Biomaterials

Aeos™ ePTFE Products

Expanded PTFE Products

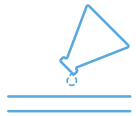
Overview-

Aeos™ ePTFE is produced by mechanically expanding biocompatible PTFE to produce a microporous structure of solid nodes interconnected by fibrils. Thanks to its customizable microporous structure, Aeos™ ePTFE can be used in diverse medical applications, where it minimizes immune response.

Aeos™ ePTFE *microporous membranes and ribbons* excel in applications that demand porosity, flexibility, and strength. Ultra-thin, biaxially stretched membranes favor stent encapsulation while thicker, uniaxially stretched calendared ribbons can be cut or formed to shape for medical implants.

Aeos™ ePTFE *porous tubing* combines tailored porosity with maximum flexibility. Alongside standard sized tubing, Zeus' ultra-thin Aeos™ Sub-Lite-Wall® tubing and biaxially oriented tubing balance strength with elasticity, making them ideal for stent grafts or endoscope channels.

Aeos™ ePTFE *suture and monofilament* products deliver and maintain exceptional tensile strength and flexibility. Low surface friction allows surgeons to position knots precisely while Aeos™ ePTFE high strength suture variants deliver enhanced straight-pull and knot-pull strength for a stronger suture with better closure and optimized healing.



CHEMICALLY INERT

BIOCOMPATIBILE

FLEXIBLE

Aeos™ ePTFE products can be customized in many different and complex geometries depending on the application.

APPLICATIONS

- Stent coverings
- Implants
- Suturing
- Anastomosis
- Tethering
- Vascular devices
- Endoscopic channels
- Medical equipment
- Femoral vascular closure devices

AVAILABLE PRODUCTS

- Membranes and ribbons
- Porous tubing
- Sutures, monofilament, high strength monofilament

KEY PROPERTIES

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

ZEUS

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Aeos™ ePTFE

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

Aeos™ ePTFE Tubing Capabilities				
PRODUCT	INSIDE DIAMETER (ID)		WALL	
	Thickness	Tolerance	Thickness	Tolerance
Sub-Lite-Wall®	0.014″ – 0.150″ (0.356 mm – 3.810 mm)	± 0.003″ (± 0.076 mm)	0.0020″ – 0.0049″ (0.0508 mm – 0.1245 mm)	± 0.001″ (± 0.025 mm)
Extruded Special	0.005″ – 1.250″ (0.127 mm – 31.750 mm)	± 0.005″ (± 0.127 mm)	0.0050″ – 0.0650″ (0.1270 mm – 1.651 mm)	± 0.002″ (± 0.051 mm)
Biaxial Oriented Tubing	0.390″ – 0.866″ (9.906 mm – 21.996 mm)	± 0.010″ (± 0.254 mm)	0.0020″ – 0.0050″ 0.0508 mm – 0.1270 mm)	± 0.002″ (± 0.051 mm)

Aeos™ ePTFE Ribbon Capabilities				
WIDTH		THICKNESS		PORE SIZE
Width	Tolerance	Thickness	Tolerance	
0.05″ – 4.00″ (1.27 mm - 101.6 mm)	± 0.020″ (± 0.508 mm)	0.002″ – 0.020″ (0.051 mm - 0.508 mm)	± 0.0005″ (± 0.0127 mm)	1.0 µm – 100 µm

Aeos™ ePTFE Membrane Capabilities			
BASIS WEIGHT	THICKNESS	ROLL WIDTH	PORE SIZE
	Reference Only		
1.50 g/cm³ – 40.0 g/cm³	0.00015″ – 0.00400″ (0.00381 mm – 0.10160 mm)	6″ – 24″ (152.4 mm – 609.6 mm)	0.2 µm – 1.0 µm

Aeos™ ePTFE Monofilament Capabilities				
	OUTER DIAMETER (OD)	OD TOLERANCE	DENSITY	DENSITY TOLERANCE
Aeos™ Custom Monofilament	0.010″ – 0.150″ (0.254 mm – 3.810 mm)	± 0.002″ (±0.051 mm)	0.65 g/cm³ – 1.85 g/cm³	± 0.2 g/cm³
Aeos™ High Strength Suture Monofilament	0.007″ – 0.030″ (0.178 mm – 0.762 mm)	± 0.002″ (±0.051 mm)	0.85 g/cm³ – 1.85 g/cm³	± 0.2 g/cm³
Aeos™ Suture Monofilament (ASM)	0.0080″ – 0.0300″* (0.2032 mm – 0.7620 mm)*	n/a	0.56 g/cm³ – 1.09 g/cm³	n/a

**Aeos™ Suture Monofilament (ASM) is ordered in ASM Sizes 5-0 to 1. See Aeos™ Monofilament Sheet for more detail.*

Additional Specification Options	
POROSITY RANGE	DENSITY RANGE
Low 30 – 50%	High 1.09 – 1.52 g/cm³ ± 0.15
Medium 50 – 70%	Medium 0.65 – 1.09 g/cm³ ± 0.15
High 70 – 90%	Low 0.22 – 0.65 g/cm³ ± 0.15