



Tygon® E-3603 Tubing



TUBING FOR LABORATORY AND VACUUM APPLICATIONS

Crystal clear and flexible, Tygon® Lab E-3603 tubing handles virtually all organic chemicals found in modern laboratories. Its resistance to oxidation and non-contaminating properties make it a reliable option across a wide range of applications. Manufactured with high tolerances and lot-to-lot consistency, it helps ensure reproducible results, while its non-toxic formulation and lower permeability than rubber tubing enhance overall performance. The glassy-smooth inner bore helps prevent buildup and facilitates cleaning.

Engineered to Last

Tygon® E-3603 tubing is specially formulated for resistance to flex-fatigue and abrasion. As a tubing for instrumentation connection, vent, drain and other general laboratory applications, Tygon® E-3603 tubing offers superior life, which minimizes the labor and the expenses associated with replacement.

Available in Vacuum Tubing Sizes

Tygon® E-3603 vacuum tubing has extra-heavy walls that will withstand a full vacuum at room temperature (29.9" [759 mm] of mercury at 73˚F [23˚C] and up to 27" [686 mm] of mercury at 140˚F [60˚C]). Like standard Tygon® laboratory tubing, E-3603 vacuum tubing has good tensile and tear strength.

Typical Applications

- General laboratory
- Analytical instruments
- Peristaltic and vacuum pumps
- Ideal for condensers, desiccators, gas lines, and drain lines

Features and Benefits

- Lot-to-lot consistency for reproducible results
- Non-toxic and non-contaminating
- Smooth, polished inner wall
- Slips easily over fittings and grips securely for simple lab set-ups
- Contains no BPA or phthalates
- Standard sizes available to hold full vacuum at room temperature

Regulatory Compliance

- REACH
- OEHHA California's Proposition 65

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Making a material impact around the world.

