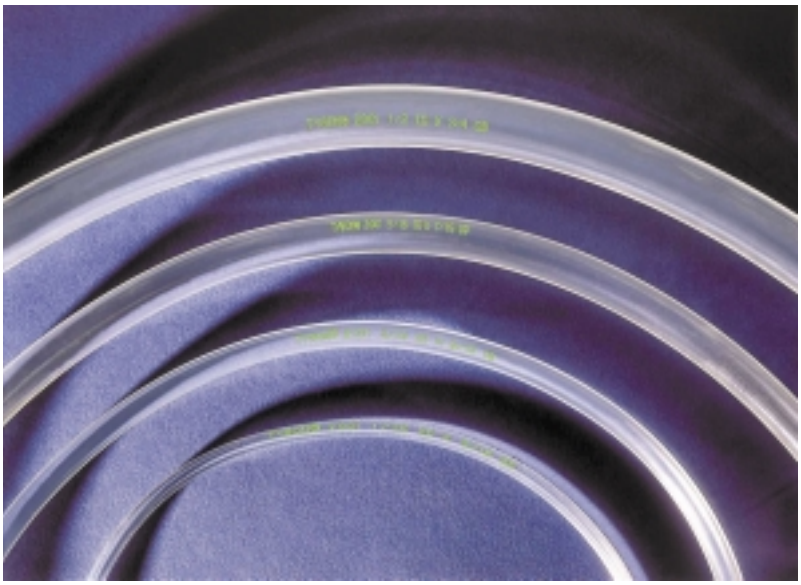
TYGON®



Tygon® 2001 Plasticizer Free Tubing resists chemical attack and is a clear, flexible alternative to PVC.

Superior Performance in a Broad Range of Applications

Tygon® Plasticizer Free Tubing, Formulation 2001 is uniquely engineered to provide flexibility, chemical resistance and extended pump life in a clear, plasticizer/oil free tubing product. It is ideal for a broad range of demanding applications including peristaltic pump systems, soap and detergent dispensing, ink transfer, water purification lines, food and beverage, and chemical transfer.

Tygon® 2001 Outperforms PVC in Chemical Resistance

Tygon® 2001 is resistant to a wide range of fluids that typically destroy PVC products. Its chemical resistance allows it to be used in applications with aggressive chemicals like polar solvents, benefiting the user with less downtime and tubing changes. Tygon® 2001 will yield a longer service life and will not degrade over time like other flexible tubing products.
(See Relative Chemical Resistance Chart on back of sheet.)

Additional Product Features

Upon incineration, many tubing products release hazardous by-products like hydrogen chloride gas when incinerated, but Tygon® 2001 does not release any hazardous materials when properly incinerated. Since it contains no plasticizers or oils, Tygon® 2001 will not yield any taste, which makes it an ideal choice for food and beverage applications with strict taste requirements.

Plasticizer Free Tubing Formulation 2001

Features / Benefits

- **Plasticizer and oil free — does not contaminate fluids**
- **Superior flex life in peristaltic pumps**
- **Chemically resistant to a wide range of fluids**
- **Temperature resistant from -108°F to 135°F**
- **Clear for easy visual flow monitoring**
- **Meets FDA criteria for food contact**

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TYGON® Plasticizer Free Tubing

Tygon® 2001 Manufactured Sizes and Pressures*

Norton Part Number	I.D. (inches)	O.D. (inches)	Wall Thickness (inches)	Length (feet)	Max. Bend Radius (inches)	Max. Working Pressure at 73°F (PSI)*	Vacuum Rating In. of Mercury at 73°F
AE300003	1/16	3/16	1/16	50	1/4	45	29.9
AE300007	1/8	1/4	1/16	50	1/2	30	29.9
AE300012	3/16	5/16	1/16	50	1/2	22	29.9
AE300017	1/4	3/8	1/16	50	1	17	29.9
AE300022	5/16	7/16	1/16	50	1-1/2	14	25.0
AE300027	3/8	1/2	1/16	50	2	12	15.0
AE300038	1/2	3/4	1/8	50	1-1/2	16	29.9
AE300046	5/8	7/8	1/8	50	2-1/2	13	25.0
AE300053	3/4	1	1/8	50	3	11	15.0
AE300064	1	1-3/8	3/16	50	3-3/4	13	17.0

*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.

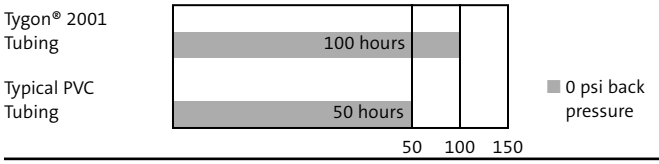
Relative Chemical Resistance Properties*

Tubing	Conc.	Acids Med.	Weak	Conc.	Bases Med.	Weak	Salts	Alcohols	Ketones
Tygon® 2001	F	E	E	F	E	E	E	E	F
Fluoroelastomers	E	E	E	U	F	F	E	F	U
Urethane	U	U	U	U	F	F	E	U	U
PVC	F	E	E	E	E	E	E	F	U
Thermoplastic Rubber	U	F	F	F	E	E	E	F	U
Neoprene	U	F	E	E	E	E	E	E	U
Nitrile Rubber	F	F	E	U	E	E	E	E	U
Silicone	U	U	U	U	F	F	F	F	U
EVA	U	F	E	F	E	E	E	E	U

E = Excellent F = Fair U = Unsatisfactory *All tests conducted at room temperatures.
Refer to the comprehensive Tygon® catalog for an expanded listing of chemical resistance

Comparative Peristaltic Pump Tubing Life

The table below depicts typical hours until failure of 1/4" ID x 3/8" OD tubing. In each case, a 3-roller pump head was utilized operating at 300 rpm under room temperature (73°F). Tubing failure is measured in hours of use prior to rupture.



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.

Tygon® 2001 Typical Physical Properties

Property	ASTM Method	Value or Rating
Durometer Hardness Shore A, 15 Sec	D2240-00	69
Color	-	Clear
Tensile Strength psi (MPa)	D412-98	800 (5.51)
Ultimate Elongation, %	D412-98	500
Tear Resistance lb-f/inch (kN/m)	D1004-94	140 (24.5)
Specific Gravity	D792-00	0.88
Water Absorption, % 24 hrs. @ 23°C	D570-98	0.04
Compression Set Constant Deflection, % @158°F (70°C) for 22 hrs.	D395-98 Method B	40
Brittleness By Impact Temp., °F (°C)	D746-98	<-108 (-78)
Maximum Recommended Operating Temp., °F (°C)	-	135 (57)
Low Temp. Flexibility, °F (°C)	D380-94	-100 (-73)
Dielectric Strength v/mil (kV/mm)	D149-97	530 (20.9)
Tensile Modulus, @ 100% Elongation, psi (MPa)	D412-98	240 (1.65)
Tensile Set, %	D412-98	110

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.

Distributed by:

TYGON® 2001 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 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.