

## B/T<sup>®</sup> PERFECTPOSITION<sup>™</sup> PUMP TUBING

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

Ensure top performance with your Masterflex<sup>®</sup> pump head by using precision-extruded Masterflex<sup>®</sup> tubing to deliver accurate flow rates. Ten different material formulations are available for B/T<sup>®</sup> pumps.

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 30–31, as well as specific information about individual tubing materials on pages 22–29.
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 help you determine which tubing will pressurize the 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 191 to select the best tubing size.

### FREE TUBING TEST KIT!

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

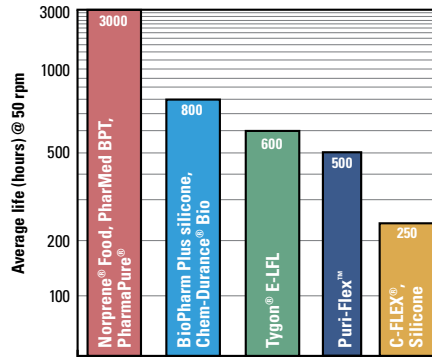
**Call or go online to request your FREE test kit today!**



### WHERE TO ORDER TUBING

|                              |         |
|------------------------------|---------|
| C/L <sup>®</sup> TUBING..... | 34, 36  |
| L/S <sup>®</sup> TUBING..... | 68–73   |
| I/P <sup>®</sup> TUBING..... | 126–130 |
| B/T <sup>®</sup> TUBING..... | 153     |

### TUBING MATERIAL LIFE COMPARISON



The graph above displays the average tubing life in hours of Masterflex<sup>®</sup> B/T<sup>®</sup> 91 tubing. This tubing was tested in a Masterflex<sup>®</sup> RapidLoad<sup>®</sup> pump head continuously pumping water at 21°C (70°F) 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<sup>®</sup> 16, I/P<sup>®</sup> 73, and B/T<sup>®</sup> 91 tubing at various rpm are listed in the table below.

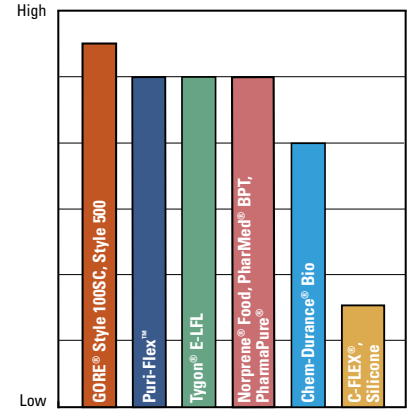
| Tubing class  | L/S <sup>®</sup> 16 |      | I/P <sup>®</sup> 73 |     | B/T <sup>®</sup> 91 |     |
|---|---------------------|------|---------------------|-----|---------------------|-----|
|   | 50                  | 600  | 50                  | 600 | 50                  | 321 |
| Norprene <sup>®</sup> , PharMed <sup>®</sup> BPT, PharmaPure <sup>®</sup> | 10,000              | 1000 | 4000                | 800 | 3000                | 600 |
| Puri-Flex <sup>™</sup> , C-Flex ULTRA                                     | 5000                | 1000 | 3000                | 500 | 500                 | 100 |
| Tygon <sup>®</sup> E-LFL  | 2500                | 600  | 800                 | 400 | 600                 | 200 |
| C-FLEX <sup>®</sup> , Silicone  | 500                 | 100  | 400                 | 80  | 250                 | 100 |
| Tygon <sup>®</sup> E-Food   | 320                 | 80   | —                   | 125 | —                   | —   |
| Tygon <sup>®</sup> E-Lab  | 320                 | 80   | 180                 | 380 | —                   | —   |
| Viton <sup>®</sup>  | 150                 | 30   | 120                 | 25  | —                   | —   |

### NOTES

Use only Masterflex<sup>®</sup> tubing with Masterflex<sup>®</sup> pumps to ensure optimal performance. Use of other tubing may void applicable warranties.

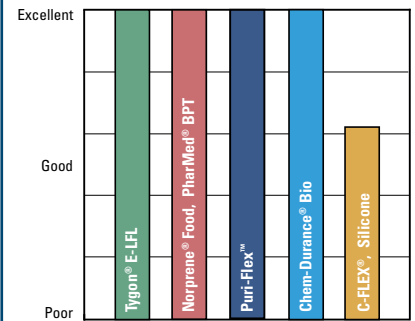


### PRESSURE GUIDELINES



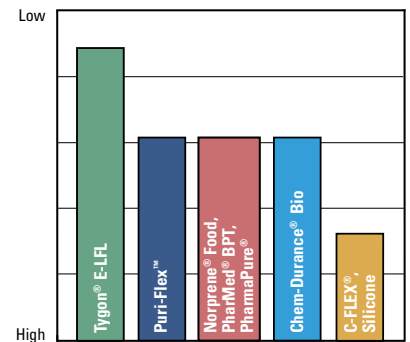
All tubing types accept pressure, but the firmer formulations accept more pressure than the softer types of tubing.

### 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.

### GAS PERMEABILITY



To minimize permeation of gases through the tubing wall, use firm tubing. See pages 20–23 for tubing permeability to various gases.

## B/T® PERFECTPOSITION™ PUMP TUBING

