

# LCP Monofilament

Extruded Product

MONOFILAMENT



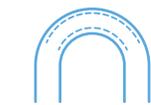
## OVERVIEW

Since its invention in the 1970's, magnetic resonance imaging (MRI) has become an industry standard medical tool for diagnosis and treatment. However, procedures requiring catheterization would still rely on x-ray as a means to guide the catheter due to the MRI-incompatibility of the metal construction catheter. X-ray guided procedures thus exposed patients and doctors to ionizing radiation. More recently, though, there has been a refocused effort towards eliminating the radiation component from catheter procedures.

At Zeus, we respond to challenges and have once again with our MRI-compatible LCP monofilament fiber. With exceptional tensile strength, our LCP monofilament is ideally suited for catheter braiding reinforcement allowing catheter construction without the use of metals such as stainless steel. This advanced monofilament also provides excellent torque response, pushability, and distal end deflectability of the catheter. This material is Class VI approved and is autoclavable.



LCP Monofilament can be used as an MRI-compatible non-metallic alternative for catheter braiding.



FLEXURAL MODULUS



TENSILE STRENGTH



ABRASION RESISTANT

## APPLICATIONS

- Braiding monofilament for catheters
- Replacement for stainless steel, nitinol, and tungsten braiding

## CAPABILITIES AND SIZING

- Monofilament:
  - Round:
    - » 0.002" - 0.006" (0.051 - 0.152 mm)
  - Rectangle:
    - » 0.001" x 0.003" (0.025 x 0.076 mm)
- Additional custom monofilament shapes

## KEY PROPERTIES

- MRI-compatibility
- Excellent torquability and distal end deflectability
- Can be wound on Steeger and Wardwell bobbins and DIN 160 spools
- Minimal fraying compared to other aramid fibers
- Class VI approved
- Autoclavable



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## INFORMATION OF NOTE

Available in rectangle and round geometries.

LCP MONOFILAMENT vs. STAINLESS STEEL					
Material	Zeus LCP Monofilament			304 Stainless Steel (annealed)	Stainless Steel (spring tempered)
	<i>rectangle</i>	<i>round</i>			
Dimension (in./mm)	0.001 × 0.003 / 0.025 × 0.076	0.002 / 0.051	0.003 / 0.076	0.003 / 0.076	0.003 / 0.076
Average Tensile Strength (Gpa)	0.75	1.30	1.20	1.00	2.30
Average Elongation at Break (%)	1.5	1.6	1.7	31.1	1.7
Average Tensile Modulus (Gpa)	55.0	75.0	75.0	134.5	202.7

*SIZE RANGES/CAPABILITIES	
Units	Size Range
Dimension (round; in./mm)	0.002 - 0.006 / 0.051 - 0.152
Dimension (rectangle; in./mm)	0.001 × 0.003 / 0.025 × 0.076

\*Ask us about other sizing and profile options.

### ZEUS AND STEEGER USA BRAIDING

Steeger USA recommends KL80D carriers for braiding Zeus LCP monofilament. Steeger USA has already taken the first steps to get you to your braiding goals faster. For Zeus' 0.003" (0.076 mm) LCP monofilament using the KL80D, Steeger recommends:

- Swivel head rollers
- Triple compensation rollers
- 0.5 mm ratchet spring
- 0.5 mm tension spring

Ask about Steeger's maintenance program to help you maintain consistent PPI and braid angle, increase production, and minimize breakage. For more information, visit [www.radiation-free.com](http://www.radiation-free.com)

Steeger USA is a Machine Solutions Inc. Company.