



# Tygon® SPT-50 LF

## Superior Hygiene for Milk Dispensing Applications

Tygon® SPT-50 LF tubing is a new, proprietary platinum-cured silicone formulation specifically designed to address the root cause of hygiene issues in milk dispensing applications. By specifically addressing the behavior of heated milk in dispensing applications, Tygon® SPT-50 LF tubing helps provide better hygiene in this type of equipment.

### The Cause of Hygiene Issues in Milk Dispensing

Fouling is defined as the accumulation of unwanted material on solid surfaces to the detriment of function. Protein nature (size and folding) and surface properties (roughness, charges, hydrogen bonding) are the main elements that play a role in the milk fouling. The accumulation of protein deposit on the walls of a dispensing tubing product makes rigorous cleaning compulsory, not only for sanitary reasons, but also to ensure a proper fluid flow. The graph on page 2 shows Tygon® SPT-50 LF tubing's performance in reducing protein fouling in a variety of coffee machine conditions.

### Mechanical Performance

Fluid integrity is vitally important in food and beverage applications. Tygon® SPT-50 LF tubing is manufactured from the finest grade of silicone materials. Ultra-low TOCs ensure that contamination by extractables is kept to an absolute minimum, and the formulation imparts no taste or odor. Saint-Gobain Performance Plastics silicone tubing is known for its superior mechanical properties, and Tygon® SPT-50 LF tubing is no exception.

The Typical Physical Properties chart on page 2 shows the mechanical properties of Tygon® SPT-50 LF tubing. These properties are perfectly suitable for food and beverage dispensing at various temperatures.

### Regulatory Compliance\*

Tygon® SPT-50 LF tubing complies with all applicable sections of FDA 21 CFR 175.300 for food contact articles. It also complies with EU Regulation 1935/2004 on materials and articles intended to come into contact with food, and with the French Order of November 25, 1992 relating to materials and articles made of silicone elastomers used in contact, or intended to be placed in contact with foodstuffs, food products and beverages. In addition, it complies with BfR and Japan MHLW Notification No. 370, Section 3-D. NSF listing under Standard 51 is pending.

### Features and Benefits

- Anti-fouling technology for improved system hygiene
- Ultra-low extractables to eliminate taste and odor impact
- Excellent flexibility
- Temperature range from -80°F to 392°F (-62°C to 200°C)
- Available in 50 and 65 durometers

### Regulatory Compliance\*

- FDA 21 CFR 175.300
- EU Regulation 1935/2004
- French Order of November 25, 1992
- BfR
- Japan MHLW Notification No. 370, Section 3-D
- NSF 51 (Pending)

\* For complete compliance information and appropriate use instructions, please refer to the detailed document of compliance.

## Typical Physical Properties

Property	Unit	Method	Tygon® SPT-50 LF	Tygon® SPT-65 LF
100% Modulus	MPa	ISO 37	1.13	1.43
Tensile Strength	MPa	ISO 37	9.12	8.45
Elongation at Break	%	ISO 37	627	617
Tear Strength	N/mm	ASTM D624	20.1	18.5
Hardness	Shore A	–	51	64

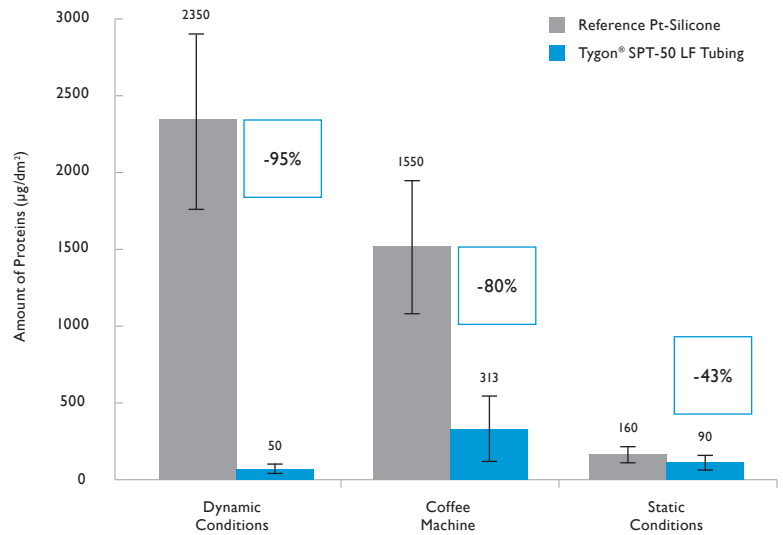
## Available Options

Tygon® SPT-50 LF tubing is available in custom sizes, lengths, lay lines, and durometers.

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® SPT-50 LF TUBING IS NOT INTENDED FOR USE AS AN IMPLANT MATERIAL.

## Tygon® SPT-50 LF Tubing Performance



Amount of protein attached to the walls of reference platinum-cured silicone tubing and Tygon® SPT-50 LF tubing after various contacts with milk.



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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.

Tygon® is a registered trademark.