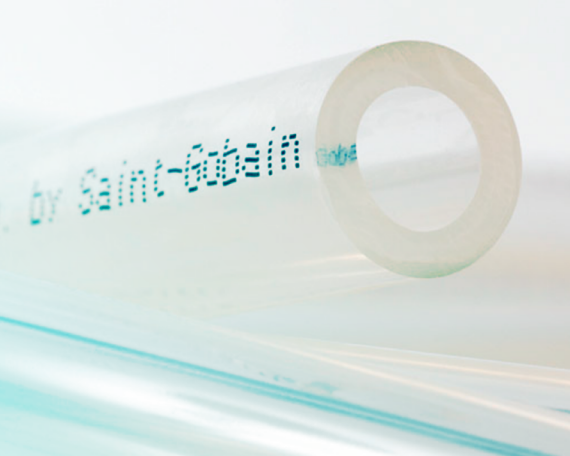




TYGON S3™ E-3603

The only choice for phthalate-free flexible tubing

Non-DEHP Tubing for Laboratory, Food & Beverage and Vacuum Applications

The bio-based Tygon S3 line combines high performance with an eco-friendly tubing design. Crystal clear and flexible, long-lasting and crack-resistant, Tygon S3 E-3603 non-DEHP tubing delivers the same superior performance you have come to expect, and in a formulation that contains a bio-based plasticizer.

Tygon S3™ E-3603 is manufactured under tightly controlled standards to ensure consistency and reduce variability in your application. It is non-toxic, noncontaminating, and the glassy-smooth inner bore helps prevent buildup and facilitates cleaning. Coils are marked at 1-foot (30.4 cm) intervals for easy measuring.

Engineered to Last

Tygon S3™ E-3603 Tubing is formulated to resist flex-fatigue and abrasion. As a tubing for instrumentation connection, vent, drain and other general laboratory applications, Tygon S3™ E-3603 Tubing offers superior life, which minimizes the labor and expense of replacement. It can be sterilized through conventional autoclave methods (steam 30 minutes at 15 psi, 121°C) and ethylene oxide.

Regulatory Standards

Tygon S3™ E-3603 complies with:

- US FDA food contact criteria
- (EU) 10/2011 and (EC) 1935/2004
- Japanese Food Sanitation Law 370/1959
- NSF®-51, Food Equipment Materials
- USP <88> Class VI, and/or USP <87>, and/or ISO 10993-5
- REACH (EC) 1907/2006

Features and Benefits

- Bio-based formulation reduces environmental impact
- Lot-to-lot consistency for reproducible results
- Non-toxic and non-contaminating
- Smooth inner wall
- Slips easily over fittings and grips securely for simple lab set-ups
- No BPA or phthalates intentionally added
- Sizes available which hold full vacuum at room temperature

Typical Applications

- General laboratory connections
- Food & beverage
- Biopharmaceutical analysis
- Analytical Instrumentation
- Vacuum pumps
- Ideal for condensers, incubators, desiccators, gas lines and drain lines

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TYGON S3™ E-3603

Typical Physical Properties

Property	Value	ASTM
Durometer Hardness:	56 Shore A	D2240
Tensile Strength:	12,1 MPa	D412
Ultimate Elongation:	425 %	D412
Tear Resistance:	31 Kn/m	D1004
Specific Gravity:	1,21	D792
Water Absorption: 24 h @ 23 °C	0,21 %	D570

Property	Value	ASTM
Compression Set: 22 h @ 22 °C	64 %	D395 B
Brittle Temperature:	-46 °C	D746
Max. Operating Temp:	74 °C	—
Tensile Stress: @ 100% elongation	4,0 MPa	—
Tensile Set:	95 %	D412

Product Characteristics and Compliance

Opacity	Clear
FDA for food contact:	Yes
NSF 51 Standard:	Yes
UPS/ISO Biocompatibility:	Passed

Sterilization Methods

- Autoclavable — Steam 30 min at 121°C
- Gamma Radiation — up to 2.5 MRad
- Ethylene oxide gas

