

TYGON® 3370 I.B. Braid-Reinforced Silicone Hose



Designed to Maintain Fluid Purity Under Pressure

Braid reinforced for increased pressure resistance, TYGON® 3370 I.B. silicone hose is frequently specified in the most demanding applications requiring sanitary transfer of fluids. Its smooth inner surface reduces the risk of particle entrapment and inhibits excessive residue and microscopic bacterial build-up; cleaning and sterilization cycles may become more effective as a result. Additionally, an improvement in fluid flow characteristics may occur from the reduced surface area and lowered absorption of fluids to the wall.

TYGON® 3370 I.B. can easily withstand repeated SIP and CIP cleaning and sterilization cycles, making it ideal for repeat-use applications. Its flexibility, durability, and chemical and temperature resistance provide a unique combination of characteristics required in many pharmaceutical, biotechnology, laboratory, food, beverage, cosmetic, environmental, and industrial applications.

Lower Extractables and Exceptional Biocompatibility

TYGON® 3370 I.B. silicone hose is produced from a platinum curing process to meet the most demanding requirements of biocompatibility.

In-house extractability tests have shown that TYGON® 3370 I.B. hose has a low extractable content. Lower extractables help to maintain the purity of transported fluids in sensitive applications.

TYGON® 3370 I.B. hose complies fully with the requirements of the USP Class VI Criteria and is entirely non-toxic, non-hemolytic and non-pyrogenic. Continued monitoring of the hose also ensures minimal bioburden levels are maintained. TYGON® 3370 I.B. hose also meets 3-A Sanitary Standard No. 18-01 and FDA 21 CFR Part 177.2600 criteria. TYGON® 3370 I.B. silicone hose has a Master File with the U.S. Food and Drug Administration.

BIOPHARMACEUTICAL PRODUCTS

The smooth surface, platinum-cured silicone hose designed for transferring high-purity fluid under pressure

Features/Benefits

- Consistently smooth inner surface limits particle entrapment
- Platinum cured to minimize extractables
- Tough braid reinforcement permits use under elevated working pressures
- Withstands repeated CIP and SIP cleaning and sterilization
- Custom color striping available

Typical Applications

- Sterile filling
- Media dispensing
- Vaccine manufacturing
- Bioreactor process lines
- Water purification systems
- Food and dairy processing
- Diagnostic test product manufacturing
- Sanitary fitting assembly

TYGON® 3370 I.B. Hose Inventory Sizes

Part Number	I.D. (inches)	O.D. (inches)	Minimum Bend Radius	Length (feet)	Max. Working Pressure		Vacuum Rating	
					at 73°F (psi) *	at 320°F (psi)*	at 73°F In. of Mercury	at 320°F
AHJ001718	3/16	.443	1/4	50	170	125	29.9	29.9
AHJ001719	1/4	.515	1/2	50	150	105	29.9	29.9
AHJ001720	3/8	.687	3/4	50	130	95	29.9	29.9
AHJ001721	1/2	.847	1-1/4	50	125	90	29.9	29.9
AHJ001722	5/8	.980	1-1/2	50	110	80	29.9	29.9
AHJ001671	3/4	1.150	2-1/4	50	100	75	29.9	29.9
AHJ001724	1	1.390	3-1/2	50	70	50	15.0	10.0
AHJ421725	1-1/4	1.636	5-3/4	25	55	40	10.0	5.0
AHJ421726	1-1/2	1.900	6-3/4	25	40	30	5.0	0.0
AHJ421798	2	2.427	8-3/4	25	20	12	0	0

*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 hose'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 hose for use.

TYGON® 3370 I.B. Toxicological Profile

The biocompatibility of TYGON 3370 I.B. has been tested and found to be non-toxic in the following test protocols:

USP Systemic Toxicity and Intracutaneous Reactivity
 USP Intramuscular Implant
 Cytotoxicity
 Blood Compatibility
 USP Physico Chemical Tests

TYGON® 3370 I.B. Sterilization Methods

Autoclavable
 Gas — Ethylene Oxide
 Radiation — Radiation up to 5.0 MRad (50 Kilogray)

TYGON HOSE IS NOT INTENDED FOR USE AS AN IMPLANT MATERIAL

TYGON® 3370 I.B. Typical Physical Properties

Property	ASTM Method	Value or Rating
Durometer Hardness Shore A, 15 Sec	D2240	70
Color	—	Translucent
Tensile Strength psi (MPa)	D412	1,200 (8.3)
Ultimate Elongation, %	D412	500
Tear Resistance lb-f/inch (kN/m)	D624 Die B	250 (44)
Specific Gravity	D792	1.18
Water Absorption, % 24 hrs. @ 23°C	D570	0.11
Compression Set Constant Deflection, % @ 158°F (70°C) for 22 hrs. @ 347°F (175°C) for 22 hrs.	D395 Method B	3 10
Brittleness by Impact Temp., °F (°C)	D746	-112 (-80)
Maximum Recommended Operating Temp., °F (°C)	—	320 (160)
Dielectric Strength v/mil (kV/mm)	D149	600 (24)
Tensile Modulus, 200% psi (MPa)	D412	650 (4.5)
Tensile Set, %	D412	25

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.

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