

Aeos™ ePTFE Sutures and Monofilament

Expanded PTFE Sutures and Monofilament

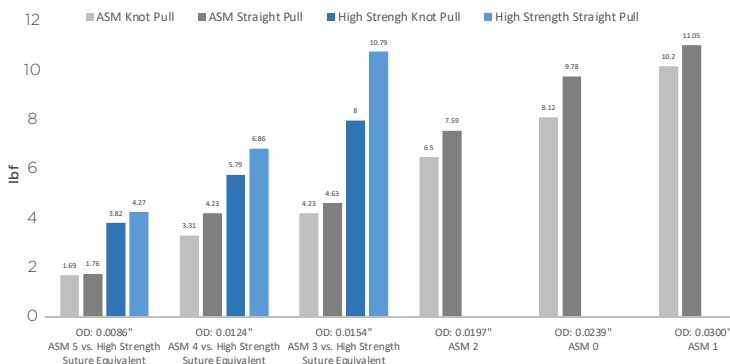
Overview-

Aeos™ ePTFE suture and monofilament products are engineered using advanced extrusion techniques to expand PTFE under controlled conditions to produce both standard strength and high-strength sutures or monofilaments, tailored to your exact needs. Biocompatible Aeos™ ePTFE suture and monofilament products are non-absorbable and can be permanently implanted in the human body with minimal immune response.

Designed to exhibit low surface friction with excellent drape, these products facilitate precision knot placement in delicate surgeries such as valve repair. In situ, sutures maintain the high tensile strength and flexibility required for stressful anatomical environments.

For enhanced straight-pull and knot-pull strength, Zeus offers a high strength suture monofilament which is up to two times stronger than standard ePTFE USP monofilaments (ASM) in some sizes, enabling better closure and optimized patient healing.

Straight Pull and Knot Pull Strength Comparison



Zeus Aeos™ ePTFE suture monofilament has superior knot strength and can be swaged up to a 1:1 ratio via suppliers such as RK Manufacturing Corporation.

APPLICATIONS

- Suturing
- Tethering
- Vascular anastomosis
- Femoral vascular closure devices

AVAILABLE PRODUCTS

- Aeos™ ePTFE customized monofilament
- Aeos™ ePTFE suture monofilament
- Aeos™ ePTFE high strength suture monofilament

CAPABILITIES AND SIZING

- Can be swaged with a 1:1 needle-to-suture ratio
- Bulk supply available

KEY PROPERTIES

- Microporous
- Highly customizable
- Biocompatible
- Chemically inert
- Lubricious
- Soft and flexible



Aeos™ ePTFE Sutures and Monofilament

All Aeos™ ePTFE suture and monofilament products are produced based on customer specifications and the charts below are a general capability guide.

	Aeos™ ePTFE Customized Monofilament	Aeos™ ePTFE Suture Monofilament	Aeos™ ePTFE High Strength Suture Monofilament
AVAILABILITY	Customizable	Ordered as ASM/USP	Customizable
STRENGTH CLASSIFICATION	Standard	Standard	Stronger
PROCESS	Extruded	Extruded	Extruded + Drawn
DENSITY	Moderate To High (0.65 g/cm ³ - 1.85 g/cm ³)	Moderate (0.56 g/cm ³ - 1.09 g/cm ³)	High (0.85 g/cm ³ - 1.85 g/cm ³)
DENSITY TOLERANCE	± 0.2 g/cm ³	n/a	± 0.2 g/cm ³
OUTSIDE DIAMETER (OD) THICKNESS	0.010" - 0.150" (0.254 mm - 3.810 mm)	0.0080" - 0.0300" (0.2032 mm - 0.7620 mm) <i>mean diameter</i>	0.007" - 0.030" (0.178 mm - 0.762 mm)
OUTSIDE DIAMETER (OD) TOLERANCE	± 0.002" (±0.051 mm)	n/a	± 0.002" (±0.051 mm)

To achieve the soft feel and drape preferred by clinicians, the diameter of the Zeus Aeos™ Suture Monofilament (ASM) is larger than the USP standard. Because of this difference, Zeus has created our own sizing designations which are comparable to USP standards. Zeus Aeos™ suture is designated by ASM followed by a number. A chart is provided to show the diameter and knot strength relationship.

Aeos™ ePTFE SUTURE CAPABILITIES			
USP Size‡	Zeus Aeos™ Suture Monofilament (ASM) Size	MEAN DIAMETER†	KNOT-PULL TENSILE STRENGTH*
5-0	ASM 5	0.008" (0.2032 mm)	≥ 1.10 lbf (0.50 kgf)
4-0	ASM 4	0.0125" (0.3175 mm)	≥ 1.65 lbf (0.75 kgf)
3-0	ASM 3	0.0155" (0.3937 mm)	≥ 2.65 lbf (1.20 kgf)
2-0	ASM 2	0.0200" (0.508 mm)	≥ 3.97 lbf (1.80 kgf)
0	ASM 0	0.0240" (0.6096 mm)	≥ 5.95 lbf (2.70 kgf)
1	ASM 1	0.0300" (0.762 mm)	≥ 7.50 lbf (3.40 kgf)

*For non-sterile sutures of Class 1, the limits for knot pull tensile strength are 25% higher than listed on USP chart.

† Zeus ASM diameter is measured using a laser micrometer on an uncompressed ePTFE suture fiber.

‡ USP 861 non-absorbable suture diameter measurement is of the dead-weight type measurement on a compressed suture fiber

