



GORE™ Silicone Tubing

FOR HIGH-PURITY APPLICATIONS

High-Purity Tubing for Fluid Transfer and Peristaltic Pump Operations

Product Description

GORE™ Silicone Tubing is offered in a variety of different options including standard, pump, and extended life pump tubing. These products have been specifically formulated for use with sensitive media found in pharmaceutical and biotech processing. Designed to meet a range of performance requirements, GORE™ Silicone Tubing is ideal for extended-life pumping and in applications demanding ultimate purity in fluid transfer and peristaltic pump operations. All tubing products are fully traceable from start to finish.

Quality Assurance

GORE™ Silicone Tubing is compounded to meet the most demanding requirements of biocompatibility and manufactured using platinum-cured pharmaceutical grade silicone elastomer that meets or exceeds the test requirements of the following:

- USP Class VI for Plastics
- USP <661> Physicochemical Tests
- FDA 21 CFR 177.2600
- EP 3.1.9 — Silicone elastomer for closures and tubing

Critical properties are controlled throughout the manufacturing process, which operates under a quality system based on applicable current Good Manufacturing Practices (cGMP).

Forced extraction tests have shown that GORE™ Silicone Tubing has low extractable content and is animal derived component free (ADCF).

Materials of Construction

Platinum-cured silicone

Chemical Compatibility Guidelines

Acids		Bases		Salts	Alcohols	Ketones
Strong	Weak	Strong	Weak			
N	Y	N	Y	Y	Y	Y

Y = Yes N = No



Benefits of GORE™ Silicone Tubing

- Offers superior performance over peroxide-cured silicone in high-purity fluid transfer and pump applications
- Imparts no odors or taste to transported fluids due to ultra-pure biopharmaceutical grade silicone
- Allows for tubing resilience and adaptability within processes because of excellent tubing flexibility and pumpability
- Provides easy visibility of fluid transport due to naturally clear tubing
- Enables identification and differentiation of fluid transfer paths with custom coding and printing options
- Offers versatility in processing with the ability to customize tubing lengths
- Meets specific process connection requirements with compatible reusable and integrated non-metallic molded connectors

Typical Applications

- Pharmaceutical and biotech processing
- Ultra-pure fluid transfer
- Peristaltic pumping
- Filling operations
- Laboratory use
- Media processing



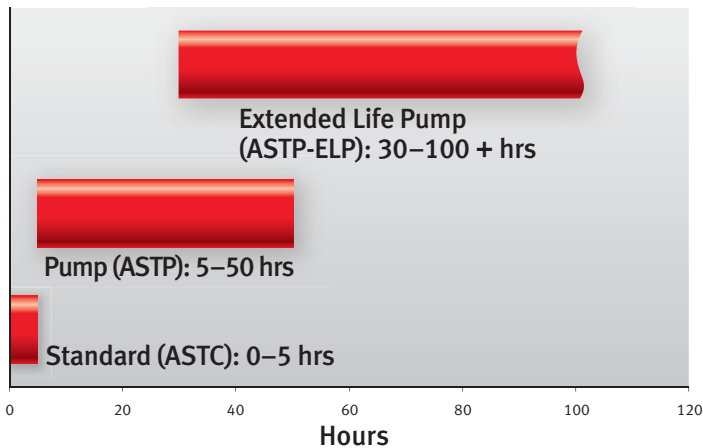
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Typical Physical Properties

Property	ASTM Method	Specifications		
		Standard (ASTC)	Pump (ASTP)	Extended Life Pump (ASTP-ELP)
Durometer hardness, Shore A	D2240	50	50	60
Ultimate elongation, 100%	D412	750	750	435
Modulus at 100%, 200%, 300%, psi	D412	120, 170, 250	120, 170, 250	220, 455, 700
Tear Resistance, lb-f/inch	D624 – Die B	200	200	150
Tensile Strength, psi	D412	1480	1480	1020
Specific Gravity	D297	1.15	1.15	1.17
Temperature Range, °F, (°C)	—	-80 to 450 (-62 to 232)		
Color	—	Translucent		

Comparative Peristaltic Pump Tubing Life



*Note: Final determination of the suitability of any information or material for the use contemplated and the manner of use is the sole responsibility of the user. The above information gives typical properties only and should not be used for specific purposes.

