

# TYGON® R-1000 Ultra-Soft Tubing



*Tygon® Ultra-Soft Tubing provides unmatched flexibility and drapeability – characteristics beneficial to numerous laboratory set-ups.*

## A Flexible Alternative to Complex Laboratory Set-ups

Extremely flexible, Tygon® Ultra-Soft Tubing is the solution to applications requiring maximum drapeability and kink resistance. Even under laboratory set-ups with abrupt radius curves and multiple directional changes, Tygon® Ultra-Soft Tubing resists twisting and collapse — common problems when using other tubing products. Tygon® Ultra-Soft Tubing stays flexible at temperatures as low as -100°F (-73°C). Its smooth bore facilitates easy cleaning and helps prevent possible buildup.

## The Preferred Tubing in Low-Torque Peristaltic Pumps

The extremely low durometer of Tygon® Ultra-Soft Tubing provides minimal resistance to compression. This feature is ideal when using low-torque or battery-driven peristaltic pumps and provides an excellent alternative to silicone tubing where corrosive chemicals are used. Tygon® Ultra-Soft Tubing will typically outlast silicone tubing in peristaltic pump applications by a margin of 2 to 1.

*An extremely soft and flexible tubing that offers minimal resistance to compression*

## Features/Benefits

- Ultra-soft and flexible
- Performs well at low temperatures (to -100°F)
- Excellent for use in low-torque pump applications
- Resistant to a broad range of corrosive chemicals
- Meets FDA CFR part 175.3000

## Typical Applications

- General laboratory
- Analytical instruments
- Peristaltic pumps
- Vent and drain lines

Saint-Gobain Part Number	I.D. (inches)	O.D. (inches)	Wall Thickness (inches)	Length (feet)	Minimum Bend Radius (inches)	Maximum Working Pressure at 73°F (psi)*	Vacuum Rating, In. of Mercury at 73°F
AAU00003	1/16	3/16	1/16	50	1/8	55	29.9
AAU00007	1/8	1/4	1/16	50	3/8	30	29.9
AAU00012	3/16	5/16	1/16	50	5/8	20	25.0
AAU00017	1/4	3/8	1/16	50	1	15	13.0
AAU00019	1/4	1/2	1/8	50	5/8	30	29.9
AAU00022	5/16	7/16	1/16	50	1-3/8	15	9.0
AAU00027	3/8	1/2	1/16	50	1-3/4	10	6.0
AAU00029	3/8	5/8	1/8	50	1-1/8	20	25.0
AAU00036	1/2	5/8	1/16	50	2-7/8	10	3.0
AAU00038	1/2	3/4	1/8	50	1-3/4	15	13.0

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

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.

## TYGON® R-1000 Typical Physical Properties

Property	ASTM Method	Value or Rating
Durometer Hardness Shore A, 15 Sec	D2240-02	40
Color	—	Clear
Tensile Strength, psi (MPa)	D412-98	1,200 (8.3)
Ultimate Elongation, %	D412-98	375
Tear Resistance, lb-f/inch (kN/m)	D1004-94	52 (9)
Specific Gravity	D792-00	1.12
Water Absorption, % 24 hours at 23°C	D570-98	0.30
Compression Set Constant Deflection, % @ 158°F (70°C) for 22 hours	D395-01 Method B	57
Brittleness By Impact Temp., °F (°C)	D746-98	-103 (-75)
Maximum Recommended Operating Temperature °F (°C)	—	125 (52)
Dielectric Strength v/mil (kV/mm)	D149-97	500 (19.7)
Tensile Modulus, @ 100% Elongation, psi (MPa)	D412-98	330 (2.2)
Tensile Set, %	D412-98	73

TYGON® R-1000 Tubing is not intended for use as an implant material.

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.

TYGON® is a registered trademark.

### Saint-Gobain Performance Plastics

2664 Gilchrist Road  
Akron, OH 44305  
Tel: 800-798-1554  
Tel: (330) 798-9240  
Fax: (330) 798-6968



**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.

For a period of 6 months from the date of first sale, Saint-Gobain Performance Plastics Corporation warrants this product to be free from defects in materials and workmanship. Our only obligation will be to replace any portion proving defective, or at our option, to refund the purchase price thereof. User assumes all other risk, if any, including the risk of injury, loss or damage, direct or consequential, arising out of the use, misuse, or inability to use, this product. THIS WARRANTY IS IN LIEU OF THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. No deviation is authorized.

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.