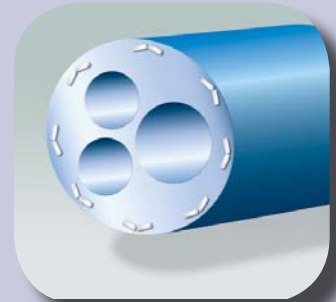
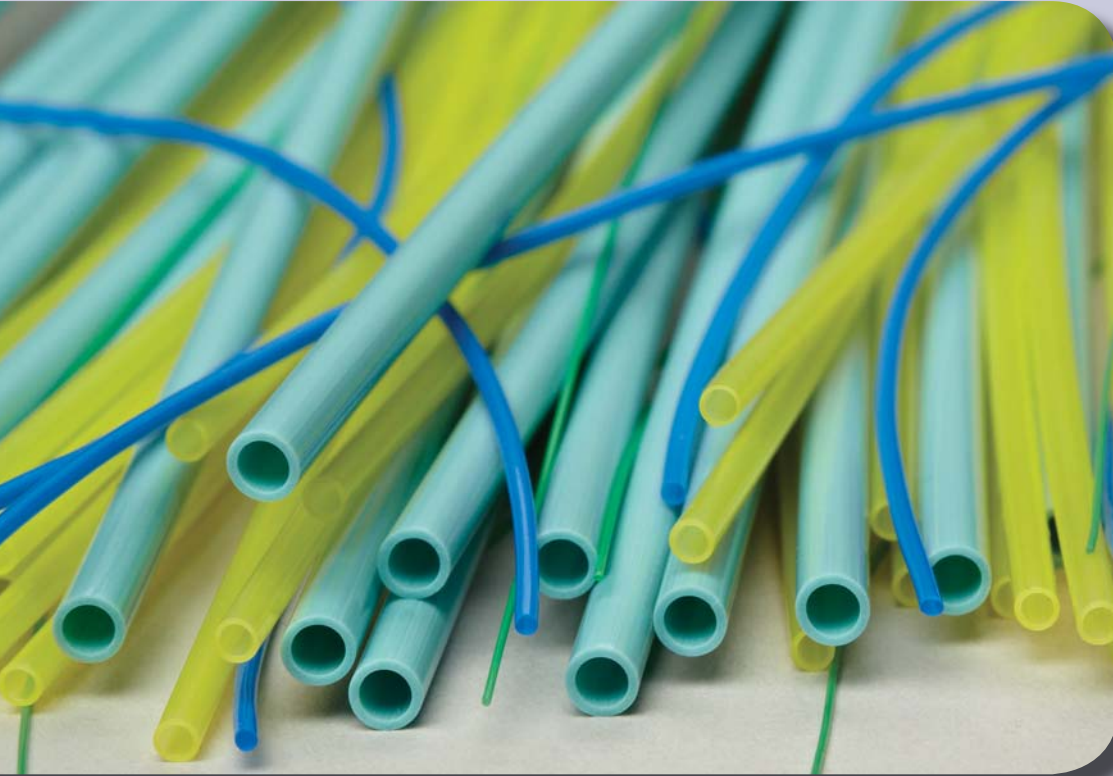


TFX OEM[®] FLUOROPOLYMER EXTRUSIONS

Concept-to-Completion Capabilities





Our expertise extends to coil/braid reinforcement (top) and multi-lumen tubing (bottom)

CUSTOM ENGINEERED PTFE AND FEP EXTRUSIONS

MATERIALS

- PTFE: Polytetrafluoroethylene
- FEP: Fluorinated Ethylene Propylene

SIZE RANGE

- PTFE
 - OD ranges from 0.006" to 1.50" (0.15mm to 38.10mm)
 - ID ranges from 0.005" to 1.00" (0.127mm to 25.4mm)
 - Wall thickness as small as 0.001" (0.025mm)
 - Tolerances +/- 0.0005" to 0.01"
- FEP
 - OD ranges from 0.018" to 0.400" (0.46mm to 10.2mm)
 - ID as small as 0.012" (0.30mm)
 - Wall thickness as small as 0.0035" (0.09mm)
 - Tolerances +/- 0.001" to 0.006"
- PTFE and FEP extrusions can be customized to the sizes and lengths required for most applications

FILLERS

- Available upon request

SURFACE ETCHING

- Sodium Naphthalene

CONFIGURATIONS

- Custom profiles and shapes
- Ultra-lite wall tubing
- Multi-lumen
- Etch liner (Sodium Naphthalene)
- Custom colors and fillers
- Beading (solid rod)

CHARACTERISTICS

- Excellent surface lubricity
- Exceptional resistance to high temperatures
- Excellent dielectric insulation properties
- Water resistant
- Chemical inertness
- Chemical resistance to common solvents, acids, and bases



Teleflex Medical OEM is also a leading provider of PTFE spiral heat-shrink tubing

PTFE AND FEP HEAT-SHRINK TUBING

MATERIALS

- PTFE: Polytetrafluoroethylene
- FEP: Fluorinated Ethylene Propylene

SIZE RANGE

- PTFE*
 - Shrink ratios to 4:1
 - Recovered IDs down to 0.003" (0.76mm)
- FEP*
 - Shrink ratios to 1.65:1
 - Recovered IDs down to 0.024" (0.61mm)
 - Maximum 15% linear shrinkage

RECOVERY TEMPERATURE REQUIREMENTS

- PTFE heat-shrink tubing requires a temperature of 662°F +/- 8°F (350°C +/- 4°C) for 10 minutes unrestricted per MIL-I-23053/12A**
- FEP heat-shrink tubing requires a temperature of 375°F +/- 4°F (191°C +/- 2°C) for 10 minutes unrestricted per MIL-I-23053/11B**

CHARACTERISTICS

- Teleflex Medical OEM produces some of the thinnest walled, microbore, heat-shrink tubing available in the industry
- Surface etching is available
- Heat-shrink tubing is available in custom sizes, lengths, and colors

APPLICATIONS

- Guidewire jacketing
- Coating for surgical instruments
- Dielectric insulation
- Covering for components
- Waterproofing
- Abrasion/corrosion protection

Please note:

*Consider expanded and recovered ID requirements when selecting and specifying heat-shrink tubing.

