

*High
Performance
for small
Engines*



Designed to resist Hydrocarbons

Specifically designed to handle most fuels and industrial lubricants, Tygon® Fuel and Lubricant Tubing resists the swelling and hardening caused by hydrocarbon-based fluids. This significantly reduces the risk of failure due to cracking and leakage. Its minimum extractability safeguards the liquid or vapor being transferred against adulteration.

Because it is extremely flexible, Tygon® Fuel and Lubricant Tubing simplifies installation, even in tight places. It is translucent yellow for positive identification and to allow easy flow monitoring. It is routinely used to handle gasoline, kerosene, heating oils, cutting compounds and glycol-based coolants.

Routinely Specified in Fuel and Lubricant Applications

A consistent performer lot after lot, Tygon® Fuel and Lubricant Tubing is the most requested fuel and lubricant tubing for a variety of applications – from small engine fuel lines to coolant transfer.

Other Tygon® formulations are available to meet new permeation standards.



Features and Benefits

- Resists embrittlement
- Compatible with most hydrocarbons
- Resistant to swelling
- Highly flexible, easy to install
- Specifically developed for fuels and lubricants
- Ozone and UV light resistant

Typical Applications

- Small engine fuel lines
- General automotive
- Recreational vehicles
- Lawn and garden equipment
- Coolant transfer
- Heating fuels
- Cutting compounds
- Polishing equipment
- Lubrication lines
- Shear-sensitive fluid transfer
- Diagnostics and laboratory testing

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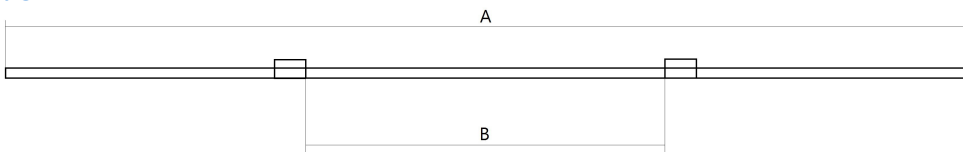
OPTUBUS believes that the information in this technical data sheet is an accurate description of the typical uses of the product. OPTUBUS, however, disclaims any liability for incidental or consequent damages, which may result from the use of the product that are beyond its control. Therefore it is the user's responsibility to thoroughly test the product in their particular application to determine its performance, efficiency and safety. Nothing contained herein is to be considered as permission or a recommendation to infringe any patent or any other intellectual property right.

Tygon® F-4040-A Standard Sizes

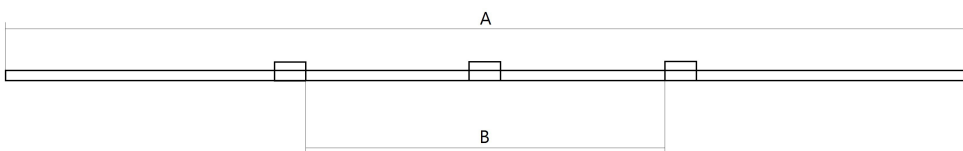
Part Number	ID	OD	Wall	Min. Bend Radius	Max. Working Pressure* 22°C (73°F)	Vacuum Rating at 22°C (73°F)
TY2,03FA3,56	2,03 mm (2/25")	3,56 mm (7/50")	0,76 mm (3/100")	6,4 mm	2,7 bar	29.9 inHg
TY2,38FA4,76	2,38 mm (3/32")	4,76 mm (3/16")	1,19 mm (3/64")	6,4 mm	3,4 bar	29.9 inHg
TY3,18FA6,35	3,18 mm (1/8")	6,35 mm (1/4")	1,59 mm (1/16")	9,5 mm	3,4 bar	29.9 inHg
TY4,76FA7,94	4,76 mm (3/16")	7,94 mm (5/16")	1,59 mm (1/16")	15,9 mm	2,4 bar	29.9 inHg
TY6,35FA9,53	6,35 mm (1/4")	9,53 mm (3/8")	1,59 mm (1/16")	25,4 mm	2,0 bar	22.0 inHg
TY7,94FA11,11	7,94 mm (5/16")	11,11 mm (7/16")	1,59 mm (1/16")	34,9 mm	1,7 bar	14.0 inHg
TY9,53FA12,70	9,53 mm (3/8")	12,70 mm (1/2")	1,59 mm (1/16")	47,6 mm	1,3 bar	10.0 inHg
TY9,53FA15,88	9,53 mm (3/8")	15,88 mm (5/8")	3,18 mm (1/8")	28,5 mm	2,4 bar	29.9 inHg
TY11,11FA14,29	11,11 mm (7/16")	14,29 mm (9/16")	1,59 mm (1/16")	60,3 mm	1,0 bar	7.0 inHg
TY12,70FA15,88	12,70 mm (1/2")	15,88 mm (5/8")	1,59 mm (1/16")	73,0 mm	1,0 bar	5.0 inHg
TY12,70FA19,05	12,70 mm (1/2")	19,05 mm (3/4")	3,18 mm (1/8")	44,4 mm	2,1 bar	22.0 inHg
TY15,88FA22,23	15,88 mm (5/8")	22,23 mm (7/8")	3,18 mm (1/8")	63,5 mm	1,7 bar	14.0 inHg
TY19,05FA25,40	19,05 mm (3/4")	25,40 mm (1")	3,18 mm (1/8")	82,5 mm	1,4 bar	10.0 inHg

