

Bioprene Elements

Bioprene - Thermoplastic tubing

Features and benefits

- Certification: Raw material complies with USP Class VI and FDA regulation 21CFR 177.2600 for contact with aqueous food
- Sterilisable by gamma irradiation and autoclaving
- Available as standard in 15 different bore sizes (13 for elements), five wall thicknesses (3 for elements) and three coil lengths, including bulk reels and LoadSure elements. Other sizes available on request.
- Operating temperature: 5 °C to 80 °C
- Colour/transparency: Beige/opaque
- Spallation: Low



Technical specifications

	Bioprene Elements
Bore size	1.6 - 25.4 mm (0.0625 - 1 in)
Wall thickness	2.4 - 4.8 mm (0.09375 - 0.2 in)
Colour	Beige
Transparency	Opaque
Spallation	Low
Certification and compliance	FDA 21CFR177.2600, USP Class VI
Operating temperature	5 °C to 80 °C (41 °F to 176 °F)
Hardness, shore A (5sec)	62 to 68
Specific gravity	0.95 to 0.98 g/ml
UV resistance	Excellent
Ultimate tensile strength	≥ 5.3 MPa (≥ 798 psi)
Elongation at break	340 to 600 %
Tensile stress at 100% elongation	1.9 - 3 Mpa (28 - 43 Psi)
Gas permeability rating	Low
Compression set	5 to 42.5 %
Water absorption	Low
Shelf life	5 years
Gamma stability	25 kGy to 40 kGy
Autoclave stability	121 °C 30 minutes
Sterilisation methods	Autoclave, Gamma

Autoclave sterilisation is not recommended for Bioprene Loadsure Elements with these two part numbers 933.P120.PFT and 933.P170.PFT

ASTM methods Hardness: ASTM D 2240; Specific gravity: ASTM D 792; Tear B, Ultimate tensile strength, Elongation at break, Tensile stress at 100 % elongation; ASTM D 412

Functional testing of Bioprene in a pump head shows acceptable performance at 40 kGy. All validation test data for irradiated samples are subjected to a gamma irradiation dose of 50 kGy prior to testing

Materials of construction

	Bioprene Elements
Tubing	Thermoplastic elastomer
Connector material	PVDF

Product codes

Bioprene Double Segment Kynar Y-Element ordering codes				
Bore		Wall Thickness		Product codes
mm	inch	mm	inch	
1.6	1/16	2.4	3/32	933.E016.K24
3.2	1/8	2.4	3/32	933.E032.K24
4.8	3/16	2.4	3/32	933.E048.K24
6.4	1/4	2.4	3/32	933.E064.K24
8.0	5/16	2.4	3/32	933.E080.K24
8.0	5/16	4.0	5/32	933.E080.K40
9.6	3/8	2.4	3/32	933.E096.K24
12.0	15/32	4.0	5/32	933.E120.K40
16.0	5/8	4.0	5/32	933.E160.K40
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Bioprene Loadsure Elements ordering codes				
Product Name				Product codes
Bioprene 520 LoadSure TI 3.2mm Bore Tri-Clamp Element				933.0032.PFT
Bioprene 520 Loadsure TM 3.2mm TM Bore Tri-Clamp Element 0-4 bar peak pressure				933.P032.PFT
Bioprene 520 Loadsure TH 3.2mm TM Bore Tri-Clamp Element 0-7 bar peak pressure				933.H032.PFT
Bioprene 520 LoadSure TI 6.4mm Bore Tri-Clamp Element				933.0064.PFT
Bioprene 520 Loadsure TM 6.4mm Bore Tri-Clamp Element 0-4 bar peak pressure				933.P064.PFT
Bioprene 520 LoadSure TI 9.6mm Bore Tri-Clamp Element				933.0096.PFT
Bioprene 620 LoadSure TI 12mm Bore Tri-Clamp Element				933.0120.PFT
Bioprene 620 Loadsure TM 12mm Bore Tri-Clamp Element 0-4 bar peak pressure				933.P120.PFT
Bioprene 620 LoadSure TI 17mm Bore Tri-Clamp Element				933.0170.PFT
Bioprene 620 Loadsure TM 17mm Bore Tri-Clamp Element 0-4 bar peak pressure				933.P170.PFT
Bioprene 720 LoadSure 12.7mm Bore Tri-Clamp Element				933.0127.PFT
Bioprene 720 Loadsure hard 80 Shore 12.7 x 4.8 mm				933.P127.G48
Bioprene 720 LoadSure 15.9mm Bore Tri-Clamp Element				933.0159.PFT
Bioprene 720 Loadsure hard 80 Shore 15.9 x 4.8 mm				933.P159.G48
Bioprene 720 LoadSure 19mm Bore Tri-Clamp Element				933.0190.PFT
Bioprene 720 Loadsure hard 80 Shore 19.0 x 4.8 mm				933.P190.G48
Bioprene 720 LoadSure 25.4mm Bore Tri-Clamp Element				933.0254.PFT
Bioprene 720 Loadsure hard 80 Shore 25.4 x 4.8 mm				933.P254.G48
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