

BIOPRENE® TUBING

Thermoplastic elastomer tubing

Ideal for:
**Critical
biopharmaceutical
processes requiring
accurate, reliable
and repeatable
performance**

Bioprene peristaltic pump tubing is USP Class VI and FDA compliant and suitable for biopharmaceutical and food applications. Bioprene's long peristaltic life ensures process security, thereby reducing risks in critical cGMP applications.

- USP Class VI and FDA certified and NSF51 listed for biopharmaceutical and food applications
- Fully documented biocompatibility including FDA Drug Master File
- UV opaque and fully weldable
- Sterilisable by gamma irradiation and autoclaving



BIOPRENE® TUBING

For long life and chemical compatibility

Suitable for upstream and downstream biopharmaceutical processes, Bioprene offers exceptionally long peristaltic life, ensuring process security. Bioprene demonstrates a broad chemical compatibility; especially resistance to strong acids, alkalis and oxidising agents.

Bioprene is widely applicable in biopharmaceutical manufacturing operations such as metering, transfer and filtration. It is ideal for media feed and pH control in fermentation and metering tablet coating materials.

Bioprene is also suitable for a variety of applications in the food and beverage industry; especially product transfer and metering.

Operating pressures of 0-2 bar can be achieved with Bioprene continuous tubing. A range of LoadSure tube elements increase the pressure capability up to a maximum of 7 bar.

| Bioprene | Typical Values |
|-------------------------------|---|
| Material | Thermoplastic elastomer |
| Colour/transparency | Beige/opaque |
| Spallation | Low |
| Life/hours | 313/314, 520R pumpheads -10,000 hrs 620R pumpheads - 6000 hrs |
| Certification | U SP Class VI, FDA 21CFR 177:2600 for contact with aqueous food. NSF51 listed |
| Sterilisation methods | Gamma, autoclave, EtO, ask Watson Marlow for more detail |
| Operating temperature | 5C to 80C |
| Hardness, shore A (5sec) | 62 to 68 |
| Specific gravity | 0.95 to 0.98 |
| Ultimate tensile strength psi | 798 to 9999 |
| Elongation at break, % | 340 to 600 |
| UV resistance | Excellent |
| Permeability rating | Fair |
| Water absorption | Low |

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

Watson-Marlow is a trademark of Watson-Marlow Limited. Disclaimer: The information contained in this document is believed to be correct but Watson-Marlow Limited accepts no liability for any errors it contains, and reserves the right to alter specifications without notice. LoadSure is a trademark of Watson-Marlow Limited. Please state the product code when ordering pumps and tubing.

| Tube ordering codes | | | | | | |
|---------------------|------|------|------|--------------|--------------|--------------|
| Bore | | Wall | | Coil size | | |
| mm | inch | mm | inch | 15m/50ft | 5m/16ft | 152m/500ft |
| 0.5 | 1/50 | 1.6 | 1/16 | 933.0005.016 | 933.0005.J16 | 933.0005.R16 |
| 0.8 | 1/32 | 1.6 | 1/16 | 933.0008.016 | 933.0008.J16 | 933.0008.R16 |
| 1.6 | 1/16 | 1.6 | 1/16 | 933.0016.016 | 933.0016.J16 | 933.0016.R16 |
| 2.4 | 3/32 | 1.6 | 1/16 | 933.0024.016 | 933.0024.J16 | 933.0024.R16 |
| 3.2 | 1/8 | 1.6 | 1/16 | 933.0032.016 | 933.0032.J16 | 933.0032.R16 |
| 4.8 | 3/16 | 1.6 | 1/16 | 933.0048.016 | 933.0048.J16 | 933.0048.R16 |
| 6.4 | 1/4 | 1.6 | 1/16 | 933.0064.016 | 933.0064.J16 | 933.0064.R16 |
| 8.0 | 5/16 | 1.6 | 1/16 | 933.0080.016 | 933.0080.J16 | 933.0080.R16 |
| 1.6 | 1/16 | 2.4 | 3/32 | 933.0016.024 | 933.0016.J24 | 933.0016.R24 |
| 3.2 | 1/8 | 2.4 | 3/32 | 933.0032.024 | 933.0032.J24 | 933.0032.R24 |
| | | | | | | 122m/400ft |
| 4.8 | 3/16 | 2.4 | 3/32 | 933.0048.024 | 933.0048.J24 | 933.0048.R24 |
| | | | | | | 91m/300ft |
| 6.4 | 1/4 | 2.4 | 3/32 | 933.0064.024 | 933.0064.J24 | 933.0064.R24 |
| | | | | | | 61m/200ft |
| 8.0 | 5/16 | 2.4 | 3/32 | 933.0080.024 | 933.0080.J24 | 933.0080.R24 |
| | | | | | | 46m/150ft |
| 9.6 | 3/8 | 2.4 | 3/32 | 933.0096.024 | 933.0096.J24 | 933.0096.R24 |
| 4.8 | 3/16 | 3.2 | 1/8 | 933.0048.032 | - | - |
| | | | | | 3m/10ft | 61m/200ft |
| 6.4 | 1/4 | 3.2 | 1/8 | 933.0064.032 | 933.0048.I32 | 933.0064.R32 |
| | | | | | | 46m/150ft |
| 9.6 | 3/8 | 3.2 | 1/8 | 933.0096.032 | 933.0096.I32 | 933.0096.R32 |
| 12.7 | 1/2 | 3.2 | 1/8 | 933.0127.032 | 933.0127.I32 | - |
| 15.9 | 5/8 | 3.2 | 1/8 | 933.0159.032 | 933.0159.I32 | - |
| 8.0 | - | 4.0 | - | 933.0080.040 | 933.0080.I40 | - |
| 12.0 | - | 4.0 | - | 933.0120.040 | 933.0120.I40 | - |
| 16.0 | - | 4.0 | - | 933.0160.040 | 933.0160.I40 | - |
| 9.6 | 3/8 | 4.8 | 3/16 | 933.0096.048 | 933.0096.I48 | - |
| 12.7 | 1/2 | 4.8 | 3/16 | 933.0127.048 | 933.0127.I48 | - |
| 15.9 | 5/8 | 4.8 | 3/16 | 933.0159.048 | 933.0159.I48 | - |
| 19.0 | 3/4 | 4.8 | 3/16 | 933.0190.048 | 933.0190.I48 | - |
| 25.4 | 1 | 4.8 | 3/16 | 933.0254.048 | 933.0254.I48 | - |