

## **PUMPSIL® TUBING**

#### Post-cured platinum silicone tubing

for additional protection from contamination during the pumping process

# Post-cured for purity

Developed for the biopharmaceutical industry, Pumpsil offers an ultra-smooth bore which helps minimise protein binding and ensure high purity in the finished product. Pumpsil is fully post-cured, a process which removes cytotoxic cyclic siloxanes and other volatile process aids, resulting in an exceptionally pure tube.

#### Accurate for longer

Another major benefit of post-curing is increased cross-linking between molecules. These tighter molecular bonds maximize resistance to flexing stress. The tubing fatigues more slowly. It retains its original shape

for longer and dispensed volumes remain accurate for longer



When purity is your business, you demand it from your suppliers. Its purity is why post-cured Watson-Marlow Pumpsil leads the way in silicone pump tubing

- Ultra-smooth bore to control protein binding and bacterial growth. Tight surface cure. Non-tacky surface
- Fully documented bio-compatibility and comprehensive validation pack
- Absolute traceability with laser-etched part number, lot number and use-by date
- Excellent flow stability for accurate process control
- Comprehensive stock of a wide range of sizes
- Excellent general chemical resistance and life
- Suitable for use in disposable applications
- USP Class VI validation

#### Watson-Marlow Pumpsil: high-purity tubing to give you confidence in your sterile process

## When purity is your business

Pumpsil is widely used for single use and disposable Bore Wall filling applications, handling, dispensing, metering, Coil size Part number Coil size Part number Coil size Part number inch mm inch mm transfer and filtration of pharmaceuticals, pH control and media feed in fermentation and bioreactors, and 913.A005.016 913.AJ05.016 913.B005.R16 1/50 0.5 1/16 1.6 manufacturing processes using fluids, such as 913.A008.016 913.B008.R16 1/16 1.6 913.AJ08.016 metering sterilizing fluids on to bandages. 1/20 0.8 913.A012.016 913.AJ12.016 913.B012.R16 1.2 1/16 1.6 First choice dispensing tube for 913 A016 016 913.AJ16.016 913 B016 B16 superior dispensing accuracy. 1.6 1/16 16 500ft / 152m Bottle and vial filling applications. 2.4 1/16 1.6 913.A024.016 913.AJ24.016 913.B024.R16 Disposable dispensing systems. 1/16 1.6 913.A032.016 913.AJ32.016 913.B032.R16 3.2 913.A048.016 913.AJ48.016 913.B048.R16 3/10 4.8 1/16 1.6 Pumpsil Typical values 6.4 1/16 1.6 913.A064.016 913.AJ64.016 913.B064.R16 Platinum-cured silicone Material 913 A080 016 913 AJ80 016 400ft / 122m 913 B080 B16 5/16 80 1/16 16 16ft / 5m Colour / transparency Translucent 913.A005.024 913.B005.R24 0.5 3/30 2.4 913.AJ05.024 Spallation Good 313/314 pumpheads, 230; 520R pumpheads: 913.A008.024 913.AJ08.024 913.B008.R24 Life, hours 0.8 3/32 2.4 200; 620R pumpheads: 230 500ft / 152m 913.A016.024 913.AJ16.024 913.B016.R24 1.6 <sup>3</sup>/32 2.4 USP Class VI, FDA regulations 21 CFR 1/16 177.2600 for contact with aqueous food. ISO 10993-1, USDA and 3A approved Certification 24 913 A032 024 913 AJ32 024 913 B032 B24 3.2 <sup>3</sup>/32 Sterilisation methods Gamma, autoclave, EtO 2.4 913.A048.024 913.AJ48.024 400ft / 122m 913.B048.R24 4.8 <sup>3</sup>/32 3/16 -20C-80C Operating temperature 6.4 <sup>3</sup>/32 2.4 913.A064.024 913.AJ64.024 300ft / 91m 913.B064.R24 50ft / 15m Hardness, shore A (5 sec) 60 3/20 2.4 913.A080.024 913.AJ80.024 200ft / 61m 913.B080.R24 5/10 8.0 Specific gravity 1.16 <sup>3</sup>/32 2.4 913.A096.024 913.AJ96.024 150ft / 46m 913.B096.R24 9.6 279 Tear B, ppi 913.A048.032 913.A048.I32 1/8 3.2 300ft / 91m 913.B048.R32 4.8 Ultimate tensile 1/8 3.2 913.A064.032 913.A064.I32 200ft / 61m 913.B064.B32 1306 6.4 strength, psi 913.A096.032 913.A096.I32 913.B096.R32 3/0 1/8 3.2 150ft / 46m Elongation at break, % 861 9.6 1/8 3.2 913.A127.032 913.A127.I32 100ft / 30m 913.B127.R32 12.7 Tensile stress at 100% 118 elongation, psi 913.A159.032 913.A159.I32 5/2 15.9 1/8 32 Compression set, % 18 4.0 913.A080.040 913.A080.I40 8.0 Weather resistance Excellent 40 913 A120 I40 . 913.A120.040 10ft / 3m 12.0 Sunlight resistance Excellent 16.0 4.0 913.A160.040 913.A160.I40 Gas permeability O2cc.cm x 10%/ 400 913 A096 048 913 A096 I48 96 3/16 48 cm<sup>2</sup>.sec.atm Gas permeability rating Poor 913.A127.048 913.A127.I48 12.7 3/16 4.8 Custom sizes are Water absorption Good 15.9 3/16 48 913 A159 048 913 A159 48 available to order, as Odour Excellent are other specific 913.A190.048 913.A190.I48 3/4 19.0 3/16 4.8 ASTM methods Hardness: ASTM D 2240; Specific gravity: ASTM D 792; Tear B, Ultimate requirements 913.A254.048 913.A254.I48 25.4 3/16 4.8 tensile strength, Elongation at break, Tensile stress at 100% elongation: ASTM D 412

#### Pumpsil for purity

The Watson-Marlow Pumps Group has direct operations in 16 countries: United States | Mexico | Belgium | Brazil | China | Denmark | France | Germany | Italy | Korea | Malaysia | Netherlands | South Africa | Sweden | Switzerland | United Kingdom

> Distributors in over 50 countries. For local contact information please visit: www.watson-marlow.com

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