



Tygon[®] M-34-R Tubing

TUBING FOR MILKING EQUIPMENT

Reduced Maintenance and Inspection Concerns

Tygon[®] M-34-R tubing is specially formulated to reduce the risks that can occur with the use of rubber tubing. It is entirely clear, allowing for immediate visual inspection and verification of cleanliness. Its smooth, non-porous inner surface reduces the occurrence of buildup from butterfat, milkstones and milksoil and can help to eliminate the possibility of bacteria growth within the milk transport line.

Long-lasting Tygon[®] tubing is extremely flexible and installs quickly and easily around stanchions and milk handling equipment. It resists embrittlement and cracking from oxidation, which often shortens the service life of other tubing.

The Mark of Quality

Every foot of Tygon[®] M-34-R tubing has been embedded with a trademark blue stripe within the tubing walls. The embedded blue stripe is your assurance of receiving genuine Tygon[®] tubing, the world's finest raw milk tubing produced specifically for the dairy industry.

Tygon[®] Large Bore and Vacuum (Air) Tubing

The same reliability and performance found in Tygon[®] M-34-R tubing is also available for tank truck operators. Produced in large bore sizes up to 3 inch ID, Tygon[®] tubing's clarity, flexibility and cleanability are ideally suited for bulk milk transfer.

Tygon[®] quality is also produced in single and twin tube configurations ideally suited for supply air transport. The smooth inner surface is less susceptible to particle entrapment, which can restrict air flow, while crystal clarity permits detection of equipment deficiencies such as backflow of milk into the air lines.



Features and Benefits

- Crystal clarity permits visual inspection of milk flow
- Smooth, non-porous bore resists build-up
- Lightweight and flexible for quick installation
- Non-wetting properties allow easy cleaning and complete drainage
- Durability for long and reliable service
- Contains no BPA or phthalates

Regulatory Compliance

- Complies with applicable FDA Food Additive Regulations
- 3-A certified



Tygon® M-34-R Tubing

Tygon® M-34-R Tubing

| Part Number | ID | | OD | | Wall Thickness | | Min. Bend Radius | | Max. Working Pressure | | Vacuum Rating | |
|-------------|-------|-------|--------|--------|----------------|-------|------------------|--------|-----------------------|-------------|---------------|-------------|
| | (in) | (mm) | (in) | (mm) | (in) | (mm) | (in) | (mm) | 73°F (psi)* | 23°C (bar)* | 73°F (inHg) | 23°C (mmHg) |
| ACK02305 | 7/16 | 11.11 | 3/4 | 19.05 | 5/32 | 3.97 | 1-1/8 | 28.58 | 45 | 3.1 | 29.9 | 760 |
| ACK02039 | 1/2 | 12.70 | 13/16 | 20.64 | 5/32 | 3.97 | 1-1/2 | 38.10 | 41 | 2.8 | 29.9 | 760 |
| ACK00043 | 9/16 | 14.29 | 15/16 | 23.81 | 3/16 | 4.76 | 1-1/2 | 38.10 | 42 | 2.9 | 29.9 | 760 |
| ACK02043 | 9/16 | 14.29 | 15/16 | 23.81 | 3/16 | 4.76 | 1-1/2 | 38.10 | 42 | 2.9 | 29.9 | 760 |
| ACK03043 | 9/16 | 14.29 | 15/16 | 23.81 | 3/16 | 4.76 | 1-1/2 | 38.10 | 42 | 2.9 | 29.9 | 760 |
| ACK04043 | 9/16 | 14.29 | 15/16 | 23.81 | 3/16 | 4.76 | 1-1/2 | 38.10 | 42 | 2.9 | 29.9 | 760 |
| ACK02048 | 5/8 | 15.88 | 1 | 25.40 | 3/16 | 4.76 | 1-3/4 | 44.45 | 41 | 2.8 | 29.9 | 760 |
| ACK03048 | 5/8 | 15.88 | 1 | 25.40 | 3/16 | 4.76 | 1-3/4 | 44.45 | 41 | 2.8 | 29.9 | 760 |
| ACK04048 | 5/8 | 15.88 | 1 | 25.40 | 3/16 | 4.76 | 1-3/4 | 44.45 | 41 | 2.8 | 29.9 | 760 |
| ACK02056 | 3/4 | 19.05 | 1-5/32 | 29.37 | 13/64 | 5.16 | 2-1/4 | 57.15 | 36 | 2.5 | 29.9 | 760 |
| ACK07056 | 3/4 | 19.05 | 1-5/32 | 29.37 | 13/64 | 5.16 | 2-1/4 | 57.15 | 36 | 2.5 | 29.9 | 760 |
| ACK00061 | 7/8 | 22.23 | 1-3/8 | 34.93 | 1/4 | 6.35 | 2-1/2 | 63.50 | 38 | 2.6 | 29.9 | 760 |
| ACK02061 | 7/8 | 22.23 | 1-3/8 | 34.93 | 1/4 | 6.35 | 2-1/2 | 63.50 | 38 | 2.6 | 29.9 | 760 |
| ACK37061 | 7/8 | 22.23 | 1-3/8 | 34.93 | 1/4 | 6.35 | 2-1/2 | 63.50 | 38 | 2.6 | 29.9 | 760 |
| ACK00065 | 1 | 25.40 | 1-1/2 | 38.10 | 1/4 | 6.35 | 3 | 76.20 | 33 | 2.3 | 25.0 | 635 |
| ACK02065 | 1 | 25.40 | 1-1/2 | 38.10 | 1/4 | 6.35 | 3 | 76.20 | 33 | 2.3 | 25.0 | 635 |
| ACK36075 | 1-1/2 | 38.10 | 2-1/4 | 57.15 | 3/8 | 9.53 | 4-3/8 | 111.13 | 33 | 2.3 | 26.0 | 660 |
| ACK02075 | 1-1/2 | 38.10 | 2-1/4 | 57.15 | 3/8 | 9.53 | 4-3/8 | 111.13 | 33 | 2.3 | 26.0 | 660 |
| ACK36079 | 2 | 50.80 | 2-3/4 | 69.85 | 3/8 | 9.53 | 6-7/8 | 174.63 | 26 | 1.8 | 14.0 | 355 |
| ACK05087 | 3 | 76.20 | 4 | 101.60 | 1/2 | 12.70 | 10-5/8 | 269.88 | 25 | 1.7 | 11.0 | 279 |

