タイゴン A-60-G 工業用チューブ【参考資料】

概要

特徴：工業用、ローラーポンプ用途
材質：熱可塑性エラストマー (TPE) 系
最高使用温度：135℃
詳細：詳しくは英語版データシートをご参照ください（２ページ目以降参照）

日本での取り扱いサイズ

品番	内径		外径		片肉厚		巻長さ
	mm	(inch)	mm	(inch)	mm	(inch)	m
AFL00003	1.59	(1/16)	4.76	(3/16)	1.59	(1/16)	15
AFL00007	3.18	(1/8)	6.35	(1/4)	1.59	(1/16)	15
AFL00008	3.18	(1/8)	9.52	(3/8)	3.18	(1/8)	15
AFL00012	4.76	(3/16)	7.94	(5/16)	1.59	(1/16)	15
AFL00013	4.76	(3/16)	9.52	(3/8)	2.38	(3/32)	15
AFL00015	4.76	(3/16)	12.49	(9/16)	4.76	(3/16)	15
AFL00017	6.35	(1/4)	9.52	(3/8)	1.59	(1/16)	15
AFL00018	6.35	(1/4)	11.11	(7/16)	2.38	(3/32)	15
AFL00019	6.35	(1/4)	12.70	(1/2)	3.18	(1/8)	15
AFL00020	6.35	(1/4)	15.88	(5/8)	4.76	(3/16)	15
AFL00022	7.94	(5/16)	11.11	(7/16)	1.59	(1/16)	15
AFL00023	7.94	(5/16)	12.70	(1/2)	2.38	(3/32)	15
AFL00026	7.94	(5/16)	20.64	(13/16)	6.35	(1/4)	15
AFL00027	9.52	(3/8)	12.70	(1/2)	1.59	(1/16)	15
AFL00028	9.52	(3/8)	14.29	(9/16)	2.38	(3/32)	15
AFL00029	9.52	(3/8)	15.88	(5/8)	3.18	(1/8)	15
AFL00032	11.11	(7/16)	14.29	(9/16)	1.59	(1/16)	15
AFL00036	12.70	(1/2)	15.88	(5/8)	1.59	(1/16)	15
AFL00037	12.70	(1/2)	17.46	(11/16)	2.38	(3/32)	15
AFL00038	12.70	(1/2)	19.05	(3/4)	3.18	(1/8)	15
AFL00045	15.88	(5/8)	20.64	(13/16)	2.38	(3/32)	15
AFL00046	15.88	(5/8)	22.22	(7/8)	3.18	(1/8)	15
AFL00053	19.05	(3/4)	25.40	(1)	3.18	(1/8)	15
AFL00062	25.40	(1)	31.76	(1-1/4)	3.18	(1/8)	15

製品の仕様、梱包、その他ここに記載されている事項についてはお客様へ事前の断りなく変更することがあります。(2019年8月26日現在)

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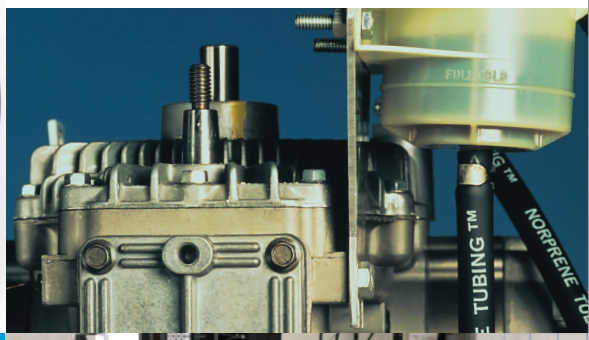
TYGON®
Excellence By Design



Tygon® A-60-G

High-performance Chemical Dispensing Alternative to Rubber Tubing

Specially formulated for chemical dispensing, Tygon® A-60-G tubing outperforms neoprene, EPDM and other general-purpose tubing in test after test, application after application. It will not weaken or crack after years of exposure to heat and ozone, providing longer pump life in industrial and institutional cleaning-chemical dispensing applications.

Engineered for outstanding performance and on-the-job reliability, Tygon® A-60-G tubing handles temperatures ranging from -75°F (-60°C) to 275°F (135°C), allowing the use of one material within a broad range of temperatures. It is heat sealable and can be joined without fittings. It also offers excellent resistance to inorganic fluids (acids and bases).

Unequalled Life in Peristaltic Pump Applications

Peristaltic pumps are used in a wide range of markets and applications, including industrial and institutional cleaning-chemical dispensing. The universal requirement common to these applications is the ability of the tubing to withstand the constant high flexural fatigue exerted by the pump rollers.

Tygon® A-60-G tubing outlasts and outperforms virtually all other general service tubing in peristaltic pump applications due to its high flexural fatigue strength. (For additional details on peristaltic pump tubing, refer to the comprehensive Saint-Gobain Performance Plastics Peristaltic Pump Tubing section on www.processsystems.saint-gobain.com).

Ideal for Use in Vacuum Systems

Tygon® A-60-G tubing is available in standard vacuum sizes that will withstand a full vacuum (29.9″ [759 mm] of mercury) at 73°F (23°C). Unlike typical rubber vacuum tubing, Tygon® tubing resists the cracking and aging that are frequent causes of vacuum tubing failure.