Sizes

Metric Sizes

Part Number	I.D. mm	O.D. mm	Wall Thickness mm	Length m	Minimum Bend Radius mm	Maximum Working Pressure Bars at 23°C	Vacuum Rating mm of Mercury at 23°C
ACF1S1502	2	4	1	15	7	2.5	760
ACF1S1517	3	5	1	15	13	1.7	760
ACF1S1518	4	6	1	15	16	1.4	533
ACF1S1503	5	8	1.5	15	19	1.6	760
ACF1S1504	6	9	1.5	15	22	1.4	559
ACF1S1506	8	12	2	15	29	1.4	533

Unless otherwise noted, all tests were conducted at room temperature (73°F/23°C). Values shown were determined on 0.075"/1.9 mm thick extruded strip or 0.075"/1.9 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.

Custom sizes available upon request.

TYGON S3™ E-3603

Sizes

Imperial Sizes

Part Number	I.D.		O.D.		Wall Thickness		Length		Minimum Bend Radius		Maximum Working Pressure		Vacuum Rating of Mercury	
	in.	mm	in.	mm	in.	mm	ft.	m	in.	mm	psi at 73°F*	bar at 23°C*	inches at 73°F	mm at 23°C
ACF00001	1/32	0.8	3/32	2.4	1/32	0.8	50	15	1/8	3.2	69	4.8	29.9	760
ACF00002	1/16	1.6	1/8	3.2	1/32	0.8	50	15	1/4	6.4	36	2.5	29.9	760
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
ACF04002	1/16	1.6	1/8	3.2	1/32	0.8	500	152	1/8	3.2	36	2.5	29.9	760
ACF00003	1/16	1.6	3/16	4.8	1/16	1.6	50	15	1/8	3.2	69	4.8	29.9	760
ACF00004	3/32	2.4	5/32	4.0	1/32	0.8	50	15	3/8	9.5	25	1.7	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
ACF00005	3/32	2.4	7/32	5.6	1/16	1.6	50	15	1/4	6.4	47	3.2	29.9	760
ACF00006	1/8	3.2	3/16	4.8	1/32	0.8	50	15	1/2	12.7	20	1.4	20	508
ACF04006	1/8	3.2	3/16	4.8	1/32	0.8	500	152	1/2	12.7	20	1.4	20	508
ACF00007	1/8	3.2	1/4	6.4	1/16	1.6	50	15	3/8	9.5	36	2.5	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
ACF04007	1/8	3.2	1/4	6.4	1/16	1.6	500	152	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	3/8	9.5	17	1.2	12	305
ACF00010	5/32	4.0	9/32	7.1	1/16	1.6	50	15	1/2	12.7	30	2.1	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
ACF00011	3/16	4.8	1/4	6.4	1/32	0.8	50	15	1	25.4	14	1.0	9	229
ACF00012	3/16	4.8	5/16	7.9	1/16	1.6	50	15	5/8	15.9	25	1.7	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
ACF04012	3/16	4.8	5/16	7.9	1/16	1.6	500	152	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	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	3/8	9.5	47	3.2	29.9	760
ACF00016	1/4	6.4	5/16	7.9	1/32	0.8	50	15	1-5/8	41.3	12	0.8	5	127
ACF00017	1/4	6.4	3/8	9.5	1/16	1.6	50	15	1	25.4	20	1.4	20	508
ACF02017	1/4	6.4	3/8	9.5	1/16	1.6	100	30.5	1	25.4	20	1.4	20	508
ACF04017	1/4	6.4	3/8	9.5	1/16	1.6	500	152	1	25.4	20	1.4	20	508
ACF00018	1/4	6.4	7/16	11.1	3/32	2.4	50	15	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	1/2	12.7	36	2.5	29.9	760