Choosing a GORE™ Silicone Tubing

1. What is your application?
 - a. Ultra-pure fluid transfer — choose Standard Tubing (ASTC)
 - b. Peristaltic pumping — choose either Pump Tubing (ASTP) or Extended Life Pump Tubing (ASTP-ELP)
2. Will you be using peristaltic pumps? If yes, how many hours will you be pumping?
 - a. Less than 50 hours — choose Pump Tubing (ASTP)
 - b. Between 50-100 or more hours — choose Extended Life Pump Tubing (ASTP-ELP)

GORE™ Silicone Tubing — Extended Life Pump (ASTP-ELP): Ordering Information

Part Number	I.D. (inches)	O.D. (inches)	Wall Thickness (inches)
ASTP-13ELP	0.031	0.157	0.063
ASTP-119ELP	0.063	0.251	0.094
ASTP-14ELP	0.063	0.189	0.063
ASTP-120ELP	0.125	0.313	0.094
ASTP-16ELP	0.125	0.250	0.063
ASTP-25ELP	0.189	0.315	0.063
ASTP-15ELP	0.189	0.378	0.094
ASTP-123ELP	0.189	0.441	0.126
ASTP-17ELP	0.252	0.378	0.063
ASTP-24ELP	0.252	0.441	0.094
ASTP-26ELP	0.252	0.504	0.126
ASTP-18ELP	0.315	0.441	0.063
ASTP-121ELP	0.315	0.504	0.094

Part Number	I.D. (inches)	O.D. (inches)	Wall Thickness (inches)
ASTP-185ELP	0.315	0.630	0.157
ASTP-122ELP	0.378	0.567	0.094
ASTP-73ELP	0.378	0.630	0.126
ASTP-190ELP	0.378	0.756	0.189
ASTP-186ELP	0.472	0.787	0.157
ASTP-82ELP	0.488	0.740	0.126
ASTP-88ELP	0.500	0.878	0.189
ASTP-184ELP	0.626	0.878	0.126
ASTP-189ELP	0.626	1.000	0.189
ASTP-187ELP	0.630	0.945	0.157
ASTP-191ELP	0.750	1.126	0.189
ASTP-92ELP	1.000	1.378	0.189

GORE™ Silicone Tubing — Pump (ASTP): Ordering Information

Part Number	I.D. (inches)	O.D. (inches)	Wall Thickness (inches)
ASTP-13	0.031	0.157	0.063
ASTP-14	0.063	0.189	0.063
ASTP-119	0.063	0.251	0.094
ASTP-16	0.125	0.250	0.063
ASTP-120	0.125	0.313	0.094
ASTP-15	0.189	0.378	0.094
ASTP-25	0.189	0.315	0.063
ASTP-123	0.189	0.441	0.126
ASTP-17	0.252	0.378	0.063
ASTP-24	0.252	0.441	0.094
ASTP-26	0.252	0.504	0.126
ASTP-35	0.312	0.500	0.094
ASTP-121	0.315	0.504	0.094
ASTP-185	0.315	0.630	0.157

Part Number	I.D. (inches)	O.D. (inches)	Wall Thickness (inches)
ASTP-36	0.378	0.562	0.092
ASTP-73	0.378	0.630	0.126
ASTP-122	0.378	0.567	0.094
ASTP-190	0.378	0.756	0.189
ASTP-186	0.472	0.787	0.157
ASTP-82	0.488	0.740	0.126
ASTP-88	0.500	0.878	0.189
ASTP-184	0.626	0.878	0.126
ASTP-189	0.626	1.000	0.189
ASTP-187	0.630	0.945	0.157
ASTP-90	0.750	1.250	0.250
ASTP-191	0.750	1.126	0.189
ASTP-92	1.000	1.378	0.189

GORE™ Silicone Tubing — Standard (ASTC): Ordering Information

Part Number	I.D. (inches)	O.D. (inches)	Wall Thickness (inches)
ASTC062-1A50	0.062	0.125	0.031
ASTC062-2A50	0.062	0.187	0.062
ASTC062-3A50	0.062	0.250	0.094
ASTC062-4A50	0.062	0.312	0.125
ASTC062-5A50	0.062	0.437	0.187
ASTC062-6A50	0.062	0.562	0.250
ASTC078-1A50	0.078	0.140	0.031
ASTC078-2A50	0.078	0.203	0.062
ASTC078-3A50	0.078	0.265	0.093
ASTC078-4A50	0.078	0.328	0.125
ASTC078-5A50	0.078	0.453	0.187
ASTC078-6A50	0.078	0.578	0.250
ASTC093-1A50	0.093	0.156	0.031
ASTC093-2A50	0.093	0.218	0.062
ASTC093-3A50	0.093	0.281	0.094
ASTC093-4A50	0.093	0.343	0.125
ASTC093-5A50	0.093	0.468	0.187
ASTC093-6A50	0.093	0.593	0.250
ASTC125-1A50	0.125	0.187	0.031
ASTC125-2A50	0.125	0.250	0.062
ASTC125-3A50	0.125	0.312	0.094
ASTC125-4A50	0.125	0.375	0.125
ASTC125-5A50	0.125	0.500	0.187
ASTC125-6A50	0.125	0.625	0.250
ASTC156-1A50	0.156	0.218	0.031
ASTC156-2A50	0.156	0.281	0.062
ASTC156-3A50	0.156	0.343	0.094
ASTC156-4A50	0.156	0.406	0.125
ASTC156-5A50	0.156	0.531	0.187
ASTC156-6A50	0.156	0.656	0.250
ASTC187-1A50	0.187	0.250	0.031
ASTC187-2A50	0.187	0.312	0.062
ASTC187-3A50	0.187	0.375	0.094
ASTC187-4A50	0.187	0.437	0.125
ASTC250-1A50	0.250	0.312	0.031
ASTC250-2A50	0.250	0.375	0.062
ASTC250-3A50	0.250	0.437	0.093
ASTC250-4A50	0.250	0.500	0.125
ASTC250-5A50	0.250	0.625	0.187

