



Sani-Tech® SIL-250

Extended Life Silicone Tubing

Sani-Tech® SIL-250 Tubing

Peristaltic pumping transports fluids efficiently, without risking contact with any portion of the pump itself. To accomplish this, flexible tubing is inserted between the pump rollers and housing. As the rollers rotate around a stationary rotor, the tubing is “squeezed” or occluded, pushing the fluid through the inside tubing surface. As the tubing behind each roller recovers its shape, a vacuum is created, drawing additional fluid in behind the occluded tubing. During this process, the fluid is contained entirely within the flexible tubing, eliminating exposure (and risk of fluid contamination) to any components of the pump.

The Material Difference

Sani-Tech® SIL-250 silicone tubing is formulated specifically for use in peristaltic pump applications. With its superior flex life characteristics, manufacturing processes can be simplified by reducing potential production downtime due to pump tubing failure. (See Comparative Peristaltic Pump Tubing Life chart on back of page.)

The smooth inner surface of Sani-Tech® SIL-250 silicone tubing is designed to help reduce the risk of particle entrapment and microscopic build-up during sensitive fluid transfer. This smooth fluid path also can help to facilitate complete sanitation of a fluid transfer system. Even in extended use applications, Sani-Tech® SIL-250 silicone tubing may help to prevent residue build-up, aiding in more efficient cleaning and sterilization processes.

Platinum-cured Sani-Tech® SIL-250 silicone tubing complies fully with the requirements of the USP Class VI criteria and is entirely non-toxic, non-hemolytic and non-pyrogenic. In addition, Sani-Tech® SIL-250 silicone tubing meets FDA 21 CFR Part 177.2600 criteria for use in food contact applications.

Easy Validation Process

Sani-Tech® SIL-250 silicone tubing provides versatility in use for a broad range of peristaltic pump applications. For situations requiring other uniquely engineered properties, Saint-Gobain Performance Plastics can design a formulation suited to meet your specific needs, including ultra-high temperature resistance, electrical conductivity, pressure and vacuum resistance, pigmented colors and closed cell sponge.

Features / Benefits

- Lasts up to five times longer than other platinum silicone tubings
- Minimal extractables help maintain fluid integrity
- Ultra-smooth inner bore reduces potential for particle entrapment
- Documented biocompatibility for sensitive applications
- Excellent fluid flow characteristics
- Taste-free and odor-free

Single-use Applications

- Production filtration and fermentation
- Sterile fill lines
- Media processing
- Cell harvest collection systems
- Chemistry and blood analysis
- Liquid chromatography

