

Tygon S3™ B-44-4X IB

Reinforced Phthalate-free Flexible Tubing for Food and Beverage Dispensing

Tygon S3™ B-44-4X IB tubing is designed specifically for food and beverage dispensing applications involving elevated pressure. Tygon pressure tubing has the identical product features found in Tygon S3™ B-44-4X tubing (clear, lightweight, flexible, smooth, non-porous bore to inhibit particle entrapment, outstanding resistance to harsh alkaline cleaners and unaffected by commonly used sanitizers), with reinforcement added to withstand up to four times the pressure.

Flexibility to Deal with the “Twists and Turns”

Lightweight and easy to handle, Tygon S3™ B-44-4X IB tubing goes into service quickly. It readily curves around corners and obstructions, requiring a minimum of couplings and fittings. Its flexibility can save up to one-third the footage and much of the labor required to install rigid stainless steel, glass tubing or piping.

Reduces the Risk of Bacterial Contamination

Tygon S3™ B-44-4X IB tubing's smooth non-porous inner bore resists particle entrapment and resultant bacterial growth. Its excellent non-wetting properties facilitate complete drainage and increase the overall effectiveness of cleaning, making it the ideal choice in food, beverage, dairy, and other bacterial-sensitive applications.* Virtually taste and odor free, Tygon S3™ B-44-4X IB tubing fully complies with FDA 175.300 criteria and the 3-A Sanitary Standards for food contact applications. It is listed under the NSF Standard 51.*

Ideal for Use with ReSeal® Reusable Sanitary Fittings

By combining Tygon S3™ B-44-4X IB tubing with ReSeal® Reusable Fittings, complete assemblies can be constructed, providing a contamination-free environment that maintains the purity of fluids being transferred. ReSeal assemblies are easy to install and can increase manufacturing efficiency by providing a fluid path that is able to be repeatedly sterilized using many conventional clean-in-place methods.



Features and Benefits

- Handles four times the pressure of non-reinforced tubing
- Smooth, non-porous bore resists particle entrapment
- Clear wall enables visualization of fluid flow
- Connects easily to ReSeal® Sanitary Fittings
- Contains no BPA or phthalates

Regulatory Compliance*

- FDA 21 CFR 175.300
- 3-A
- NSF 51
- Contains no chemical listed in California's Proposition 65

* For complete compliance information and appropriate use instructions, please refer to the detailed document of compliance. The complete compliance information and use instructions can be found at www.TygonS3.com.