Tygon® E-3603 Tubing

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Part Number	Inner Diameter (ID)		Outer Diameter (OD)		Wall Thickness		Length		Minimum Bend Radius		Maximum Working Pressure		Vacuum Rating	
	(in)	(mm)	(in)	(mm)	(in)	(mm)	(ft)	(m)	(in)	(mm)	73°F (psi)	23°C (bar)	73°F (inHg)	23°C (mmHg)
ACF00001	1/32	0.8	3/32	2.4	1/32	0.8	50	15.2	1/8	3.2	70	4.8	29.9	760
ACF00002	1/16	1.6	1/8	3.2	1/32	0.8	50	15.2	1/4	6.4	36	2.5	29.9	760
ACF00003	1/16	1.6	3/16	4.8	1/16	1.6	50	15.2	1/8	3.2	70	4.8	29.9	760
ACF00004	3/32	2.4	5/32	4.0	1/32	0.8	50	15.2	3/8	9.5	25	1.7	29.9	760
ACF00005	3/32	2.4	7/32	5.6	1/16	1.6	50	15.2	1/4	6.4	46	3.2	29.9	760
ACF00006	1/8	3.2	3/16	4.8	1/32	0.8	50	15.2	1/2	12.7	20	1.4	20.0	508
ACF00007	1/8	3.2	1/4	6.4	1/16	1.6	50	15.2	3/8	9.5	36	2.5	29.9	760
ACF00009	5/32	4.0	7/32	5.6	1/32	0.8	50	15.2	3/8	9.5	17	1.2	12.0	305
ACF00010	5/32	4.0	9/32	7.1	1/16	1.6	50	15.2	1/2	12.7	30	2.1	29.9	760
ACF00011	3/16	4.8	1/4	6.4	1/32	0.8	50	15.2	1	25.4	15	1	9.0	229
ACF00012	3/16	4.8	5/16	7.9	1/16	1.6	50	15.2	5/8	15.9	25	1.7	29.9	760
ACF00013	3/16	4.8	3/8	9.5	3/32	2.4	50	15.2	1/2	12.7	36	2.5	29.9	760
ACF00014	3/16	4.8	7/16	11.1	1/8	3.2	50	15.2	3/8	9.5	46	3.2	29.9	760
ACF00015	3/16	4.8	9/16	14.3	3/16	4.8	50	15.2	1/4	6.4	70	4.8	29.9	760
ACF00016	1/4	6.4	5/16	7.9	1/32	0.8	50	15.2	1 5/8	41.3	12	0.8	5.0	127
ACF00017	1/4	6.4	3/8	9.5	1/16	1.6	50	15.2	1	25.4	20	1.4	20.0	508
ACF00018	1/4	6.4	7/16	11.1	3/32	2.4	50	15.2	3/4	19.0	28	1.9	29.9	760
ACF00019	1/4	6.4	1/2	12.7	1/8	3.2	50	15.2	1/2	12.7	36	2.5	29.9	760
ACF00020	1/4	6.4	5/8	15.9	3/16	4.8	50	15.2	1/2	12.7	54	3.7	29.9	760
ACF00022	5/16	7.9	7/16	11.1	1/16	1.6	50	15.2	1 3/8	34.9	17	1.2	13.0	330
ACF00023	5/16	7.9	1/2	12.7	3/32	2.4	50	15.2	1	25.4	23	1.6	29.9	760
ACF00024	5/16	7.9	9/16	14.3	1/8	3.2	50	15.2	7/8	22.2	30	2.1	29.9	760
ACF00025	5/16	7.9	5/8	15.9	5/32	4.0	50	15.2	3/4	19.0	36	2.5	29.9	760
ACF00027	3/8	9.5	1/2	12.7	1/16	1.6	50	15.2	1 1/2	38.1	15	1	9.0	229
ACF00028	3/8	9.5	9/16	14.3	3/32	2.4	50	15.2	1 3/8	34.9	20	1.4	21.0	533
ACF00029	3/8	9.5	5/8	15.9	1/8	3.2	50	15.2	1 1/8	28.6	25	1.7	29.9	760
ACF00030	3/8	9.5	7/8	22.2	1/4	6.4	50	15.2	5/8	15.9	46	3.2	29.9	760
ACF00032	7/16	11.1	9/16	14.3	1/16	1.6	50	15.2	2 1/4	57.2	13	0.9	7.0	178
ACF00033	7/16	11.1	5/8	15.9	3/32	2.4	50	15.2	1 3/4	44.4	17	1.2	15.0	381
ACF00034	7/16	11.1	11/16	17.5	1/8	3.2	50	15.2	1 3/8	34.9	22	1.5	28.0	711
ACF00036	1/2	12.7	5/8	15.9	1/16	1.6	50	15.2	2 7/8	73.0	12	0.8	5.0	127
ACF00037	1/2	12.7	11/16	17.5	3/32	2.4	50	15.2	2 1/4	57.2	15	1	12.0	305
ACF00038	1/2	12.7	3/4	19.1	1/8	3.2	50	15.2	1 1/2	38.1	20	1.4	21.0	533
ACF00039	1/2	12.7	13/16	20.6	5/32	4.0	50	15.2	1 1/2	38.1	25	1.7	29.9	760
ACF00040	1/2	12.7	1 1/8	28.6	5/16	7.9	50	15.2	7/8	22.2	45	3.1	29.9	760
ACF00041	9/16	14.3	3/4	19.1	3/32	2.4	50	15.2	2 1/2	63.5	15	1	9.0	229
ACF00042	9/16	14.3	13/16	20.6	1/8	3.2	50	15.2	2	50.8	17	1.2	17.0	432
ACF00045	5/8	15.9	13/16	20.6	3/32	2.4	50	15.2	3	76.2	13	0.9	7.0	178
ACF00046	5/8	15.9	7/8	22.2	1/8	3.2	50	15.2	2 3/8	60.3	17	1.2	13.0	330
ACF00047	5/8	15.9	15/16	23.8	5/32	4.0	50	15.2	2	50.8	20	1.4	21.0	533
ACF00049	5/8	15.9	1 3/8	34.9	3/8	9.5	50	15.2	1	25.4	44	3	29.9	760
ACF00050	11/16	17.5	7/8	22.2	3/32	2.4	50	15.2	3 1/2	88.9	12	0.8	6.0	152
ACF00053	3/4	19.1	1	25.4	1/8	3.2	50	15.2	3 1/4	82.6	15	1	9.0	229
ACF00054	3/4	19.1	1 1/16	27.0	5/32	4.0	50	15.2	2 3/4	69.8	17	1.2	15.0	381
ACF00055	3/4	19.1	1 1/8	28.6	3/16	4.8	50	15.2	2 3/8	60.3	20	1.4	21.0	533

