

PUMPSIL®

Watson-Marlow Bredel Pumpsil® platinum-cured silicone tubing



Our promise to you:
LaserTraceability™

The tubing is the heart of a peristaltic pump...

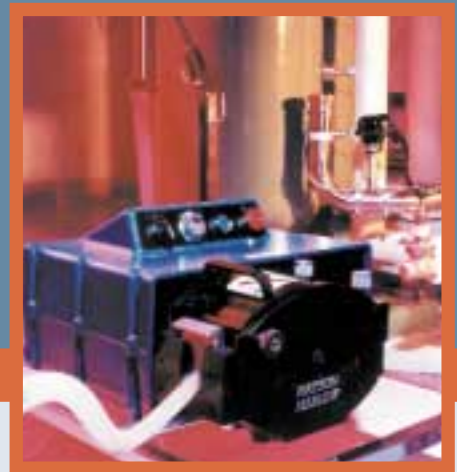
Watson-Marlow Bredel leads the world in peristaltic pumps. Now we lead the way in tube manufacture. Pumpsil[®], our own platinum-cured silicone tubing, gives you the optimal performance from your pump. We produce it to the highest standards in a clean-room plant where quality control comes first.

We know the properties a pump tube needs:

- Absolute traceability
- Full bio-pharm certification – USP Class VI, ISO10993
- Class J, clean room manufacture to ISO9001 2000, cGMP guidelines

What Pumpsil[®] offers...

- Laser-etched lot number end-to-end ensures full traceability
- High level of purity and clarity: very low leachables
- Ultra-smooth bore to control protein binding and bacterial growth
- Excellent flow stability for accurate dispensing
- Tight surface cure, with non-tacky surface



Certification

Pumpsil[®] meets or exceeds the standards laid down by quality-testing authorities worldwide.

- **USP class VI requirements**
- **European Pharmacopoeia 3.1.9**
- **ISO10993 requirements**
- **FDA regulations CFR 177.2600 for contact with food**
- **USDA standards**
- **3A standards**

A comprehensive validation pack including full technical specifications and relevant test reports is available in hard copy form or on CD ROM.

That's why Watson-Marlow Bredel produces their own.



"A lot of benefit to it ... the regulators (FDA) would see it as a very good step."

Patheon

"Brilliant! Lot numbering is very important to us."

Lonza Biologics



Traceability is fundamental in the biopharm industry, where validated processes must be demonstrated. In response to this vital requirement from our customers, every Watson-Marlow Bredel Pumpsil® tube is permanently laser-marked end-to-end with part number, lot number and use-by date. Pumpsil® offers full traceability.

Laser coding produces an indelible print which uses no ink and has no effect on tube performance. It means that, for the first time, lot traceability is carried through from box to bag to the tube itself.

.. and every length is traceable

Easy to sterilize

Pumpsil® can be sterilized by autoclaving at 250F (121C) at 14.5psi (1bar) for 30 minutes. Alternatively: gamma radiation up to 3.5Mrads; or EtO (ethylene oxide) sterilization.



- Laser-etched
- Super smooth bore
- Ultra-pure
- Perfect accuracy and performance

We don't just laser-etch the tube. Each length is sealed in a polythene bag, labeled with the part number, lot number and use-by date. The boxes are labeled in the same way. We maintain a complete record of every tube lot – from raw materials, to product.

That's traceability.

The result:

A tubing range to match our pumps in quality and operational advantages: reliable, pure, durable, and highly precise for accurate dispensing – backed by global certification. In addition, we offer next-day delivery at prices that guarantee value for money.



Double bagging is available as an option.

The right stuff.

Our custom silicone achieves precision, consistency and durability. The tubing is "addition cured" and is entirely free of the 2,4 DCBA residue associated with peroxide tubing.

We manufacture in an ISO 14644-1 Class 7 (Class J/10,000) clean room air conditioned to maintain constant temperature and humidity. Our customers can be sure of a product without impurities.

