

# BIOPRENE TUBING

Thermoplastic elastomer tubing

Highly resistant to oxidising agents

## Validated processes

Bioprene peristaltic pump tubing is fully approved for food and pharmaceutical applications. Validated processes are supported. Like Marprene, Bioprene lasts at least 10 times as long as tubing in other materials. Long-life tubing means stoppages for a tube change are rare events, easily fitted in with general maintenance.

## Easy sterilisation

Clean-in-place and steam-in-place (with tubing elements) are no problem for the tube that has everything.

USP, ISO and FDA approvals matter in maintaining validated processes. Bioprene peristaltic pump tubing offers long life and chemical resistance, and carries the widest range of safety approvals

- USP Class VI FDA approvals
- Fully documented bio-compatibility and comprehensive validation pack
- Safe for use in biomedical applications
- Ex-stock availability
- Comprehensive stock of a wide range of sizes
- UV opaque
- Fully weldable
- No odour
- Low extractables
- Suitable for repeated autoclave cycles

**Watson-Marlow Bioprene: the best peristaltic pump tube life with excellent chemical resistance**

# For long life and chemical compatibility

Bioprene offers exceptionally long life and resistance to a wide range of chemicals. It is a first choice for applications including metering tablet-coating materials, pH control and media feed in fermentation and bioreactor metering, as well as pharmaceutical handling, dispensing, metering, transfer and filtration.

**General industrial long-life transfer tube. Highly resistant to oxidising agents such as ozone, peroxides and sodium hypochlorite.**

Bioprene	Typical values
<b>Material</b>	Thermoplastic elastomer
<b>Colour / transparency</b>	Beige / opaque
<b>Spallation</b>	Fair
<b>Life, hours</b>	313/314, 520R pumpheads: 10,000; 620R pumphead: 6,000
<b>Certification</b>	FDA regulations 21 CFR 177.2600 for contact with aqueous food
<b>Sterilisation methods</b>	Gamma, autoclave, ETO, CIP, SIP: refer to Watson-Marlow for details
<b>Operating temperature</b>	5C-80C
<b>Hardness, shore A (5 sec)</b>	64 shore: 66; 73 shore: 74; 87 shore: 88
<b>Specific gravity</b>	64 shore: 0.97; 73 shore: 0.96; 87 shore: 0.95
<b>Tear B, ppi</b>	-
<b>Ultimate tensile strength, psi</b>	64 shore: 1007; 73 shore: 1410; 87 shore: 2263
<b>Elongation at break, %</b>	64 shore: 473; 73 shore: 510; 87 shore: 547
<b>Tensile stress at 100% elongation, psi</b>	64 shore: 367; 73 shore: 525; 87 shore: 987
<b>Compression set, %</b>	-
<b>Weather resistance</b>	Excellent
<b>Sunlight resistance</b>	Excellent
<b>Gas permeability, O<sub>2</sub> cc.cm x 10<sup>-5</sup> / cm<sup>2</sup>.sec.atm</b>	5.8
<b>Gas permeability rating</b>	Fair
<b>Water absorption</b>	Good
<b>Odour</b>	Excellent
<b>ASTM methods</b>	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

Bore		Wall		Coil size		Part number		Coil size		Part number		Coil size		Part number							
inch	mm	inch	mm																		
1/8	0.5	1/16	1.6	50ft / 15m	↑	903.0005.016	903.0005.016	16ft / 5m	↑	903.0005.J16	903.0005.J16	500ft / 152m	↑	903.0005.R16	903.0005.R16						
1/2	0.8	1/16	1.6													903.0008.016	903.0008.016	903.0008.J16	903.0008.J16	903.0008.R16	903.0008.R16
1/8	1.6	1/16	1.6													903.0016.016	903.0016.016	903.0016.J16	903.0016.J16	903.0016.R16	903.0016.R16
3/2	2.4	1/16	1.6													903.0024.016	903.0024.016	903.0024.J16	903.0024.J16	903.0024.R16	903.0024.R16
1/8	3.2	1/16	1.6													903.0032.016	903.0032.016	903.0032.J16	903.0032.J16	903.0032.R16	903.0032.R16
3/16	4.8	1/16	1.6													903.0048.016	903.0048.016	903.0048.J16	903.0048.J16	903.0048.R16	903.0048.R16
1/4	6.4	1/16	1.6													903.0064.016	903.0064.016	903.0064.J16	903.0064.J16	903.0064.R16	903.0064.R16
5/16	8.0	1/16	1.6													903.0080.016	903.0080.016	903.0080.J16	903.0080.J16	903.0080.R16	903.0080.R16
1/16	1.6	3/2	2.4													903.0005.024	903.0005.024	903.0005.J24	903.0005.J24		
1/8	3.2	3/2	2.4													903.0008.024	903.0008.024	903.0008.J24	903.0008.J24		
3/16	4.8	3/2	2.4	903.0016.024	903.0016.024	903.0016.J24	903.0016.J24		903.0016.R24												
1/4	6.4	3/2	2.4	903.0032.024	903.0032.024	903.0032.J24	903.0032.J24		903.0032.R24												
5/16	8.0	3/2	2.4	903.0048.024	903.0048.024	903.0048.J24	903.0048.J24	400ft / 122m	903.0048.R24												
3/8	9.6	3/2	2.4	903.0064.024	903.0064.024	903.0064.J24	903.0064.J24	300ft / 91m	903.0064.R24												
1/2	12.7	3/2	2.4	903.0080.024	903.0080.024	903.0080.J24	903.0080.J24	200ft / 61m	903.0080.R24												
3/4	15.9	3/2	2.4	903.0096.024	903.0096.024	903.0096.J24	903.0096.J24	150ft / 46m	903.0096.R24												
1	25.4	3/2	2.4	903.0048.032	903.0048.032	903.0048.I32	903.0048.I32														
1/4	6.4	1/8	3.2	903.0064.032	903.0064.032	903.0064.I32	903.0064.I32	200ft / 61m	903.0064.R32												
3/8	9.6	1/8	3.2	903.0096.032	903.0096.032	903.0096.I32	903.0096.I32	150ft / 46m	903.0096.R32												
1/2	12.7	1/8	3.2	903.0127.032	903.0127.032	903.0127.I32	903.0127.I32														
3/4	15.9	1/8	3.2	903.0159.032	903.0159.032	903.0159.I32	903.0159.I32														
-	8.0	-	4.0	903.0080.040	903.0080.040	903.0080.I40	903.0080.I40														
-	12.0	-	4.0	903.0120.040	903.0120.040	903.0120.I40	903.0120.I40														
-	16.0	-	4.0	903.0160.040	903.0160.040	903.0160.I40	903.0160.I40														
3/8	9.6	3/16	4.8	903.0096.048	903.0096.048	903.0096.I48	903.0096.I48														
1/2	12.7	3/16	4.8	903.0127.048	903.0127.048	903.0127.I48	903.0127.I48														
3/4	15.9	3/16	4.8	903.0159.048	903.0159.048	903.0159.I48	903.0159.I48														
1	25.4	3/16	4.8	903.0190.048	903.0190.048	903.0190.I48	903.0190.I48														
1	25.4	3/16	4.8	903.0254.048	903.0254.048	903.0254.I48	903.0254.I48														

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Value for life

