TYGON®
Trusted Performance



Tygon® E-LFL Tubing

TUBING FOR LABORATORY APPLICATIONS

Tygon® E-LFL tubing has been tested rigorously to ensure that it meets 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

Regulatory Compliance

- REACH
- OEHHA California's Proposition 65

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INDUSTRIAL & CONSUMER SOLUTIONS

Making a material impact around the world.

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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.

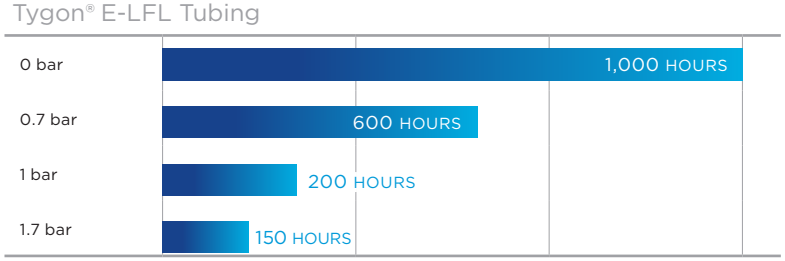
Typical Physical Properties

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) at 200% psi (MPa)	D412	550 (3.8) 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.



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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NOTE: The data and details given in this document are correct and up to date. This document is intended to provide information about the product and possible applications. This document is not the product specification and does not provide specific features, nor does it guarantee product performance in specific applications. Saint-Gobain cannot anticipate or control the conditions of the field and for this reason strongly recommends that practical tests are conducted to ensure that the product meets the requirements of a specific application.

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