Each stage of manufacture is performed by state-of-the-art production machinery, supervised by highly skilled personnel.

We achieve an accuracy which is typically a fraction of the published tolerance.

100% on-line inspection plus off-line checks during every run ensure that all Pumpsil® tubing is validated to the highest standards.

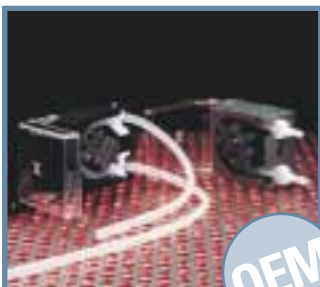


GAS/DWG	
ACTUAL TUBE DIAMETER	4.24
TUBE MAXIMUM TOLERANCE	4.53
TUBE MINIMUM TOLERANCE	3.97
AVERAGE WALL THICKNESS	1.70
WALL MAXIMUM TOLERANCE	1.80
WALL MINIMUM TOLERANCE	1.66

Closed loop control using a laser micrometer ensures tight tubing tolerances

Wherever you pump, you'll benefit from using Watson-Marlow Bredel Pumpsil®: the experts' pump tubing from the tubing pump experts

102R OEM pumpheads with continuous tubing and elements



OEM inquiries welcome

OEM

400 Series single and multi-channel laboratory pumps



100 and 200 Series pumps at Marine Biology Unit



505U/RL pump in scientific and educational research project



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HB0170

Whatever you require

- Watson-Marlow Bredel Pumpsil® platinum-cured tubing is available in bores from 0.5mm to 25.4mm and wall thicknesses from 1.6mm to 4.8mm – at **competitive prices**.
- Because we extrude Pumpsil® ourselves, we can produce **custom sizes to order**. Options include variations of bore size, wall thickness, reel length and packaging. We can also supply tube featuring **custom laser-etching**.
- Please contact your local Watson-Marlow Bredel Pumpsil® representative to discuss your requirements.
- Pumpsil® is available from **stock for fast delivery**.

Put Pumpsil® in your process

Platinum-cured silicone tubing

Bore mm	Wall mm	Tubing Number	Product code
0.5	1.6	112	913.A005.016
0.8	1.6	13	913.A008.016
1.6	1.6	14	913.A016.016
3.2	1.6	16	913.A032.016
4.8	1.6	25	913.A048.016
6.4	1.6	17	913.A064.016
8	1.6	18	913.A080.016
0.5	2.4		913.A005.024
0.8	2.4		913.A008.024
1.6	2.4	119	913.A016.024
3.2	2.4	120	913.A032.024
4.8	2.4	15	913.A048.024
6.4	2.4	24	913.A064.024
8	2.4	121	913.A080.024
9.6	2.4	122	913.A096.024
6.4	3.2	26	913.A064.032
9.6	3.2	73	913.A096.032
12.7	3.2	82	913.A127.032
15.9	3.2	184	913.A159.032
8	4	185	913.A080.040
12	4	186	913.A120.040
16	4	187	913.A160.040
9.6	4.8	193	913.A096.048
12.7	4.8	88	913.A127.048
15.9	4.8	189	913.A159.048
19	4.8	191	913.A190.048
25.4	4.8	92	913.A254.048

CUSTOM SIZES AVAILABLE



Marprene



Bioprene



Sta-Pure



PVC



Neoprene



Fluorel



Chem-Sure

- Twelve tubing materials in bore sizes 0.13mm to 25.4mm
 - Autoclavable Marprene, Bioprene, STA-PURE and Chem-Sure
- STA-PURE and CHEM-SURE are trademarks of W.L. Gore & Associates Inc.

Call 800-282-8823

or visit www.pumpsil.com

for further information on Pumpsil®, including a technical validation pack, technical specifications and special order quotations. Visit www.watson-marlow.com for further details on all Watson-Marlow Bredel products.

TIMOTHY GUY DESIGN