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
ACF00022	5/16	7.9	7/16	11.1	1/16	1.6	50	15	1-3/8	34.9	17	1.2	13	330
ACF00023	5/16	7.9	1/2	12.7	3/32	2.4	50	15	1	25.4	23	1.6	29.9	760
ACF00024	5/16	7.9	9/16	14.3	1/8	3.2	50	15	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	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	1-1/2	38.1	14	1.0	9	229
ACF00028	3/8	9.5	9/16	14.3	3/32	2.4	50	15	1-3/8	34.9	20	1.4	21	533
ACF00029	3/8	9.5	5/8	15.9	1/8	3.2	50	15	1-1/8	28.6	25	1.7	29.9	760
ACF00032	7/16	11.1	9/16	14.3	1/16	1.6	50	15	2-1/4	57.2	13	0.9	7	178
ACF00033	7/16	11.1	5/8	15.9	3/32	2.4	50	15	1-3/4	44.4	18	1.2	15	381
ACF00034	7/16	11.1	11/16	17.5	1/8	3.2	50	15	1-3/8	34.9	22	1.5	28	711
ACF00036	1/2	12.7	5/8	15.9	1/16	1.6	50	15	2-7/8	73.0	12	0.8	5	127
ACF00037	1/2	12.7	11/16	17.5	3/32	2.4	50	15	2-1/4	57.2	15	1.0	12	305
ACF02037	1/2	12.7	11/16	17.5	3/32	2.4	100	30.5	2-1/4	57.2	15	1.0	12	305
ACF00038	1/2	12.7	3/4	19.0	1/8	3.2	50	15	1-1/2	38.1	20	1.4	21	533
ACF00039	1/2	12.7	13/16	20.6	5/32	4.0	50	15	1-1/2	38.1	24	1.7	29.9	760
ACF00041	9/16	14.3	3/4	19.0	3/32	2.4	50	15	2-1/2	63.5	14	1.0	9	229
ACF00042	9/16	14.3	13/16	20.6	1/8	3.2	50	15	2	50.8	18	1.2	17	432
ACF00045	5/8	15.9	13/16	20.6	3/32	2.4	50	15	3	76.2	13	0.9	7	178
ACF00046	5/8	15.9	7/8	22.2	1/8	3.2	50	15	2-3/8	60.3	17	1.2	13	330
ACF00047	5/8	15.9	15/16	23.8	5/32	4.0	50	15	2	50.8	20	1.4	21	533
ACF00050	11/16	17.5	7/8	22.2	3/32	2.4	50	15	3-1/2	88.9	12	0.8	6	152
ACF00053	3/4	19.0	1	25.4	1/8	3.2	50	15	3-1/4	82.6	14	1.0	9	229
ACF00054	3/4	19.0	1-1/16	27.0	5/32	4.0	50	15	2-3/4	69.8	17	1.2	15	381
ACF00055	3/4	19.0	1-1/8	28.6	3/16	4.8	50	15	2-3/8	60.3	20	1.4	21	533
ACF00057	3/4	19.0	1-1/4	31.8	1/4	6.4	50	15	2	50.8	25	1.7	29.9	760
ACF00059	7/8	22.2	1-1/8	28.6	1/8	3.2	50	15	4-1/8	104.8	13	0.9	7	178
ACF00060	7/8	22.2	1-3/16	30.2	5/32	4.0	50	15	3-1/2	88.9	15	1.0	11	279
ACF00062	1	25.4	1-1/4	31.8	1/8	3.2	50	15	4-3/4	120.6	12	0.8	5	127
ACF00064	1	25.4	1-3/8	34.9	3/16	4.8	50	15	4	101.6	16	1.1	12	305
ACF00065	1	25.4	1-1/2	38.1	1/4	6.4	50	15	3	76.2	20	1.4	21	533
ACF00068	1-1/8	28.6	1-1/2	38.1	3/16	4.8	50	15	4-1/2	114.3	14	1.0	9	229
ACF00069	1-1/4	31.8	1-1/2	38.1	1/8	3.2	50	15	7-7/8	200	10	0.7	3	76
ACF00070	1-1/4	31.8	1-5/8	41.3	3/16	4.8	50	15	5-1/2	139.7	13	0.9	7	178
ACF00073	1-1/2	38.1	1-7/8	47.6	3/16	4.8	50	15	7-1/4	184.2	12	0.8	5	127
ACF00074	1-1/2	38.1	2	50.8	1/4	6.4	50	15	5-7/8	149.2	14	1.0	9	229
ACF00076	1-3/4	44.4	2-1/4	57.2	1/4	6.4	50	15	7-1/2	190.5	13	0.9	7	178
ACF00078	2	50.8	2-1/2	63.5	1/4	6.4	50	15	9-3/8	238.1	12	0.8	5	127
ACF05078	2	50.8	2-1/2	63.5	1/4	6.4	20	6	9-3/8	238.1	12	0.8	5	127

