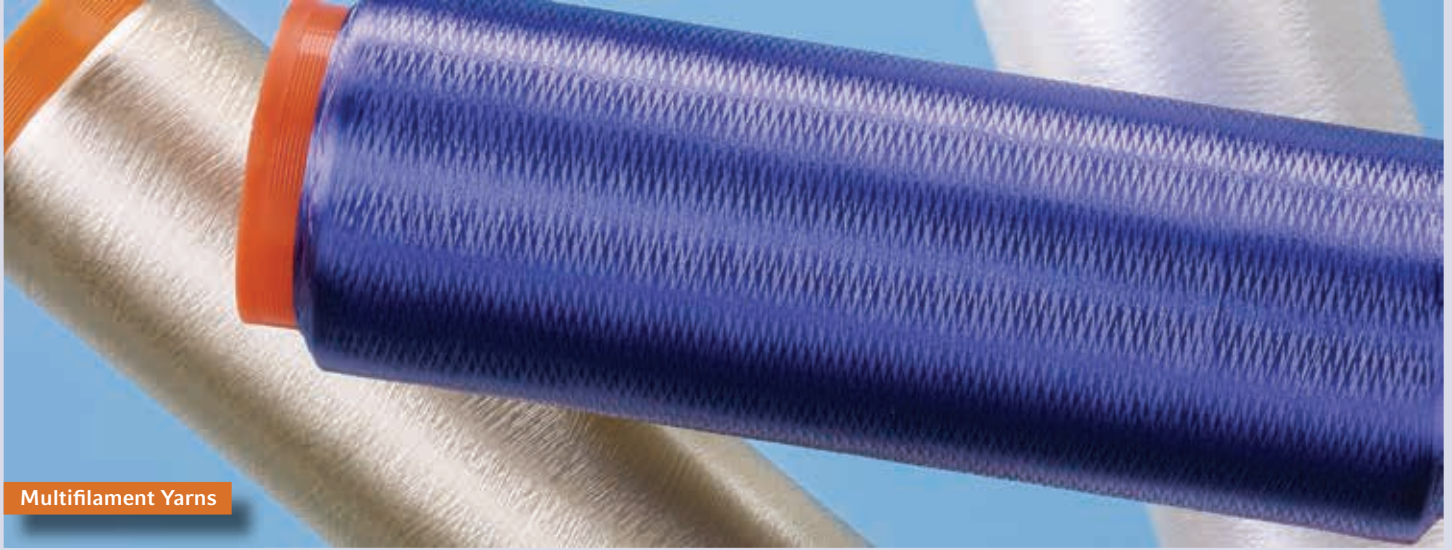
We can take
your project
from resin
to yarn to
component
to suture to
device

Bondek[®] Plus
and Monodek[®]
sutures

PGA, PGLA,
and PLLA
multifilament
yarns

PGA and PLLA
resins

Bioabsorbable Resins



Multifilament Yarns

We Create Customized Solutions Using Bioabsorbable Materials

WE TURN IDEAS INTO PRODUCTS

If the development of bioabsorbable components or sutures is your plan, you should partner with Teleflex Medical OEM. We are one of the world's few, vertically integrated, suture and yarn producers with the expertise and resources to customize product performance characteristics. Our ability to take your project from resin to yarn to component to suture to device makes us a true single source solution.

In terms of bioabsorbable yarns, Teleflex Medical OEM offers three material options — PGA, PGLA, and PLLA — all with outstanding strength and denier characteristics. In addition, we can also develop new co-polymer compositions based on absorption rate requirements.

Compounding is our specialty. The Teleflex Medical OEM team can make custom blends and compounds with different additives for characteristics such as anti-microbial, increased lubricity, and radiopacity.

PARTNER WITH OUR EXPERT TEAM

Our highly-qualified engineers, material and polymer experts, and skilled technicians make Teleflex Medical OEM stand above the rest. Whatever your project demands, we have a spectrum of world-class talent to draw from. We can polymerize, extrude, and braid in-house, and develop unique compounds.

EVERYTHING FOR YOUR SUCCESS

Vertically integrated capabilities. Deep expertise. Decades of experience. We are ready to take on your project with our extensive, in-house resources ensuring efficiency and confidentiality. Our services include:

- Compounding
- Engineering
- Material selection and formulation
- Design for manufacturability
- Prototyping
- Testing and validation
- Regulatory support
- Manufacturing
- Finishing operations
- Packaging
- Private labeling
- Sterilization

LET'S GET TO WORK ON YOUR PROJECT

- Phone: 1.800.474.0178 or 1.508.964.6021
- Email: oeminfo@teleflex.com
- Web: www.teleflexmedicaleoem.com

multifilament yarns

PLLA YARN

Slow Absorbing. Consistent Loss of Tensile Strength Over Time.

- Material: Poly-L-lactic acid (PLLA), 100% PLLA
- Longer-term, bioabsorbable yarn retaining 50% of tensile strength at 48 weeks. Actual time depends on processes and geometric formation of final device.
- Tensile strength: ≥ 245 g (75 denier), ≥ 391 g (120 denier), ≥ 1768 g (540 denier)
- Color: White (undyed)

Color	Filament Count	Denier	Part Number
White	18	83.3	156317
White	30	75	161247
White	30	120	156448
White	120	600	156280

PGLA YARN

Fast Absorbing. Co-Polymerized Material Option.