*Working pressures are calculated at a 1:5 ratio relative to burst pressure using ASTM D1599.

Typical Physical Properties

| Property | ASTM Method | Value or Rating |
|--|-------------|-----------------|
| Durometer Hardness (Shore A), 15 sec | D2240 | 66 |
| Color | — | Clear |
| Tensile Strength, psi (MPa) | D412 | 2205 (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) for 24 hrs. | D570 | 0.22 |
| Compression Set Constant Deflection, % at 158°F (70°C) for 22 hrs. | D395 | 59 |
| Maximum Recommended Operating Temp., °F (°C) | — | 165 (74) |
| Brittleness by Impact Temp., °F (°C) | D746 | -33 (-36) |
| Tensile Stress, psi (MPa) @ 200% Elongation | D412 | 1378 (9.5) |
| Tensile Set, % | D412 | 57 |

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.

Tygon® M-34-R Tubing Cleaning Instructions

To extend the usable life of Tygon® Food M-34-R tubing and reduce the risk of bacterial growth resulting from a buildup of milksoil film, the following cleaning and sanitary procedures must be followed:

- Following milking and dumping, rinse tubing with clean water at 109°F (43°C) without recirculating until discharge is clear.
- Wash tubing with alkaline cleaner (containing no caustic soda) for 10-15 minutes at 149°F (65°C); final dump temperature should not be below 109°F (43°C).
- Use an acid rinse to prevent milkstone deposits.
 - Perform daily after each cleaning for 5 minutes with cold- to room-temperature water.
 - Perform a once-weekly acid rinse for 15 minutes with 109°F (43°C) to 140°F (60°C) water in place of the alkaline cleaner used in Step 2.
- Purge moisture by draining and passing warm filtered air through the tubing until complete dryness is achieved.
- Sanitize tubing immediately prior to use following the manufacturer's recommended procedures.

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® M-34-R TUBING IS NOT INTENDED FOR USE AS AN IMPLANT MATERIAL.



Saint-Gobain
2664 Gilchrist Road
Akron, OH 44305
USA

www.ics.saint-gobain.com



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.

Tygon® is a registered trademark of Saint-Gobain Performance Plastics Corporation.