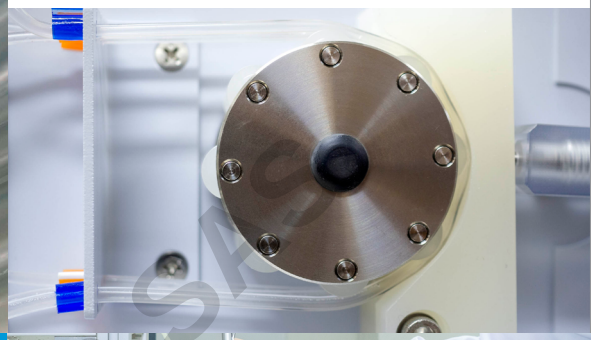


TYGON®
Excellence By Design





# Tygon® E-LFL

## Tubing for Laboratory Applications

Tygon® E-LFL has been tested rigorously to ensure that it meets the the physical standards of 1,000 hours of peristaltic pump tubing life at 0 psi back pressure and low particulate spallation. Non-aging characteristics and broad chemical resistance provides users with versatility for a wide variety of laboratory applications.

### Optimal Peristaltic Pump Performance

Crystal-clear Tygon® E-LFL tubing is formulated specifically for use in peristaltic pump applications. It has a longer pump life not only at 0 psi but also at back pressure of up to 25 psi. With its superior flex life characteristics, Tygon® E-LFL tubing reduces downtime due to pump tubing failure. Our test demonstrated reduced particle spallation, which eliminates the need for frequent downstream filter replacements and diminishes the risk of sensitive-fluid contamination.

### Typical Applications

- Wide range of liquid transfer in labs
- Surfactant delivery
- Shear-sensitive fluid transfer

### Features and Benefits

- Long flex life – reduces downtime due to pump failure
- Extremely low particle spallation – reliable for sensitive-fluid applications
- Contains no BPA or phthalates

### Regulatory Compliance*

- REACH
- OEHHA California's Proposition 65

* For complete compliance information and appropriate use instructions, please refer to the detailed document of compliance. The complete compliance information and use instructions can be found at www.Tygon.com.

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SAINT-GOBAIN

# Tygon® E-LFL

www.processsystems.saint-gobain.com

## Tygon® E-LFL

| Part Number | ID | | OD | | Wall Thickness | | Length | | Min. Bend Radius | | Max. Working Pressure | | Vacuum Rating | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | (in.) | (mm) | (in.) | (mm) | (in.) | (mm) | (ft.) | (m) | (in.) | (mm) | 73°F (psi) | 23°C (bar) | inHg at 73°F | mmHg at 23°C |
| AVX42003 | 1/16 | 1,6 | 3/16 | 4,8 | 1/16 | 1,6 | 25 | 7,62 | 1/4 | 6,4 | 50 | 3,5 | 29.9 | 760 |
| AVX42007 | 1/8 | 3,2 | 1/4 | 6,4 | 1/16 | 1,6 | 25 | 7,62 | 1/2 | 12,7 | 34 | 2,3 | 29.9 | 760 |
| AVX42012 | 3/16 | 4,8 | 5/16 | 7,9 | 1/16 | 1,6 | 25 | 7,62 | 3/4 | 19,0 | 25 | 1,7 | 29.9 | 760 |
| AVX42017 | 1/4 | 6,4 | 3/8 | 9,5 | 1/16 | 1,6 | 25 | 7,62 | 1 | 25,4 | 20 | 1,4 | 15.0 | 381 |
| AVX42019 | 1/4 | 6,4 | 1/2 | 12,7 | 1/8 | 3,2 | 25 | 7,62 | 3/4 | 19,0 | 35 | 2,4 | 29.9 | 760 |
| AVX42022 | 5/16 | 7,9 | 7/16 | 11,1 | 1/16 | 1,6 | 25 | 7,62 | 1-1/4 | 31,75 | 16 | 1,1 | 10.0 | 254 |
| AVX42029 | 3/8 | 9,5 | 5/8 | 15,9 | 1/8 | 3,2 | 25 | 7,62 | 1 | 25,4 | 25 | 1,7 | 29.9 | 760 |
| AVX42038 | 1/2 | 12,7 | 3/4 | 19,0 | 1/8 | 3,2 | 25 | 7,62 | 1-1/2 | 38,1 | 20 | 1,4 | 20.0 | 508 |
| AVX06057 | 3/4 | 19,0 | 1-1/4 | 31,75 | 1/4 | 6,4 | 10 | 3,04 | 1-3/4 | 44,4 | 24 | 1,7 | 29.9 | 760 |
| AVX06064 | 1 | 25,4 | 1-3/8 | 34,9 | 3/16 | 4,8 | 10 | 3,04 | 3-1/4 | 82,5 | 15 | 1,0 | 5.0 | 127 |

