

Masterflex® Precision Pump Tubing

- Tubing Life
- Pressure Guidelines
- Vacuum/Suction Lift
- Gas Permeability

Ensure top performance with your Masterflex® pump head by using precision-extruded Masterflex® tubing to deliver accurate flow rates. Twenty-one different material formulations are available.

To order the correct tubing:

1. Consider all the aspects of your application: flow rate, pressure, etc.
2. Review the chemical compatibility data on pages 1186–1187, as well as specific information about individual tubing materials on pages 1182–1185.
3. Use the “Tubing Material Life Comparison” graph and table at right to select the tubing with the longest life.

If your application requires the generation of high pressure or a strong vacuum/suction lift, refer to the “Pressure Guidelines” and “Vacuum/Suction Lift” graphs at right. These graphs can assist you in determining which tubing will pressurize most rapidly or develop the strongest vacuum/suction lift in your application.

If your application requires pumping air-sensitive gases or liquids, refer to the “Gas Permeability” graph below right to choose the tubing with the lowest permeability.

If you are pumping a viscous fluid, refer to the “Tubing Selection Guide for Pumping Viscous Fluids” graph on page 1189 to select the best tubing size.

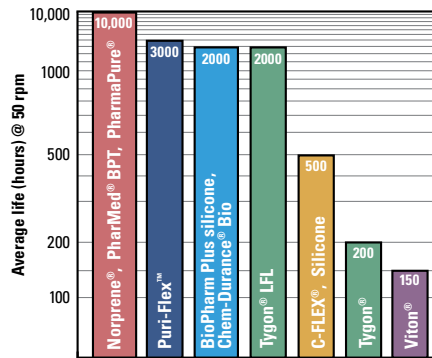
FREE MASTERFLEX® Tubing Test Kit!

Our FREE Tubing Test Kit is a simple way to test your chemicals against different tubing formulations. Kit contains samples of 17 different pump tubing formulations, formulation descriptions, a selection guide, instructions on how to test your tubing, and complete ordering information. Call today! Request item 00101-10.

Call or go online to request your FREE test kit today!



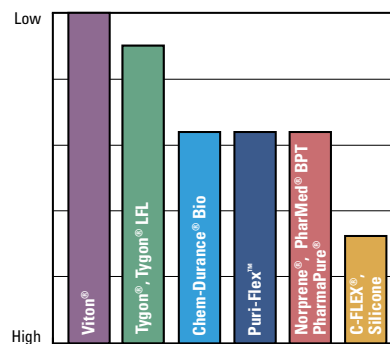
Tubing Material Life Comparison



The graph above displays the average tubing life in hours of Masterflex® tubing. This tubing was tested in a Masterflex® pump head continuously pumping water at 70°F (21°C) and 0 psig (0 bar). Tubing life is calculated to time of failure or of 50% reduction in flow rate, whichever comes first. Reduce drive speeds to extend tubing life. Average tubing life for L/S® 16, I/P® 73, and B/T® 91 tubing at various speeds are listed in the table below.

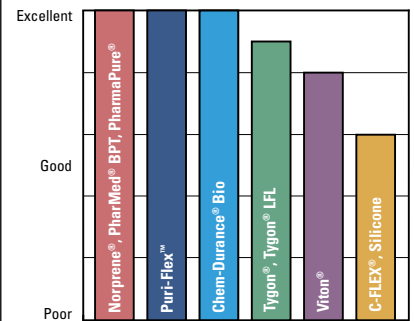
Tubing class	L/S® 16		I/P® 73		B/T® 91	
	50	600	50	600	50	321
Norprene®, PharMed® BPT, PharmaPure®	10,000	1000	4000	800	3000	600
Tygon® LFL	1600	700	800	400	600	200
C-FLEX®, Silicone	500	100	400	80	250	100
Tygon®	200	50	180	35	100	30
Viton®	150	30	120	25	—	—

Gas Permeability



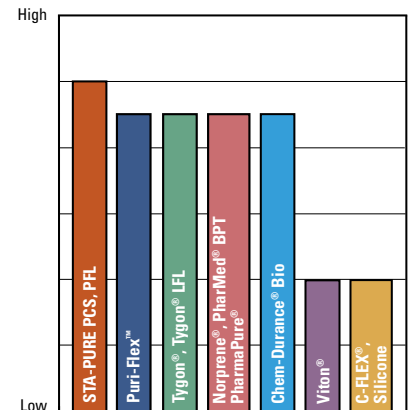
To minimize permeation of gases through the tubing wall, use firm tubing. Masterflex® L/S® and I/P® High-Performance precision tubing (L/S® 15, L/S® 24, L/S® 35, L/S® 36, I/P® 70, I/P® 88, and I/P® 89) is less permeable than Precision tubing sizes. See pages 1182–1185 for tubing permeability to various gases.

Vacuum/Suction Lift



Vacuum/suction lift capability depends greatly on the tubing's ability to maintain its shape. Thus, a firmer tubing type in the smallest possible bore size will generate a stronger vacuum for your application. Higher drive speeds are required to generate the strongest possible vacuum with some tubing sizes.

Pressure Guidelines



All tubing types accept pressure, but the firmer formulations accept more pressure than the softer types of tubing.

Where to Order TUBING

C/L® Tubing	1193
L/S® Tubing	1211–1217
I/P® Tubing	1254–1258
B/T® Tubing	1278