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Tygon® Lab E-3603 Tubing

Tygon® E-3603 Tubing continued

Part Number	Inner Diameter (ID)		Outer Diameter (OD)		Wall Thickness		Length		Minimum Bend Radius		Maximum Working Pressure		Vacuum Rating	
	(in)	(mm)	(in)	(mm)	(in)	(mm)	(ft)	(m)	(in)	(mm)	73°F (psi)	23°C (bar)	73°F (inHg)	23°C (mmHg)
ACF00057	3/4	19.1	1 1/4	31.8	1/4	6.4	50	15.2	2	50.8	25	1.7	29.9	760
ACF00058	3/4	19.1	1 1/2	38.1	3/8	9.5	50	15.2	1 1/2	38.1	36	2.5	29.9	760
ACF00059	7/8	22.2	1 1/8	28.6	1/8	3.2	50	15.2	4 1/8	104.8	13	0.9	7.0	178
ACF00060	7/8	22.2	1 3/16	30.2	5/32	4.0	50	15.2	3 1/2	88.9	15	1	11.0	279
ACF00062	1	25.4	1 1/4	31.8	1/8	3.2	50	15.2	4 3/4	120.6	12	0.8	5.0	127
ACF00064	1	25.4	1 3/8	34.9	3/16	4.8	50	15.2	4	101.6	16	1.1	12.0	305
ACF00065	1	25.4	1 1/2	38.1	1/4	6.4	50	15.2	3	76.2	20	1.4	21.0	533
ACF00066	1	25.4	2	50.8	1/2	12.7	50	15.2	1 7/8	47.6	36	2.5	29.9	760
ACF00068	1 1/8	28.6	1 1/2	38.1	3/16	4.8	50	15.2	4 1/2	114.3	15	1	9.0	229
ACF00069	1 1/4	31.8	1 1/2	38.1	1/8	3.2	50	15.2	7 7/8	200.0	10	0.7	3.0	76
ACF00070	1 1/4	31.8	1 5/8	41.3	3/16	4.8	50	15.2	5 1/2	139.7	13	0.9	7.0	178
ACF00073	1 1/2	38.1	1 7/8	47.6	3/16	4.8	50	15.2	7 1/4	184.2	12	0.8	5.0	127
ACF00074	1 1/2	38.1	2	50.8	1/4	6.4	50	15.2	5 7/8	149.2	15	1	9.0	229
ACF00076	1 3/4	44.5	2 1/4	57.2	1/4	6.4	50	15.2	7 1/2	190.5	13	0.9	7.0	178
ACF00078	2	50.8	2 1/2	63.5	1/4	6.4	50	15.2	9 3/8	238.1	12	0.8	5.0	127
ACF02002	1/16	1.6	1/8	3.2	1/32	0.8	100	30.5	1/8	3.2	36	2.5	29.9	760
ACF02004	3/32	2.4	5/32	4.0	1/32	0.8	100	30.5	3/8	9.5	25	1.7	29.9	760
ACF02007	1/8	3.2	1/4	6.4	1/16	1.6	100	30.5	3/8	9.5	36	2.5	29.9	760
ACF02010	5/32	4.0	9/32	7.1	1/16	1.6	100	30.5	1/2	12.7	30	2.1	29.9	760
ACF02012	3/16	4.8	5/16	7.9	1/16	1.6	100	30.5	5/8	15.9	25	1.7	29.9	760
ACF02017	1/4	6.4	3/8	9.5	1/16	1.6	100	30.5	1	25.4	20	1.4	20.0	508
ACF02019	1/4	6.4	1/2	12.7	1/8	3.2	100	30.5	1/2	12.7	36	2.5	29.9	760
ACF02037	1/2	12.7	11/16	17.5	3/32	2.4	100	30.5	2 1/4	57.2	15	1	12.0	305
ACF04002	1/16	1.6	1/8	3.2	1/32	0.8	500	152.4	1/8	3.2	36	2.5	29.9	760
ACF04006	1/8	3.2	3/16	4.8	1/32	0.8	500	152.4	1/2	12.7	20	1.4	20.0	508
ACF04007	1/8	3.2	1/4	6.4	1/16	1.6	500	152.4	3/8	9.5	36	2.5	29.9	760
ACF04012	3/16	4.8	5/16	7.9	1/16	1.6	500	152.4	5/8	15.9	25	1.7	29.9	760
ACF04017	1/4	6.4	3/8	9.5	1/16	1.6	500	152.4	1	25.4	20	1.4	20.0	508
ACF05078	2	50.8	2 1/2	63.5	1/4	6.4	20	6.1	9 3/8	238.1	12	0.8	5.0	127
ACFUN007	1/8	3.2	1/4	6.4	1/16	1.6	10/10'	10/3.0	3/8	9.5	36	2.5	29.9	760
ACFUN012	3/16	4.8	5/16	7.9	1/16	1.6	10/10'	10/3.0	5/8	15.9	25	1.7	29.9	760
ACFUN015	3/16	4.8	9/16	14.3	3/16	4.8	10/10'	10/3.0	1/4	6.4	61	4.2	29.9	760
ACFUN017	1/4	6.4	3/8	9.5	1/16	1.6	10/10'	10/3.0	1	25.4	20	1.4	20.0	508
ACFUN019	1/4	6.4	1/2	12.7	1/8	3.2	10/10'	10/3.0	1/2	12.7	36	2.5	29.9	760
ACFUN020	1/4	6.4	5/8	15.9	3/16	4.8	10/10'	10/3.0	1/2	12.7	51	3.5	29.9	760
ACFUN027	3/8	9.5	1/2	12.7	1/16	1.6	10/10'	10/3.0	1 1/2	38.1	15	1	9.0	229
ACFUN030	3/8	9.5	7/8	22.2	1/4	6.4	10/10'	10/3.0	5/8	15.9	51	3.5	29.9	760
ACFUN036	1/2	12.7	5/8	15.9	1/16	1.6	10/10'	10/3.0	2 7/8	73.0	12	0.8	5.0	127
ACFUN040	1/2	12.7	1 1/8	28.6	5/16	7.9	10/10'	10/3.0	7/8	22.2	45	3.1	29.9	760
ACFUN049	5/8	15.9	1 3/8	34.9	3/8	9.5	10/10'	10/3.0	1	25.4	41	2.8	29.9	760
ACFUN053	3/4	19.1	1	25.4	1/8	3.2	10/10'	10/3.0	3 1/4	82.6	15	1	9.0	229
ACFUN062	1	25.4	1 1/4	31.8	1/8	3.2	10/10'	10/3.0	4 3/4	120.6	12	0.8	5.0	127