Part Number	I.D. (inches)	O.D. (inches)	Wall Thickness (inches)
ASTC312-1A50	0.312	0.375	0.031
ASTC312-2A50	0.312	0.437	0.062
ASTC312-3A50	0.312	0.500	0.094
ASTC312-4A50	0.312	0.562	0.125
ASTC312-5A50	0.312	0.686	0.187
ASTC375-1A50	0.375	0.437	0.031
ASTC375-2A50	0.375	0.500	0.062
ASTC375-3A50	0.375	0.562	0.093
ASTC375-4A50	0.375	0.625	0.125
ASTC375-5A50	0.375	0.750	0.187
ASTC375-6A50	0.375	0.875	0.250
ASTC500-1A50	0.500	0.562	0.031
ASTC500-2A50	0.500	0.625	0.062
ASTC500-3A50	0.500	0.687	0.093
ASTC500-4A50	0.500	0.750	0.125
ASTC500-5A50	0.500	0.875	0.187
ASTC500-6A50	0.500	1.000	0.250
ASTC562-3A50	0.562	0.750	0.094
ASTC625-1A50	0.625	0.687	0.031
ASTC625-2A50	0.625	0.750	0.062
ASTC625-3A50	0.625	0.812	0.093
ASTC625-4A50	0.625	0.875	0.125
ASTC625-5A50	0.625	1.000	0.187
ASTC750-1A50	0.750	0.812	0.031
ASTC750-2A50	0.750	0.875	0.062
ASTC750-3A50	0.750	0.937	0.093
ASTC750-4A50	0.750	1.000	0.125
ASTC750-5A50	0.750	1.125	0.187
ASTC750-6A50	0.750	1.250	0.250
ASTC750-7A50	0.750	1.500	0.375
ASTC875-2A50	0.875	1.000	0.062
ASTC875-3A50	0.875	1.062	0.093
ASTC875-4A50	0.875	1.125	0.125
ASTC875-5A50	0.875	1.250	0.187
ASTC875-6A50	0.875	1.375	0.250



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FOR HIGH-PURITY APPLICATIONS

Sterilization

It is the end-user's responsibility to validate a sterilization method when using GORE™ Silicone Tubing. The end-user should conduct testing if sterilization conditions vary and/or if minor property changes could affect application performance. Recommended sterilization methods include:

- Autoclave — steam 30 minutes at 15 psi (250°F)
- Gas — ethylene oxide
- Radiation — up to 35 kGy / 3.5 mRad maximum

Connections and Fittings

GORE™ Silicone Tubing is available with a variety of sanitary end connections, including:

- Molded silicone
- Crimped stainless steel
- Reusable stainless steel

Custom line sets and molded assemblies that enable GORE™ Silicone Tubing to be integrated into your bioprocess are also available and can be designed using the GORE™ STA-PURE™ Bioprocess Configurator. Visit www.gore.com/bioprocess-configurator or consult a Gore representative for details.

Customization Options

Building on a strong heritage of technical leadership and innovation, Gore continues to meet the demands of the marketplace by offering the ability to customize product offerings to meet specific needs. Customization options for GORE™ Silicone Tubing include:

- Color striping
- Coils or bulk spool packaging in 25 ft, 50 ft, and 100 ft lengths
- Metric and other custom sizes available
- Custom printing
- Gamma irradiated
- Custom packaging, including bagging and labeling

Shelf Life

When stored in the original unopened packaging at standard conditions, GORE™ Silicone Tubing has a recommended shelf life of five years from the production date. When gamma irradiated, GORE™ Silicone Tubing has a recommended shelf life of three years from the production date.



Contact Us

For detailed selection criteria, technical assistance and installation guidelines, please contact a Gore representative.

To the best of our knowledge, the information contained herein is accurate. Final determination of the suitability of any information or material for the use contemplated and the manner of use is the sole responsibility of the user. The above information gives typical properties only.

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