

TYGON® 2475 I.B. High Pressure Thermoplastic Tubing

Overview

TYGON® 2475 I.B. high pressure thermoplastic tubing is engineering with textile reinforcement to withstand higher pressures. Using the same smooth inner fluid contact layer as Tygon® 2475, Tygon 2475 I.B. may be successfully used for higher pressure applications such as single use UF/DF systems and chromatography systems.

Tygon® 2475 I.B. is formulated without the addition of softening agents which may extract, reducing potential contamination of sensitive fluids in biopharmaceutical applications. The absence of plasticizers allows the tubing to stand up to aggressive acids, bases and solvents that would react with or extract plasticizer from a standard PVC tube. The clear construction of Tygon® 2475 I.B. tubing allows visual inspection of the fluid path to ensure consistency of flow.

Tygon 2475 I.B. has lower gas permeation than standard silicone tubing, protecting sensitive fluids from oxidation. The low surface energy of Tygon® 2475 I. B. reduces wetting of aqueous substances, allowing higher recovery of fluids. Its superior surface smoothness reduces the potential for microbial buildup, especially critical in bioprocess applications. In addition, Tygon 2475 I. B. has very low absorption of aqueous substances which minimizes the risk of fluid alteration in single use or repeat use applications.

Features and Benefits

- Extremely low sorption to aqueous fluids
- Plasticizer free
- Tough braid reinforcement for elevated working pressures
- Meet all <88>USP Class VI and FDA food contact criteria

Typical Applications

- Aseptic fill lines
- Cell harvest and media processing
- Chemical transfer
- Chromatography and UF/DF systems
- Deionized water systems
- Pharmaceutical and cosmetic processing
- Preservative fill lines
- Water for injection (WFI) transport



Sterilization Methods

Gas (Ethylene) : Yes

Radiation : 45 kGy

Typical Physical Properties of TYGON 2475 I.B. Tubing

Property	Value	Test Method
Colour	Clear	-
Durometer Hardness Shore A, 15 seconds	72	ASTM D 2240-97
Continuous Operating Temperature, °F (°C)	125 (52)	-
Brittleness at Temperature, °F (°C)	-108 (-78)	ASTM D 746-95
Low Temperature Flexibility, °F (°C)	-94 (-70)	ASTM D 380-87
Water Absorption, % 24 hrs. @ 23°C	<0.01	ASTM D 570-95

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

*Working pressures are calculated at a 1:4 ratio relative to burst pressure using ASTM D1599

Dimensional Guidance of TYGON 2475 I.B. Tubing

Part Number	I.D.	O.D.	Wall Thickness	Length	Minimum Bend Radius	Maximum Working Pressure	Vacuum Rating of Mercury @	
	In. (mm)	In. (mm)	In. (mm)	Ft. (M)	In. (mm)	23 °C or 73 °F psi (bar)	In. at 73 °F'	mm at 23 °C
ACX00019	1/4 (6.4)	1/2 (12.7)	1/8 (3.2)	50 (15.2)	3/8 (9.5)	225 (15.5)	29.9	760
ACX00029	3/8 (9.5)	5/8 (15.9)	1/8 (3.2)	50 (15.2)	1 (25.4)	210 (14.5)	29.9	760
ACX00038	1/2 (12.7)	3/4 (19.0)	1/8 (3.2)	50 (15.2)	1 (25.4)	230 (15.9)	29.9	760
ACX00046	5/8 (15.9)	7/8 (22.2)	1/8 (3.2)	50 (15.2)	1-3/4 (44.5)	135 (9.3)	29.9	760
ACX00054	3/4 (19.0)	1-1/16 (27.0)	5/32 (4.0)	50 (15.2)	1-1/4 (31.8)	135 (9.3)	29.9	760
ACX42064	1 (25.4)	1-3/8 (34.9)	3/16 (4.8)	25 (7.6)	3-1/2 (88.9)	125 (8.6)	29.9	760

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.