Working pressures are calculated at a 1:5 ratio relative to burst pressure using ASTM D1599.

## Typical Physical Properties

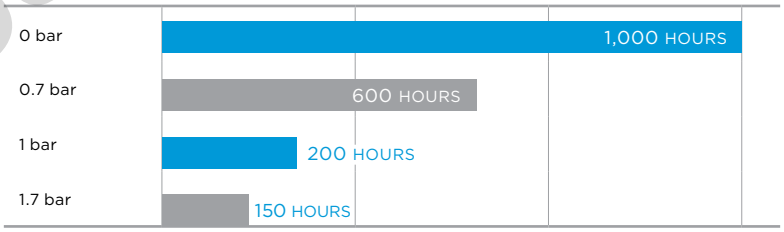
| Property | ASTM Method | Value or Rating |
|---|---|---|
| Durometer Hardness, Shore A, 15s | D2240 | 56 |
| Tensile Strength, psi (MPa) | D412 | 1,800 (12.4) |
| Ultimate Elongation, % | D412 | 400 |
| Tensile Stress, at 100% psi (MPa)<br>at 200% psi (MPa) | D412 | 550 (3.8)<br>950 (6.6) |
| Tear Resistance, lb-f/in (kN/m) | D1004 | 184 (32.2) |
| Compression Set Constant Deflection, % at 158°F (70°C) for 22 hrs. | D395 | 68 |
| Brittleness by Impact Temp., °F (°C) | D746 | -51 (-46) |
| Cold Temp. Flexibility, at 5°C increments, °F (°C) | D380 | -67 (-55) |
| Maximum Recommended Operating Temp., °F (°C) | — | 165 (74) |
| Specific Gravity | D792 | 1.17 |
| Water Absorption, % at 73°F (23°C) for 24 hrs. | D570 | 0.20 |
| Tensile Set, at 75% Elongation | D412 | 54 |
| Color | — | Clear |
| Dielectric Strength, v/mil (kV/mm) | D149-97 | 396 (15.6) |

More sizes available upon request.

## Peristaltic Pump Tubing Life

The table below illustrates hours until failure of 1/4" ID x 3/8" OD (6,35 mm ID x 9,525 mm OD) tubing for 0, 10, and 15 psi (0, 0.7, and 1.0 bar) and 1/4" ID x 7/16" OD (6,35 mm ID x 11,11 mm OD) tubing for 25 psi or 1.7 bar. In each case, a 3-roller pump head was utilized operating at 600 rpm under room temperature 73°F (23°C). Tubing failure is measured in hours of use prior to rupture.

### Tygon® E-LFL Tubing




The values listed for working and burst pressures are derived from tests conducted under controlled laboratory conditions. Many factors will reduce the tubing's ability to withstand pressures, including temperature, chemical attack, stress, pulsation and the attachment to fittings. It is imperative that the user conduct tests simulating the conditions of the application prior to specifying the tubing for use.

TYGON® E-LFL TUBING IS NOT INTENDED FOR USE AS AN IMPLANT MATERIAL.

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