



MASTERFLEX® PharmaPure® and PharMed® BPT Pump Tubing

Masterflex PharmaPure Low Spallation Pump Tubing

Features/Benefits

- Ultra-low particulate spallation
- Outlasts silicone tubing in peristaltic pumps up to 30 times
- Provides an excellent barrier with low permeability
- Withstands autoclaving and sterilization
- Meets all USP Class VI and FDA criteria

Masterflex PharmaPure tubing is a premium peristaltic pump tubing that combines unsurpassed pump life with ultra-low particle spallation. Developed especially for pharmaceutical, biotechnology, and laboratory applications, this tubing provides superior flex life; excellent wear properties; low permeability and superior adsorption characteristics as compared to silicone and other alternate materials. Recommended for use in all Masterflex P/S®, I/P®, and B/T® pump heads, except for P/S and I/P High-Performance pump heads.

Applications

- Cell harvest and media process systems
- Vaccine manufacturing
- Bioreactor process lines
- Sterile filling
- Diagnostic test products
- Production filtration and fermentation

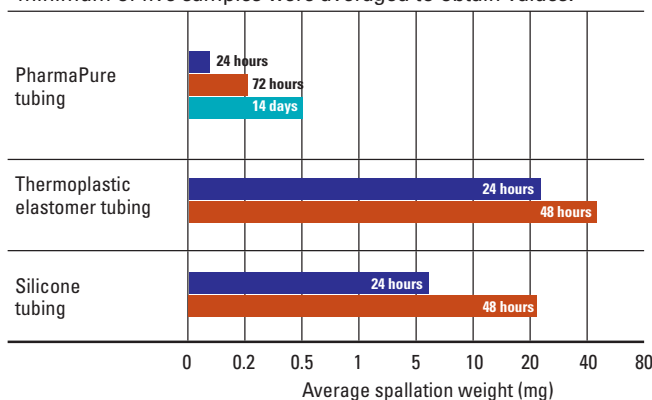


With its superior flex life and low spallation rate, PharmaPure tubing is an ideal option in biotechnology and laboratory applications. The inner layer protects sensitive cell cultures. The tubing is shown at right on Masterflex I/P drive 77420-00 and I/P® Easy-Load® pump head 77601-60.



Spallation Rate Tubing Comparison

The following test data summarizes the spallation results of select tubing used in a peristaltic pump. In each case 1/4" ID tubing was used in a three-roller pump head operating at 600 rpm under room temperature 23°C (73°F). Results from a minimum of five samples were averaged to obtain values.



Masterflex PharMed BPT Biocompatible Pump Tubing

Features/Benefits

- Provides an excellent barrier with low permeability
- Outlasts silicone tubing in peristaltic pumps up to 30 times
- Withstands autoclaving and sterilization
- Temperature resistant from -51 to 135° (-60 to 275°F)
- Withstands repeated CIP and SIP cleaning and sterilization
- Meets all USP Class VI and FDA criteria

Masterflex PharMed BPT biocompatible tubing is less permeable to gases and vapors than silicone tubing and is ideal for protecting sensitive cell cultures, fermentation, synthesis, separation, purification, and process monitoring and control systems. PharMed BPT tubing has been formulated to withstand the rigors of peristaltic pumping action while providing the biocompatible fluid surface required in sensitive applications. Recommended for use in all Masterflex P/S, I/P, and B/T pump heads.

Applications

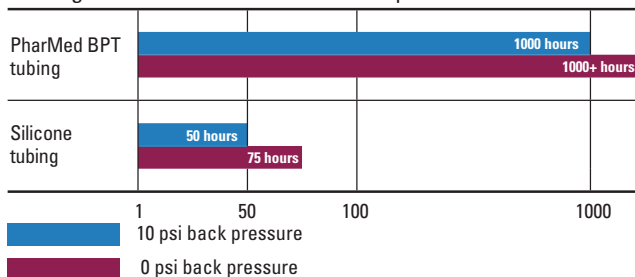
- Diagnostic test product manufacturing
- Cell harvest and media process systems
- Vaccine manufacturing
- Bioreactor process lines
- Production filtration and fermentation
- Sterile filling
- Shear-sensitive fluid transfer



Formulated to last in tough peristaltic pumping conditions, PharMed BPT tubing is an excellent choice for pharmaceutical and biotechnology applications. The tubing is shown at right on Masterflex P/S drive 07523-60 and Easy-Load 3 pump head 77800-60.

Comparative Peristaltic Pump Tubing Life

The table below depicts hours until failure of 1/4" ID x 3/8" OD tubing. In each case, a three-roller pump head was utilized operating at 600 rpm under room temperature 23°C (73°F). Tubing life is measured in hours of use prior to failure.



Note: The performance of tubing in peristaltic pumping applications is affected by the conditions of use and equipment utilized, along with size and wall thickness of the tubing tested. The data above are presented for information only and should not be utilized for specification purposes.

Gore™ Sta-Pure® and Chem-Sure® Tubing for Masterflex® Pumps

Features/Benefits

- Durable and dependable tubing, ideal for your most critical peristaltic pump applications
- Long-life performance—over 1000 hours at 60 psi
- Maintains stable flow rates
- Spallation-free to protect fluid purity
- Withstands repeated CIP and SIP cleaning and sterilization
- Meets USP Class VI and FDA criteria
- Recommended for use in Masterflex pump heads: P/S® Standard, Easy-Load®, Easy-Load II, High-Performance; and I/P® Standard, Easy-Load, and High-Performance

Applications

- Biotechnology
- Cell harvesting
- Tablet coating
- Media process systems
- Sterile filling
- Metering systems
- Production filtration and fermentation

STA-PURE Tubing performs exceedingly well in the most sensitive and sanitary production environments. It is completely biocompatible for pharmaceutical processes, while its nontoxic composition is also ideal for food and beverage processing.

Made from a unique composite of platinum-cured silicone and expanded PTFE, STA-PURE tubing has exceptional longevity ideal for high-pressure applications and processes where premature tubing failure is costly. The composite structure provides superior resistance to cracking and abrasion—virtually eliminating spallation within the tubing's inner surface. This structure minimizes the risk of filter plugging, maintains a cleaner process stream and ultimately reduces any downtime normally experienced when spallation occurs.

CHEM-SURE Tubing has excellent chemical resistance allowing it to handle many aggressive chemicals including organic solvents such as methyl ethyl ketone, toluene, and acetone. Additionally, its unique structure provides superior burst resistance compared to conventional unreinforced extruded tubing. By maintaining stable flow rates, handling higher pressures, and eliminating spallation, CHEM-SURE tubing provides fewer change outs and higher-purity fluid handling.



STA-PURE tubing (96200-series) has a smooth inner bore which eliminates bacterial growth.



Spallation debris collected onto a microporous filter membrane after recirculating water for 48 hours through TPE tubing (left) and STA-PURE tubing (right).

CHEM-SURE tubing 96210-26 shown with Masterflex I/P drive 77410-10, Easy-Load pump head 77601-10, and NPT pipe adapters 06373-92