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

Tygon® F-4040-A with collar



Length A = 381 mm
 Collar distance B = 140 mm



Length A = 381 mm
 Collar distance B = 170 mm

Color-code	ID	OD	Wall	Part Number 2-Stops	Part Number 3-Stops	Part Number no-Stops
orange-red	0,19 mm	1,99 mm	0,90 mm	FA0,19OR2RT	FA0,19OR3RT	TY0,19FA1,99
orange-blue	0,25 mm	2,05 mm	0,90 mm	FA0,25OR2BL	FA0,25OR3BL	TY0,25FA2,05
orange-green	0,38 mm	2,18 mm	0,90 mm	FA0,38OR2GN	FA0,38OR3GN	TY0,38FA2,18
orange-yellow	0,51 mm	2,31 mm	0,90 mm	FA0,51OR2GL	FA0,51OR3GL	TY0,51FA2,31
orange-white	0,64 mm	2,44 mm	0,90 mm	FA0,64OR2WS	FA0,64OR3WS	TY0,64FA2,44
black-black	0,76 mm	2,46 mm	0,85 mm	FA0,76SW2SW	FA0,76SW3SW	TY0,76FA2,46
orange-orange	0,89 mm	2,59 mm	0,85 mm	FA0,89OR2OR	FA0,89OR3OR	TY0,89FA2,59
white-white	1,02 mm	2,72 mm	0,85 mm	FA1,02WS2WS	FA1,02WS3WS	TY1,02FA2,72
red-red	1,14 mm	2,84 mm	0,85 mm	FA1,14RT2RT	FA1,14RT3RT	TY1,14FA2,84

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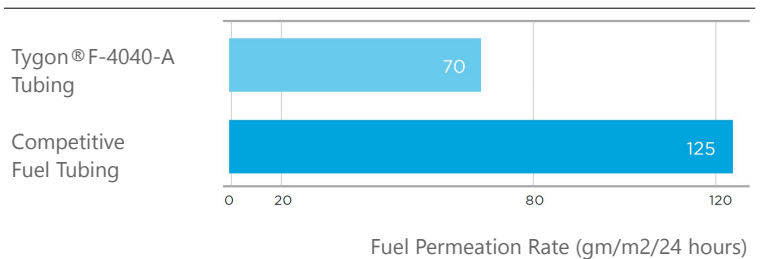
grey-grey	1,30 mm	3,00 mm	0,85 mm	FA1,3GR2GR	FA1,3GR3GR	TY1,3FA3,0
yellow-yellow	1,42 mm	3,12 mm	0,85 mm	FA1,42GL2GL	FA1,42GL3GL	TY1,42FA3,12
yellow-blue	1,52 mm	3,22 mm	0,85 mm	FA1,52GL2BL	FA1,52GL3BL	TY1,52FA3,22
blue-blue	1,65 mm	3,35 mm	0,85 mm	FA1,65BL2BL	FA1,65BL3BL	TY1,65FA3,35
green-green	1,85 mm	3,55 mm	0,85 mm	FA1,85GN2GN	FA1,85GN3GN	TY1,85FA3,55
purple-purple	2,06 mm	3,76 mm	0,85 mm	FA2,06VO2VO	FA2,06VO3VO	TY2,06FA3,76
purple-black	2,29 mm	3,99 mm	0,85 mm	FA2,29VO2SW	FA2,29VO3SW	TY2,29FA3,99
purple-orange	2,54 mm	4,24 mm	0,85 mm	FA2,54VO2OR	FA2,54VO3OR	TY2,54FA4,24
purple-white	2,79 mm	4,49 mm	0,85 mm	FA2,79VO2WS	FA2,79VO3WS	TY2,79FA4,49

Typical Physical Properties of Tygon® F-4040-A

Property	ASTM Method	Value of Rating
Durometer Hardness	D2240	57° Shore A, 15s
Tensile Strength	D412	1,82 psi (12.5 MPa)
Ultimate Elongation	D412	310,00%
Color	-	yellow
Tear Resistance	D1004	29.0 kN/m
Specific Gravity	D792	1,26
Water Absorption 23°C for 24 hours	D570	1.5 %
Compression Set Constant Deflection 70° C for 22 hours	D395 Method B	65,00%
Max. Recommended Operating Temp.	-	74° C
Tensile Modulus, at 100% Elongation	D412	910 psi (6.3 MPa)
Tensile Set, at 75% Elongation	D412	50
Brittleness by Impact Temp.	D746	-37° C
Dielectric Strength	D149	403 v/mil (15.8 kV/mm)

Comparative Fuel Permeation Rate of Tubing

The table below summarizes the results of an in-house study conducted on permeation of unleaded, alcohol-free 87 octane gasoline in 1/4" ID x 3/8" OD tubing. Testing was conducted in accordance with SAEJ1527.



The performance of tubing in peristaltic pumping applications is affected by the conditions of use and equipment utilized, along with size and wall thickness of the tubing tested. The data above is presented for information only and should not be utilized for specification purposes.

Unless otherwise noted, all tests were conducted at room temperature 73°F. Values shown were determined on 0.075" thick extruded strip, 0.075" 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.