Tygon S3™ B-44-4X IB

| Part Number | ID | | OD | | Wall Thickness | | Min. Length | | Min. Bend Radius | | Max. Working Pressure | | | | Vacuum Rating | | | |
|-------------|-------|-------|-------|-------|----------------|------|-------------|------|------------------|--------|-----------------------|-------------|------------|------------|---------------|---------------|--------------|--------------|
| | (in.) | (mm) | (in.) | (mm) | (in.) | (mm) | (ft.) | (m) | (in.) | (mm) | 73°F (psi) | 160°F (psi) | 23°C (bar) | 71°C (bar) | inHg at 73°F | inHg at 160°F | mmHg at 23°C | mmHg at 71°C |
| ADA00018 | 1/4 | 6,40 | 7/16 | 11,11 | 3/32 | 2,38 | 50 | 1,27 | 1-1/2 | 38,10 | 250 | 90 | 17,2 | 6,0 | 29,9 | 29,9 | 760 | 760 |
| ADA00029 | 3/8 | 9,53 | 5/8 | 15,88 | 1/8 | 3,18 | 50 | 1,27 | 1-1/8 | 28,58 | 170 | 90 | 11,7 | 6,0 | 29,9 | 25,0 | 760 | 635 |
| ADA00038 | 1/2 | 12,70 | 3/4 | 19,05 | 1/8 | 3,18 | 50 | 1,27 | 2-1/8 | 53,98 | 200 | 95 | 13,8 | 6,6 | 29,9 | 10,0 | 760 | 254 |
| ADA00046 | 5/8 | 15,88 | 7/8 | 22,23 | 1/8 | 3,18 | 50 | 1,27 | 2-3/8 | 60,33 | 165 | 105 | 11,0 | 7,2 | 25,0 | 10,0 | 635 | 254 |
| ADA00053 | 3/4 | 19,05 | 1 | 25,40 | 1/8 | 3,18 | 50 | 1,27 | 3-1/4 | 82,55 | 145 | 85 | 10,0 | 5,9 | 20,0 | 5,0 | 508 | 127 |
| ADA00064 | 1 | 25,40 | 1-3/8 | 34,93 | 3/16 | 4,76 | 50 | 1,27 | 3-3/4 | 95,25 | 100 | 60 | 6,9 | 4,1 | 20,0 | 5,0 | 508 | 127 |
| ADA00070 | 1-1/4 | 31,75 | 1-5/8 | 41,28 | 3/16 | 4,76 | 50 | 1,27 | 5-1/2 | 139,70 | 85 | 55 | 5,9 | 3,8 | 10,0 | 3,0 | 254 | 76 |
| ADA00074 | 1-1/2 | 38,10 | 2 | 50,80 | 1/4 | 6,35 | 50 | 1,27 | 5-7/8 | 149,23 | 75 | 45 | 5,2 | 3,1 | 10,0 | 2,0 | 254 | 76 |
| ADA05074 | 1-1/2 | 38,10 | 2 | 50,80 | 1/4 | 6,35 | 20 | 0,51 | 5-7/8 | 149,23 | 75 | 45 | 5,2 | 3,1 | 10,0 | 2,0 | 254 | 50 |
| ADA06074 | 1-1/2 | 38,10 | 2 | 50,80 | 1/4 | 6,35 | 10 | 0,25 | 5-7/8 | 149,23 | 75 | 45 | 5,2 | 3,1 | 10,0 | 2,0 | 254 | 50 |
| ADA05079 | 2 | 50,80 | 2-3/4 | 69,85 | 3/8 | 9,53 | 20 | 0,51 | 6-7/8 | 174,63 | 60 | 40 | 4,1 | 2,8 | 25,0 | 10,0 | 635 | 254 |
| ADA06079 | 2 | 50,80 | 2-3/4 | 69,85 | 3/8 | 9,53 | 10 | 0,25 | 6-7/8 | 174,63 | 60 | 40 | 4,1 | 2,8 | 25,0 | 10,0 | 635 | 254 |
| ADA05086 | 3 | 76,20 | 3-3/4 | 95,25 | 3/8 | 9,53 | 20 | 0,51 | 13-1/4 | 336,55 | 40 | 25 | 2,8 | 1,7 | 10,0 | 1,0 | 254 | 635 |
| ADA06086 | 3 | 76,20 | 3-3/4 | 95,25 | 3/8 | 9,53 | 10 | 0,25 | 13-1/4 | 336,55 | 40 | 25 | 2,8 | 1,7 | 10,0 | 1,0 | 254 | 635 |

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

Typical Physical Properties

| Property | ASTM Method | Value or Rating |
|--|---------------|-----------------|
| Durometer Hardness, Shore A, 15s | D2240 | 66 |
| Tensile Strength, psi (MPa) | D412 | 2,200 (15,2) |
| Ultimate Elongation, % | D412 | 390 |
| Tear Resistance, lb-f/in (kN/m) | D1004 | 250 (43,8) |
| Specific Gravity | D792 | 1,21 |
| Water Absorption, % at 73°F (23°C) 24 hrs. | D570 | 0,22 |
| Compression Set Constant Deflection, % at 158°F (70°C) for 22 hrs. | D395 Method B | 59 |
| Brittleness by Impact Temp., °F (°C) | D746 | -32 (-36) |
| Maximum Recommended Operating Temp., °F (°C) | — | 165 (74) |
| Tensile Stress @ 200% Elongation, psi (MPa) | D412 | 1,379 (9,5) |
| Tensile Set, at 75% Elongation | D412 | 57 |
| Color | — | Clear |

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.

TYGON S3™ B-44-4X IB TUBING IS NOT INTENDED FOR USE AS AN IMPLANT MATERIAL.

Unless otherwise noted, all tests were conducted at room temperature 73°F (23°C). Values shown were determined on 0.075" (1,905 mm) thick extruded strip or 0.075" (1,905 mm) thick molded ASTM plaques or molded ASTM durometer buttons.

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NOTE: The data and details given in this document are correct and up to date. This document is intended to provide information about the product and possible applications. This document is not the product specification and does not provide specific features, nor does it guarantee product performance in specific applications. Saint-Gobain cannot anticipate or control the conditions of the field and for this reason strongly recommends that practical tests are conducted to ensure that the product meets the requirements of a specific application.

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