TYGON® Fuel and Lubricant Tubing



Designed for safe and efficient handling of most petroleum-based products, Tygon® Fuel and Lubricant Tubing resists embrittlement, cracking and swelling.

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's 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.

Low Rate of Permeation

In-house testing of Tygon® Fuel and Lubricant Tubing has shown it to have a lower rate of permeation than competitive tubings. Reduced levels of permeation may limit alteration and loss of fuels critical to today's high performance engines.

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 available to meet new permeation standards.

FORMULATION F-4040-A

High performance fuel and lubricant tubing designed for today's small engines

Features/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

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Tygon® F-4040-A Manufactured Sizes and Pressures

Saint-Gobain Part Number	I.D. (inches)	O.D. (inches)	Wall Thickness (inches)	Length (feet)	Minimum Bend Radius (inches)	Max. Working Pressure at 73°F (psi)*	Vacuum Rating In. of Mercury at 73°F
AAG00700	.080	.140	.030	50	1/4	40	29.9
AAG00165	3/32	3/16	3/64	50	1/4	50	29.9
AAG00007	1/8	1/4	1/16	50	3/8	50	29.9
AAG00012	3/16	5/16	1/16	50	5/8	35	29.9
AAG00017	1/4	3/8	1/16	50	1	30	22.0
AAG00022	5/16	7/16	1/16	50	1-3/8	25	14.0
AAG00027	3/8	1/2	1/16	50	1-7/8	20	10.0
AAG00029	3/8	5/8	1/8	50	1-1/8	35	29.9
AAG00032	7/16	9/16	1/16	50	2-3/8	15	7.0
AAG00036	1/2	5/8	1/16	50	2-7/8	15	5.0
AAG00038	1/2	3/4	1/8	50	1-3/4	30	22.0
AAG00046	5/8	7/8	1/8	50	2-1/2	25	14.0
AAG00053	3/4	1	1/8	50	3-1/4	20	10.0

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

The values listed for working 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.

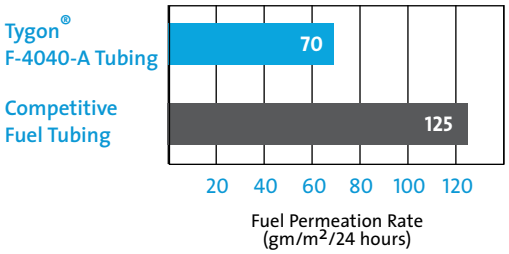
Tygon® F-4040-A Typical Physical Properties

Property	ASTM Method	Value or Rating
Durometer Hardness Shore A, 15 Sec	D2240	57
Color	—	Translucent Yellow
Tensile Strength, psi (MPa)	D412	1,820 (12.5)
Ultimate Elongation, %	D412	310
Tear Resistance, lb-f/inch (kN/m)	D1004	167 (29)
Specific Gravity	D792	1.26
Water Absorption, % 24 hrs. @ 23°C	D570	0.49
Compression Set Constant Deflection, % @ 158°F (70°C) for 22 hrs.	D395 Method B	65
Brittleness By Impact Temp., °F (°C)	D746	-35 (-37)
Maximum Recommended Operating Temp., °F (°C)	—	165 (74)
Dielectric Strength, v/mil (kV/mm)	D149	403 (15.8)
Tensile Modulus, @ 100% Elongation, psi (MPa)	D412	910 (6.3)
Tensile Set, %	D412	50

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

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 SAE J1527.



The performance of tubing 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.

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IMPORTANT: It is the user's responsibility to ensure the suitability and safety of Saint-Gobain Performance Plastics tubing for all intended uses. Laboratory and clinical tests must be conducted in accordance with applicable regulatory requirements in order to determine the safety and effectiveness for use of tubing in any particular application.

Saint-Gobain Performance Plastics Corporation assumes no obligations or liability for any advice furnished by it, or for results obtained with respect to those products. All such advice is given and accepted at the buyer's risk.

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