Sani-Tech® SIL-250 Tubing Available Sizes

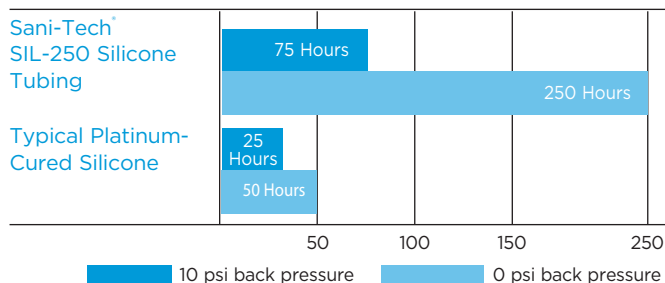
Part Number	Tubing Size		Length		Minimum Bend	
	inches	mm	feet	m	inches	mm
SIL-250/125-1	1/8 x 3/16	3.2 x 4.8	50	15.2	3/8	9.5
SIL-250/125-2	1/8 x 1/4	3.2 x 6.4	50	15.2	1/2	12.7
SIL-250/156-1	5/32 x 7/32	4 x 5.6	50	15.2	3/4	19.1
SIL-250/187-1	3/16 x 1/4	4.8 x 6.4	50	15.2	1	25.4
SIL-250/187-2	3/16 x 5/16	4.8 x 7.9	50	15.2	1/2	12.7
SIL-250/187-3	3/16 x 3/8	4.8 x 9.5	50	15.2	3/8	9.5
SIL-250/187-4	3/16 x 7/16	4.8 x 11.1	50	15.2	3/8	9.5
SIL-250/250-1	1/4 x 5/16	6.4 x 7.9	50	15.2	1-1/2	38.1
SIL-250/250-2	1/4 x 3/8	6.4 x 9.5	50	15.2	1-1/2	38.1
SIL-250/250-3	1/4 x 7/16	6.4 x 11.1	50	15.2	1-5/8	41.3
SIL-250/250-4	1/4 x 1/2	6.4 x 12.7	50	15.2	5/8	15.9
SIL-250/312-2	5/16 x 7/16	7.9 x 11.1	50	15.2	1-1/4	31.8
SIL-250/312-3	5/16 x 1/2	7.9 x 12.7	50	15.2	5/8	15.9
SIL-250/375-2	3/8 x 1/2	9.5 x 12.7	50	15.2	1-1/2	38.1
SIL-250/375-3	3/8 x 9/16	9.5 x 14.3	50	15.2	1	25.4
SIL-250/375-4	3/8 x 5/8	9.5 x 15.9	50	15.2	1	25.4
SIL-250/437-1	7/16 x 9/16	11.1 x 14.3	50	15.2	1-1/2	38.1
SIL-250/437-2	7/16 x 5/8	11.1 x 15.9	50	15.2	1-3/4	44.5
SIL-250/500-2	1/2 x 5/8	12.7 x 15.9	50	15.2	3	76.2
SIL-250/500-3	1/2 x 11/16	12.7 x 17.5	50	15.2	1-3/4	44.5
SIL-250/500-4	1/2 x 3/4	12.7 x 19.1	50	15.2	1-1/2	38.1

*Working pressures are calculated at a 1:5 ratio relative to burst pressure using ASTM D1599. ADDITIONAL SIZES AVAILABLE UPON REQUEST.

Sani-Tech® SIL-250 Typical Physical Properties

Property	ASTM Method	Value or Rating
Durometer Hardness Shore A, 15 Sec	D2240	55
Color Translucent	-	
Tensile Strength psi (MPa)	D412	900 (6.2)
Ultimate Elongation, %	D412	400
Tear Resistance lb-f/inch (kN/m)	D624 Die B	135 (23.6)
Specific Gravity	D792	1.12
Water Absorption, % 24 hrs. @ 23°C	D570	0.16
Compression Set Constant Deflection, % @ 158°F (70°C) for 22 hrs.	D395 Method B	5
Brittleness by Impact Temp., °F (°C)	D746	<- 112° (<-80°)
Maximum Recommended Operating Temp., °F (°C)	-	400 (204)
Dielectric Strength v/mil (kV/mm)	D149	462 (18.2)
Tensile Modulus, @100% Elongation, psi (MPa) @ 200% Elongation, psi (MPa)	D412	375 (2.6) 500 (3.4)
Tensile Set, %	D412	6

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.



The performance of tubing in peristaltic pumping applications is affected by the conditions of use and equipment utilized, along with size and wall thickness of the tubing tested. The data above is presented for information only and should not be utilized for specification purposes.

Comparative Peristaltic Pump Tubing Life

The table below depicts hours until failure of 1/4" ID x 3/8" OD tubing. In each case, a 3-roller pump head was utilized operating at 600 rpm at room temperature (73° F). Tubing failure is measured in hours of use prior to rupture.

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.

SANI-TECH[®] TUBING IS NOT INTENDED FOR USE AS AN IMPLANT MATERIAL

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Saint-Gobain Performance Plastics

3910 Terry-Diane Drive
 Beaverton, MI 48612
 Tel: (888) 387-0067
 Tel: (989) 435-9533
 Fax: (989) 435-2355

www.biopharm.saint-gobain.com

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