

# TRANSFLOW



# M-34-R

*The only choice for phthalate-free flexible tubing*

## The leading choice in dairy tubing\*

Transflow S3™ M-34-R from Saint-Gobain Performance Plastics is now phthalate-free. Saint-Gobain is proud to be among the first companies to offer sustainable flexible tubing products. The bio-based Transflow S3™ line combines the high performance standards customers demand with an eco-friendly tubing design.

## Reduced Maintenance and Inspection Concerns

Transflow S3™ M-34-R Tubing is specially formulated to reduce the risks that can occur with the use of rubber tubings. Many regulatory sanitarians throughout the world recognize Transflow S3™ as the preferred tubing for raw milk transfer.\*

Transflow S3™ tubing 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 Transflow S3™ 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 tubings.

## The Mark of Quality

Every foot of Transflow S3™ 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 Transflow S3™ tubing, the world's finest raw milk tubing produced specifically for the dairy industry.

## Transflow S3™ Large Bore and Vacuum (Air) Tubing

The same reliability and performance found in Transflow S3™ M-34-R Tubing is also available for tank truck operators. Produced in large bore sizes up to 3" I.D., Transflow S3™ tubing's clarity, flexibility and cleanability are ideally suited for bulk milk transfer.

Transflow S3™ 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.

## Regulatory Standards

Transflow S3™ complies with FDA, NSF, 3-A, Japan Food Sanitation Law # 370/1959, REACH, 1935/2004/EC and 10/2011/EU for many foods and beverages. Transflow S3™ tubing products do not contain chemicals listed in California's Prop 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](http://www.TygonS3.com).



## Transflow S3™ M-34-R Features/Benefits

- Crystal clarity permits visual inspection of milk flow
- Smooth, non-porous bore resists buildup
- 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

## Typical Applications\*

- Raw milk transport lines
- Dairy processing

## Inventoried Sizes, Pressures and Shipping Weights for: Transflow S3™ M-34-R Tubing

Saint-Gobain Part Number	I.D. (inches)	O.D. (inches)	Wall Thickness (inches)	Length (feet)	Minimum Bend Radius (inches)	Max. Working Pressure at 73°F (psi)	Vacuum Rating In. of Mercury at 73°F (psi)	Weight per Length (lbs)
ACK02305	7/16	3/4	5/32	100	1-1/8	45	29.9	18
ACK02039	1/2	13/16	5/32	100	1-1/2	40	29.9	20
ACK00043	9/16	15/16	3/16	50	1-1/2	43	29.9	16
ACK02043	9/16	15/16	3/16	100	1-1/2	43	29.9	28
ACK03043	9/16	15/16	3/16	250	1-1/2	43	29.9	70
ACK04043	9/16	15/16	3/16	500	1-1/2	43	29.9	145
ACK02048	5/8	1	3/16	100	1-3/4	40	29.9	29
ACK03048	5/8	1	3/16	250	1-3/4	40	29.9	77
ACK04048	5/8	1	3/16	500	1-3/4	40	29.9	150
ACK02056	3/4	1-5/32	13/64	100	2-1/4	36	29.9	41
ACK07056	3/4	1-5/32	13/64	400	2-1/4	36	29.9	155
ACK00061	7/8	1-3/8	1/4	50	2-1/2	38	29.9	27
ACK02061	7/8	1-3/8	1/4	100	2-1/2	38	29.9	54
ACK37061	7/8	1-3/8	1/4	300	2-1/2	38	29.9	150
ACK00065	1	1-1/2	1/4	50	3	34	25.0	30
ACK02065	1	1-1/2	1/4	100	3	34	25.0	61
ACK36075	1-1/2	2-1/4	3/8	60	4-3/8	34	26.0	77
ACK02075	1-1/2	2-1/4	3/8	100	4-3/8	34	26.0	124
ACK36079	2	2-3/4	3/8	60	6-7/8	27	14.0	108
ACK05087	3	4	1/2	20	10-5/8	25	11.0	90

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
Tensile Strength, psi (MPa)	D412	2,200 (15.2)
Ultimate Elongation, %	D412	390
Tear Resistance, lb-ff/inch (kN/m)	D1004	250 (43.8)
Specific Gravity	D792	1.21
Water Absorption, % 24 hrs. @ 73°F (23°C)	D570	0.22
Compression Set Constant Deflection, % @ 158°F (70°C) for 22 hrs.	D395 Method B	59
Brittleness Temp., °F (°C)	D746	-32 (-36)
Maximum Recommended Operating Temp. °F (°C)	-	165 (74)
Tensile Stress @ 200% Elongation, psi (MPa)	-	1,379 (9.5)
Tensile Set, %	D412	57
Color	-	Clear

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.

### Transflow S3™ Cleaning Instructions

To extend the usable life of Transflow S3™ 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 110°F without recirculating until discharge is clear.
- Wash tubing with alkaline cleaner (containing no caustic soda) for 10-15 minutes at 150°F; final dump temperature should not be below 115°F.
- 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 110°F - 140°F water in place of the alkaline cleaner used in Step 2 above.
- 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.

**TRANSFLOW S3™ M-34-R TUBING IS NOT INTENDED FOR USE AS AN IMPLANT MATERIAL.**



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Transflow® is a registered trademark.



**IMPORTANT:** It is the user's responsibility to ensure the suitability and safety of Saint-Gobain Performance Plastics tubing for all intended uses. Laboratory and clinical tests must be conducted in accordance with applicable regulatory requirements in order to determine the safety and effectiveness for use of tubing in any particular application.

For a period of 6 months from the date of first sale, Saint-Gobain Performance Plastics Corporation warrants this product to be free from defects in materials and workmanship. Our only obligation will be to replace any portion proving defective, or at our option, to refund the purchase price thereof. User assumes all other risk, if any, including the risk of injury, loss or damage, direct or consequential, arising out of the use, misuse, or inability to use, this product. THIS WARRANTY IS IN LIEU OF THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, AND ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. No deviation is authorized.

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