- Material: Polyglycolic acid-co-poly-L-lactic acid (PGA/PLLA), 89-93 mol% PGA-co-7-11 mol% PLLA
- Short-term, bioabsorbable yarn retaining 50% of straight tensile strength at less than 14 days. Actual time depends on processes and geometric formation of final device.
- Tensile strength: ≥ 265 g
- Color: Beige

Color	Filament Count	Denier	Part Number
Beige	28	56	160200

SPECIFICATIONS FOR MULTIFILAMENT YARNS

Property	Units	PGA	PGLA	PLLA	
Material	%	100	92:8	100	<ul style="list-style-type: none"> • Custom deniers are available upon request. • Yarns are wound on tubes. The standard quantity of yarn per tube is 100 grams per tube. • Yarns are coated with a water washable spin lubricant. The formulation is available to customers on request.
Linear Density	Denier	15-144	56	75-160	
Multifilaments	Number	6-48	28	30	
Denier/Filament	DPF	2.5-3.0	2.0	2.5-5.3	
Tenacity	Grams/Denier	≥ 5.5	≥ 5.1	≥ 3.4	
Elongation at Break	%	15-30	10-35	20-35	
IV	dL/g	≥ 0.80	≥ 1.16	≥ 1.30	
<i>In Vitro</i> 50% Tensile Strength Loss		≈ 2 Weeks	≈ 2 Weeks	≈ 48 Weeks	
Colors		Beige (undyed) Violet Light Violet	Beige (undyed)	White (undyed)	

PGA YARN

Fast Absorbing. 20+ Year History of Clinical Application.

- Material: Polyglycolic acid (PGA), 100% PGA
- Short-term, bioabsorbable yarn retaining 50% of tensile strength at less than 14 days. Actual time depends on processes and geometric formation of final device.
- Tensile strength: ≥ 77 g (15 denier), 231 g (45 denier), 462 g (90 denier), 657 g (128 denier)
- Colors: Beige (undyed), violet, and light violet

Color	Filament Count	Denier	Part Number
Beige	18	45	158936
Beige	30	75	156224
Beige	36	90	158937
Beige	48	127	156346
Violet	6	15	156344
Violet	18	45	155073
Violet	36	90	155072
Light Violet	18	45	159412
Light Violet	36	90	159413



resins

PGA RESIN

- Material: Polyglycolic acid
 - Bioabsorbable material provided in precise, uniform pellets
- Colors: Beige (undyed) and violet
- Qualified to ASTM Standard F2313-10
- Standard IV (0.100 g/dL, HFIP, 30°C): 1.10-1.20 dL/g
- Tm: $\approx 223^{\circ}$ C
- Max H₂O: 0.05%
- Moisture-barrier packaging
Important: Please store frozen until needed

PLLA RESIN

- Material: Poly-L-lactic acid
 - Bioabsorbable material provided in precise, uniform pellets
- Colors: White (undyed)
- Qualified to ASTM Standard F1925-09
- Standard IV (0.100 g/dL, chloroform, 30°C): 1.50-1.80 dL/g
- Tm: $\approx 174^{\circ}$ C
- Max H₂O: 0.05%
- Moisture-barrier packaging
Important: Please store frozen until needed



Teleflex[®]
MEDICAL OEM

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sutures

BONDEK® PLUS SUTURE

- This suture offers outstanding smoothness, lubricity, and knotability. It has high, initial tensile strength during the critical wound healing period; then it breaks down evenly and predictably.
- Material: Polyglycolic acid (PGA)
- Construction: Braided
- Coating: Polycaprolactone copolyglycolic acid
- Indications: Bondek® Plus suture is cleared by the FDA for use in general soft tissue approximation and/or ligation, including use in ophthalmic procedures, but not for use in cardiovascular or neurological procedures.
- Sizes: USP 2 through 8-0
- Colors:
 - Violet (colorant: D&C violet #2)
 - Beige (colorant: none)
- Sterilization: Ethylene oxide (EtO)
- Configurations:
 - Non-sterile spools
 - Sterile packages
 - Chemical resistant
 - Veterinary cassettes

MONODEK® SUTURE

- Smooth, secure suture with a low risk of wicking. Monodek® suture retains its initial wound healing tensile strength with 70% at two weeks, 50% at four weeks, and 25% at six weeks.
- Material: Polydioxanone (PDO)
- Construction: Monofilament
- Coating: None
- Indications: Monodek® suture is cleared by the FDA for use in all types of soft tissue approximation, including use in pediatric cardiovascular tissue where growth is expected to occur and in ophthalmic surgery. The suture is not indicated for adult cardiovascular tissue, microsurgery, and neural tissue.
- Sizes: USP 0 through 6-0
- Color: Violet (colorant: D&C violet #2)
- Sterilization: Ethylene oxide (EtO)
- Configuration:
 - Monodek® suture is only available as a sterile finished good. It is NOT available as a non-sterile product or on a spool.
 - Sterile packages

WE CAN CREATE THE CUSTOMIZED SOLUTION FOR YOUR PROJECT

When it comes to custom-engineered sutures and yarns, Teleflex Medical OEM is a global leader. We have the extensive, in-house capabilities and deep expertise to be the single source solution for your project.

- Teleflex Medical OEM can take your project from resin to yarn to component to suture...
all accomplished in-house
- Development of new co-polymer compositions based on your absorption rate requirements
- Custom blends and compounds to achieve your specifications for antimicrobial ability, lubricity, and radiopacity
- Variety of patterns and colors available
- Custom PIC counts and deniers



Custom Suture

Bioabsorbable Sutures, Yarns, and Resins



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