Unless otherwise noted, all tests were conducted at room temperature 73°F (23°C).
Values shown were determined on 0.075 in (1,905 mm) thick extruded strip or 0.075 in (1,905 mm) thick molded ASTM plaques or molded ASTM durometer buttons.
* Working pressures are calculated at a 1:5 ratio relative to burst pressure using ASTM D1599.
Please consult factory for availability.
Metric dimensions are nominal.

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Relative Chemical Resistance Properties*

Acids			Bases			Salts	Alcohols	Ketones	Hydrocarbons
Conc.	Med.	Weak	Conc.	Med.	Weak				
F	E	E	F	U	U	E	F	U	U

E = Excellent F = Fair U = Unsatisfactory
*All tests conducted at room temperature.

Typical Physical Properties

Property	ASTM Method	Value or Rating
Durometer Hardness, Shore A, 15s	D2240	56
Tensile Strength, psi (MPa)	D412	1,750 (12.1)
Ultimate Elongation, %	D412	425
Tear Resistance, lb-f/in (kN/m)	D1004	173 (31.0)
Specific Gravity	D792	1.21
Water Absorption, % at 73°F (23°C) for 24 hrs.	D570	0.21
Compression Set Constant Deflection, % at 158°F (70°C) for 22 hrs.	D395 Method B	64
Brittleness by Impact Temp.,°F (°C)	D746	-51 (-46)
Maximum Recommended Operating Temp., °F (°C)	—	165 (74)
Tensile Stress @ 100% Elongation, psi (MPa)	D412	582 (4.0)
Tensile Set, at 75% Elongation	D412	95
Color	—	Clear

Unless otherwise noted, all tests were conducted at room temperature 73°F (23°C). Values shown were determined on 0.075 in (1,905 mm) thick extruded strip or 0.075 in (1,905 mm) thick molded ASTM plaques or molded ASTM durometer buttons.

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.

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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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