

Teleflex Medical OEM is a market leader in providing design, development, and production services to medical device manufacturers across the world. We set ourselves apart with deep expertise, decades of experience, and integrated, concept-to-completion capabilities, which include:

- Product concept and design specifications
- Regulatory affairs
- Materials selection
- Rapid prototyping
- Testing and validation
- Custom tooling
- Manufacturing
- Secondary processing
- Assembly and packaging

You can count on Teleflex Medical OEM to deliver industry-leading innovations and next-generation solutions for precision extrusions, high-performance interventional catheters, sutures, performance fibers, bioresorbable resins and yarns, and custom medical devices. For detailed information, see www.teleflexmedialoem.com

Teleflex Incorporated is a leading global provider of specialty medical devices used for diagnostic and therapeutic procedures in critical care and surgery. Our mission is to provide solutions that enable health-care providers to improve outcomes and enhance patient and provider safety. We specialize in devices for general and regional anesthesia, cardiac care, respiratory care, urology, vascular access and surgery and we serve healthcare providers in more than 130 countries. For detailed information, see www.teleflex.com

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IMAGINE IT. ACHIEVE IT.®

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TFX OEM[®] LUBRICIOUS LINED CATHETERS WITH BRAID/COIL REINFORCED SHAFTS

Concept-to-Completion Capabilities

LUBRICIOUS-LINED, BRAID/COIL REINFORCED CATHETERS CUSTOMIZED TO YOUR APPLICATION

IMAGINE IT, ACHIEVE IT® WITH TELEFLEX MEDICAL OEM

- Braid/coil-reinforced, lubricious-lined catheters offer an outstanding combination of high torque control and stiffness for excellent pushability and flexibility
- Lubricity options for optimized performance
- Full range of tensile strength is available from annealed to full hard
- Teleflex Medical OEM can vary the durometer and/or materials along the entire length of the shaft
- Contact Teleflex Medical OEM for customization options

DIMENSIONS

- Shaft sizes from 2F to 35F
- Ultra-thin liners to 0.0007"
- Ultra-thin walls

MATERIALS

- Liner: PTFE, FEP, HDPE, or Nylon/Pebax®
- Outer jacket materials: Nylon, Pebax®, or Polyurethane
- Braid/Coil materials: Round or flat stainless steel, nitinol, or non-metal materials
- Color match or custom color per customer specifications

RADIOPACITY OPTIONS

- Encapsulated or embedded marker bands
- Encapsulated tungsten (W)
- Conventional radiopaque fillers

POTENTIAL APPLICATIONS

- Diagnostic or therapeutic interventional procedures
- Graft or stent delivery

INDUSTRY-LEADING BRAIDING/COILING CAPABILITIES

- Large diameter coiled shafts - *continuous process*
- Proprietary, variable pitch coiled shafts - *unique, proprietary continuous process*
- Multiple braid configurations (patterns and sizes) for flexibility, stability, and pushability
- Braid/coil wire density up to 250 PPI (depending on wire and tubing size)
- Catheters are available with flat or round wire braid, and/or coiled configurations

DESIGN CONSIDERATIONS

- Flat wire is generally used for thin-walled applications where anti-kink performance is critical
- Choose coil for high flexibility and kink resistance; braided for high torque capabilities
- Small flexible tips are available for microcatheters

WE ARE YOUR TOTAL SOLUTION FOR DESIGN, DEVELOPMENT, AND PRODUCTION SERVICES

- Decades of innovation and industry leadership
- Vertically integrated, concept-to-completion capabilities, which include: concept and design specification, materials selection, regulatory affairs, prototyping, testing and validation, custom tooling, manufacturing, secondary processing, assembly, and packaging



www.teleflexmedicaloem.com

LINER SELECTION GUIDE

PTFE (*polytetrafluoroethylene*)

- Best lubricity, lowest friction of any polymer
- Multi-durometer
- Thinnest wall
- Coil and braid reinforcement
- EtO sterilizable

PTFE Design Considerations

- Requires manual assembly
- Not Gamma stable
- Etch required

FEP (*fluorinated ethylenepropylene*)

- Higher lubricity, lower friction compared to HDPE and Pebax®
- Multi-durometer
- Coil and braid reinforcement
- Continuous process (single durometer)
- EtO sterilizable

FEP Design Considerations

- Only single durometer is available when using a continuous process
- Etch required

HDPE (*high-density polyethylene*)

- Lower lubricity, higher friction compared to PTFE and FEP
- Multi-durometer
- Coil and braid reinforcement
- EtO sterilizable
- Gamma stable
- Less contact for adhesion
- Continuous process even with ID change

HDPE Design Consideration

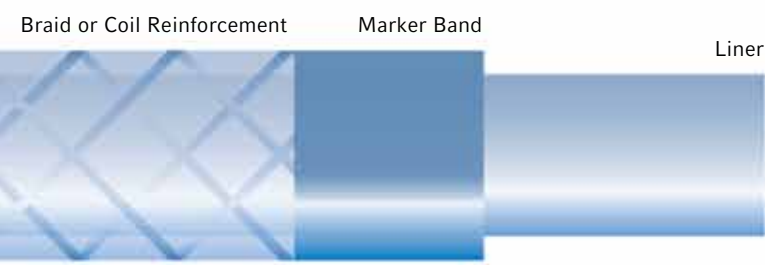
- Only single durometer is available when using a continuous process

Pebax® (*polyether block amide*) and Nylon

- Lower lubricity, higher friction compared to PTFE and FEP
- High material strength
- Multi-durometer
- ID silicone coating
- EtO sterilizable
- Gamma stable
- Coil and braid reinforcement
- Continuous process even with ID change

Pebax® Design Consideration

- Only single durometer is available when using a continuous process



Braid Patterns



Braid-Reinforced Catheter Shaft Design