

Long Life at High Pressures

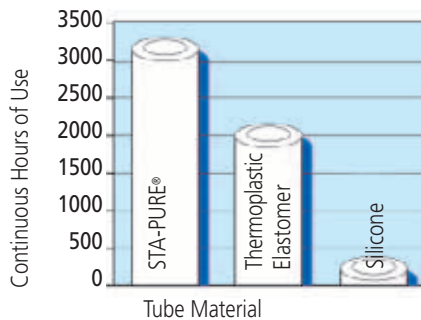
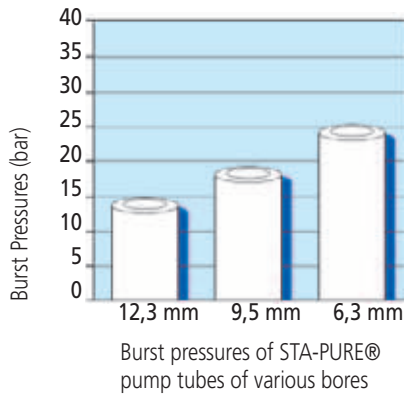


e.g. for the Flowmaster® metering pump,
13 liters/min., IP-65 rated dust-tight and washdown
pump, ideal for industrial use

- Minimal spallation
- Exhibits 18 times the life of silicone rubber tubing
- Can be used for back pressures up to 60 psi (4.1 bar)
- Burst strength approaches 360 psi (25 bar)
- Extremely stable flow rate over time

Applications:

Tangential flow filtration and other high-pressure applications
Transfer, and in-line steam-sterilization operations



Spallation debris collected onto a microporous filter membrane after recirculating water for 48 hours through thermoplastic elastomer tubing (left) and STA-PURE® tubing (right). The thermoplastic elastomer tube produces particles of rubber, inorganic filler, and plasticizer.

Long life eliminates tube rotation

The exceptional longevity of the STA-PURE® peristaltic pump tube is extremely beneficial for tangential flow filtration and other high-pressure applications. At a back pressure of 60 psi (4,1 bar), this pump tube lasts over 1,000 hours with continuous use at 200 rpm. Under transfer conditions, it exhibits 18 times the life of silicone rubber tubing, and nearly twice the life of thermoplastic elastomer tubing with continuous pumping at 360 rpm. Tube rotation is eliminated, and the risk of premature tube rupture is significantly reduced.

Smooth bore reduces contamination

The interior of the STA-PURE® peristaltic pump tube, before use, is three times smoother than thermoplastic elastomer tubing. During pumping, a thermoplastic elastomer tube develops grooves where the tube creases, which causes rubber particles to be expelled into the process stream. The surface roughness increases from 1,6 microns to 3,6 microns in RMS roughness, while the STA-PURE® peristaltic pump tube shows only a slight increase in roughness, and no grooves develop.

Superior toughness reduces risk of filter plugging

The exceptional toughness of the composite structure of the new STA-PURE® peristaltic pump tube provides superior resistance to cracking, and subsequent spallation is virtually eliminated. This means that the risk of filter plugging can be significantly reduced without sacrificing pump tube life. As a result, process streams stay cleaner, which reduces filtration requirements.

Highest burst pressure, unique composite construction

With burst strength approaching 360 psi (25 bar), the STA-PURE® tube can operate at elevated pressures for filtration, transfer, and in-line steam sterilization operations.

STA-PURE® Product Configuration

- Tubing ID ranges from 1.6 mm to 40 mm
- Passes USP Class VI, cytotoxicity and physicochemical testing
- Extremely stable flow rate over time
- FDA Type II Material Master File is available for citation
- Operating pressure up to 60 psi (4.1 bar)
- Can be in-line steam sterilized



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Solutions for Fluid Handling



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