Features and Benefits

- Superior weathering
- Abrasion resistant
- Outstanding flexural fatigue resistance
- Wide temperature range (-75°F to 275°F)
- Low gas permeability versus rubber tubing
- Ozone* and UV light resistant

Typical Applications

- Soap and disinfectant dispensing
- Cleaning chemical transfer
- Caustic chemical dispensing
- Plating and etching chemicals
- Glass and window wash systems
- Vacuum pumps

* 300 pphm

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Tygon® A-60-G

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Tygon® A-60-G

Part Number	ID	OD	Wall Thickness	Length	Min. Bend Radius	Max. Working Pressure		Vacuum Rating	
	(in.)	(in.)	(in.)	(ft.)	(in.)	73°F (psi)*	180°F (psi)*	inHg at 73°F	inHg at 180°F
AFL00003	1/16	3/16	1/16	50	1/4	34	21	29.9	29.9
AFL00007	1/8	1/4	1/16	50	1/2	19	12	29.9	29.9
AFL00008**	1/8	3/8	1/8	50	1/2	34	21	29.9	29.9
AFL00012	3/16	5/16	1/16	50	3/4	13	8	29.9	29.9
AFL00013	3/16	3/8	3/32	50	1/2	19	12	29.9	29.9
AFL00015**	3/16	9/16	3/16	50	1/4	34	21	29.9	29.9
AFL00017	1/4	3/8	1/16	50	7/8	10	6	29.9	15.8
AFL00018	1/4	7/16	3/32	50	3/4	15	9	29.9	29.9
AFL00019	1/4	1/2	1/8	50	3/4	19	12	29.9	29.9
AFL00020**	1/4	5/8	3/16	50	1/2	26	16	29.9	29.9
AFL00022	5/16	7/16	1/16	50	1-1/4	8	5	20.2	10.1
AFL00023	5/16	1/2	3/32	50	1	12	7	29.9	25.0
AFL00026**	5/16	13/16	1/4	50	1/2	28	17	29.9	29.9
AFL00027	3/8	1/2	1/16	50	1-3/8	7	4	14.1	7.0
AFL00028	3/8	9/16	3/32	50	1-1/2	10	6	29.9	15.0
AFL00029	3/8	5/8	1/8	50	1-1/8	13	8	29.9	27.7
AFL00032	7/16	9/16	1/16	50	2-1/4	6	4	5.0	0.0
AFL00036	1/2	5/8	1/16	50	3	6	3	15.0	0.0
AFL00037	1/2	11/16	3/32	50	2-1/4	8	5	20.0	10.0
AFL00038	1/2	3/4	1/8	50	1-1/8	10	6	29.6	15.6
AFL00045	5/8	13/16	3/32	50	3-1/4	7	4	10.0	5.0
AFL00046	5/8	7/8	1/8	50	2-3/4	8	5	20.0	9.9
AFL00053	3/4	1	1/8	50	3-1/2	7	4	13.9	6.9
AFL00062	1	1-1/4	1/8	50	5	6	3	5.0	5.0

*Working pressures are calculated at a 1:5 ratio relative to burst pressure using ASTM D1599 **Vacuum tubing sizes

Typical Physical Properties

Property	ASTM Method	Value or Rating
Durometer Hardness, Shore A, 15s	D2240	61
Tensile Strength, psi (MPa)	D412	1,000 (6.9)
Ultimate Elongation, %	D412	375
Tear Resistance, lb-f/in (kN/m)	D1004	120 (21.0)
Specific Gravity	D792	0.98
Water Absorption, % at 73°F (23°C) for 24 hrs.	D570	0.30
Compression Set Constant Deflection, % at 158°F (70°C) for 22hrs.	D395 Method B	27
Maximum Recommended Operating Temp., °F (°C)	—	275 (135)
Tensile Modulus, at 100% Elongation, psi (MPa) at 300% Elongation, psi (MPa)	D412	410 (2.8) 800 (5.5)
Tensile Set, at 75% Elongation	D412	47
Color	—	Black
Brittleness by Impact Temp., °F (°C)	D746	-75 (-60)
Dielectric Strength, v/mil (kV/mm)	D149	535 (21.1)

Unless otherwise noted, all tests were conducted at room temperature 73°F (23°C). Values shown were determined on 0.075" (1.905 mm) thick extruded strip or 0.075" (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 pressure, 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® A-60-G TUBING IS NOT INTENDED FOR USE AS AN IMPLANT MATERIAL.

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How Tygon® Tubing Compares with Neoprene® Tubing

The following information is based on tests conducted for 28 days at 73°F, unless otherwise noted. The information is based on reliable test results. Use as a guide only, taking into account such variables as temperature and fluid contamination in your own application.

Chemical Tested	Performance	
	Tygon®	Neoprene®
20% Ammonium Hydroxide	Excellent	Good
10% Sodium Hydroxide	Excellent	Fair
50% Sulfuric Acid	Excellent	Excellent
90% Sulfuric Acid	Fair	Failed
Methanol	Excellent	Excellent
37% Hydrochloric Acid	Excellent	Fair
Ethanol	Good	Good
50% Ethylene Glycol	Excellent	Excellent
Water: 28 days @ 220°F	Excellent	Fair
Air: 7 days @ 275°F	Good	Failed
Ozone: 100 pphm, 40°C, 28 days	Excellent	Fair
Fatigue Resistance Ross Flex @ 100 CPM	750,000 cycles – 1 inch cut growth	2,000 cycles – 0.1 inch cut growth
Hot Air Heat Aging, 7 days @ 275°F	+22% tensile, +9% elongation	Crumbled
Hot Air 7 days @ 220°F	+15% tensile, +14% elongation	Fair Good-Fair
Typical Environmental Resistance		
Ozone, 300 pphm	Excellent	Good
Weather (UV)*	Excellent-Good	Good
Acids	Excellent	Good
Alkalis	Excellent	Good
Lubricating Oils	Fair	Fair
Gas Permeability	Fair	Good-Fair

*UV environmental resistance properties are influenced by additives. These comparisons are based on published material properties and are not guaranteed for all samples or applications. Actual performance will vary, depending on finished part design and requirements.

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