

# TYGON®

## ULTRA-SOFT TUBING FORMULATION R-1000

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 21 CFR Part 177.2600

### TYPICAL APPLICATIONS INCLUDE:

- General Laboratory
- Analytical Instruments
- Peristaltic Pumps
- Vent and Drain Lines



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 for applications requiring maximum drapeability and kink resistance. Even under laboratory set-ups requiring abrupt radius curves and multiple directional changes, Tygon Ultra-Soft Tubing resists twisting and collapse common 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 typically will outlast silicone tubing in peristaltic pump applications by a margin of 2 to 1.

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**TYGON® R-1000  
INVENTORIED SIZES**

Norton 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
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
AAE00038	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.

**Distributed By:**

**TYGON® R-1000  
TYPICAL PHYSICAL PROPERTIES**

Property	ASTM Method	Value or Rating
Durometer Hardness Shore A, 15 Sec	D2240-97	40
Color	—	Clear
Tensile Strength psi (MPa)	D412-97	1200 (8.3)
Ultimate Elongation, %	D412-97	375
Tear Resistance lb-f/inch (kN/m)	D1004-94	52 (9)
Specific Gravity	D792-91	1.12
Water Absorption, % 24 hrs. @ 23°C	D570-95	0.30
Compression Set Constant Deflection, % @158°F (70°C) for 22 hrs.	D395-89 Method B	57
Brittleness By Impact Temp., °F (°C)	D746-95	-103 (-75)
Maximum Recommended Operating Temp., °F (°C)	—	125 (52)
Dielectric Strength, v/mil (kV/mm)	D149-95	500 (19.7)
Tensile Modulus, @ 100% psi (MPa)	D412-97	330 (2.2)
Tensile Set, %	D412-97	73

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® R-1000 TUBING IS NOT INTENDED FOR USE AS AN IMPLANT MATERIAL**

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*IMPORTANT: It is the user's responsibility to ensure the suitability and safety of Norton 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, Norton 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.

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