



TYGON® 2475 I.B.

High Pressure Thermoplastic Tubing

Higher pressure capabilities

Tygon® 2475 I.B. high pressure thermoplastic tubing is engineered 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.

No added plasticizers for lower potential extractables

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.

Low wetting and ultra smooth

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.

Tested biocompatibility

Tygon® 2475 I.B. meets USP <88> Class VI criteria.

Features/Benefits

- No added plasticizer
- Tough braid reinforcement for elevated working pressures
- Meets USP <88> Class VI

Typical Applications

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

Sterilization Methods

Gas (Ethylene Oxide)	Yes
Radiation	45 kGy

Typical Physical Properties of TYGON® 2475

Property	ASTM Method	Value or Rating
Appearance	—	Clear
Durometer Hardness Shore A, 15 Sec	D2240-97	72
Maximum Recommended Operating Temperature, °F (°C)	—	125 (52)
Brittleness by Impact Temperature, °F (°C)	D746-95	-108 (-78)
Low Temperature Flexibility, °F (°C) (tubing)	D380-87	-94 (-70)
Water Absorption, % 24 hrs. @ 23°C	D570-95	<0.01

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.

Selection Guide of TYGON® 2475 I.B. Tubing

Part number	I.D. inches (mm)	O.D. inches (mm)	Wall thickness inches (mm)	Length feet (m)	Minimum bend radius inches (mm)	Maximum working pressure at 73°F 23°C psi* (bar)	Vacuum rating at 73°F mm Hg
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)	25.0 (635)

*Working pressures are calculated at a 1:4 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.



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