TYGON S3™ E-3603

Part Number	I.D.		O.D.		Wall Thickness		Length		Minimum Bend Radius		Maximum Working Pressure		Vacuum Rating of Mercury at	
	in	mm	in	mm	in	mm	ft.	m	in	mm	psi at 73°F	bar at 23°C*	inches at 73°F	mm at 23°C
Vacuum Sizes														
ACF00015	3/16	4.8	9/16	14.3	3/16	4.8	50	15	1/4	6.4	69	4.8	29.9	760
ACF00020	1/4	6.4	5/8	15.9	3/16	4.8	50	15	1/2	12.7	53	3.7	29.9	760
ACF00030	3/8	9.5	7/8	22.2	1/4	6.4	50	15	5/8	15.9	47	3.2	29.9	760
ACF00040	1/2	12.7	1-1/8	28.6	5/16	7.9	50	15	7/8	22.2	45	3.1	29.9	760
ACF00049	5/8	15.9	1-3/8	34.9	3/8	9.5	50	15	1	25.4	43	3.0	29.9	760
ACF00058	3/4	19.0	1-1/2	38.1	3/8	9.5	50	15	1-1/2	38.1	36	2.5	29.9	760
ACF00066	1	25.4	2	50.8	1/2	12.7	50	15	1-7/8	47.6	36	2.5	29.9	760
ACF05066	1	25.4	2	50.8	1/2	12.7	20	6	1-7/8	47.6	36	2.5	29.9	760
Unipacs (10/10' lengths per carton)														
ACFUN007	1/8	3.2	1/4	6.4	1/16	1.6	10/10'	10/3	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	5/8	15.9	25	1.7	29.9	760
ACFUN017	1/4	6.4	3/8	9.5	1/16	1.6	10/10'	10/3	1	25.4	20	1.4	20	508
ACFUN019	1/4	6.4	1/2	12.7	1/8	3.2	10/10'	10/3	1/2	12.7	36	2.5	29.9	760
ACFUN027	3/8	9.5	1/2	12.7	1/16	1.6	10/10'	10/3	1-1/2	38.1	15	1.0	9	229
ACFUN036	1/2	12.7	5/8	15.9	1/16	1.6	10/10'	10/3	2-7/8	73.0	12	0.8	5	127
ACFUN053	3/4	19.0	1	25.4	1/8	3.2	10/10'	10/3	3-1/4	82.6	15	1.0	9	229
ACFUN062	1	25.4	1-1/4	31.8	1/8	3.2	10/10'	10/3	4-3/4	120.6	12	0.8	5	127
Vacuum Unipacs (10/10' or 4/10' lengths per carton as shown below)														
ACFUN015	3/16	4.8	9/16	14.3	3/16	4.8	10/10'	10/3	1/4	6.4	70	4.8	29.9	760
ACFUN020	1/4	6.4	5/8	15.9	3/16	4.8	10/10'	10/3	1/2	12.7	54	3.7	29.9	760
ACFUN030	3/8	9.5	7/8	22.2	1/4	6.4	10/10'	10/3	5/8	15.9	46	3.2	29.9	760
ACFUN040	1/2	12.7	1-1/8	28.6	5/16	7.9	10/10'	10/3	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	1	25.4	44	3.0	29.9	760

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High Purity Tubing



Hoses for Food Contact and Cosmetics



High Purity Fittings