**The actual temperature and time depend on tubing size and the application.



FEP I.V. CATHETER TUBING

MATERIAL

- FEP: Fluorinated Ethylene Propylene
 - Compared to PTFE products, FEP extrusions are more flexible and optically clear

SIZE RANGE

- 30 to 10 GA
- Extruded to the tightest of tolerances

FILLERS

- Clear, striped, and fully radiopaque tubing
 - Barium Sulphate
 - Bismuth Trioxide
- Multiple stripe configurations
- Custom colorations

CONFIGURATIONS

- Cut lengths or spools

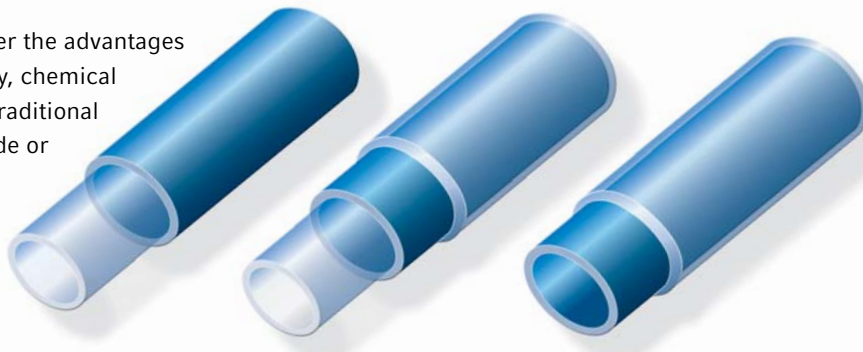
ETCHLESS EFEP CO-EXTRUSION

MATERIAL

- EFEP: a terpolymer of ethylene, tetrafluoroethylene, and hexafluoropropylene
 - EFEP can be co-extruded with polyamide- or PEBA-type materials using a one-step process that eliminates the need for etching
 - EFEP co-extrusion can offer the advantages of fluoropolymers (lubricity, chemical resistance); plus those of traditional materials such as polyamide or PEBA (i.e., flexibility, ease of bonding, over molding)

PRODUCT INFORMATION

- Etch-free EFEP co-extrusion creates tubing with high clarity
- Tubing stiffness can be tailored to specific applications
- EFEP can produce low durometer tubing that is dimensionally stable



PARTNER WITH THE EXTRUSION EXPERT THAT DELIVERS SOLUTIONS, INNOVATIONS, AND SERVICES

IF YOU CAN IMAGINE IT, YOU CAN ACHIEVE IT WITH TELEFLEX MEDICAL OEM

Teleflex Medical OEM is a single source provider of the design, development, and production services you need to take your extrusion project from concept to completion. We will work closely with you and your R&D team to deliver custom-engineered fluoropolymer extrusions that meet your exact specifications.

We offer you a unique, customer-focused combination of expertise, decades of experience, advanced facilities, in-house capabilities, and dedication to service. That is why Teleflex Medical OEM can take on challenges few other suppliers can. And why we should be your “go to” partner for your custom extrusion projects.

INDUSTRY-LEADING EXTRUSION CAPABILITIES THAT ARE SEAMLESSLY INTEGRATED

Our global team of highly-qualified engineers, material and polymer experts, PhD scientists, and highly-skilled technicians makes Teleflex Medical OEM stand above the rest. You can count on us to enhance your design, develop functional prototypes, guide you through the maze of global regulations, and scale up for manufacturing. It is all made possible by our vertically integrated, in-house capabilities, which include:

- Product concept
- Design specifications
- Engineering
- Regulatory affairs
- Materials selection
- Prototyping
- Testing and validation
- Production process development
- Process development to ensure scalability
- Custom tooling
- Manufacturing
- Secondary processing
- Assembly
- Packaging and private labeling



DEEP EXPERTISE IN ALL ASPECTS OF FLUOROPOLYMER EXTRUSIONS

- Single- and multi-lumen
- Profiles
- Ultra-thin walls
- Heat-shrink and spiral heat-shrink tubing
- Co-extrusion (multi-layer)
- Braid- and coil-reinforced shafts and sheaths
- Thin-wall, lubricious-lined reinforced shafts
- Multi-durometer
- Microbore
- Radiopaque fillers
- Marker bands and encapsulated tips
- Color match and custom color

COMPREHENSIVE PROCESSING CAPABILITIES

- Tube bonding
- Coil completion
- Etching
- Flaring
- Hole drilling
- Insert molding
- Labeling
- Shaping
- Skiving
- Tapering
- Tipping
- Tip joining
- Cut lengths or spools
- Finished, packaged, and sterilized devices – including printing.

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
- Material 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.teleflexmedicaloem.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 healthcare 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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