

# Versilon™ 367

## High-Purity, Superior Surface Smooth Fluoropolymer Tubing

### Lets You Maintain Fluid Integrity

More and more manufacturers are realizing the importance of maintaining the integrity of the chemicals used in their production processes, and are using chemically inert fluoropolymer tubing to achieve the required purity levels. Versilon™ 367 tubing not only maintains fluid integrity, but outperforms tubing made from standard or high-purity PFA resins in many significant ways.

In terms of surface smoothness, Versilon™ 367 tubing is up to six times smoother, which translates to less cross-contamination, greater product yields and easier-to-clean systems.

In extraction tests - in which several different fluoropolymer tubing were filled separately with deionized water and acid - Versilon™ 367 had one of the lowest parts-per-billion counts on trace metals (see "Comparative Total Trace Metal Extractables" chart on the back of this page).

As far as visual clarity is concerned, Versilon™ 367 is clearer than virtually all other fluoropolymers. Coupled with its chemical inertness, this clarity makes Versilon™ 367 tubing ideally suited for easy identification of just about any chemical.

### Regulatory Compliance

Versilon™ 367 meets FDA 21 CFR, 177.1550 criteria and is applicable for food contact applications.

### Features and Benefits

- Vastly superior surface smoothness compared to other fluoropolymer tubing
- Very low extractables with deionized water and acids
- Superior clarity versus other fluoropolymer tubing
- Resistant to virtually all commonly used chemicals
- Excellent mechanical properties
- Meets FDA criteria

### Typical Applications

- Food and beverage
- Environmental
- Semiconductor processing
- Chemical processing
- General industrial
- Autoanalyzer
- Nuclear

## Versilon™ 367

Part Number**	ID	OD	Wall Thickness	Length	Min. Bend Radius	Max. Working Pressure*		
	(in)	(in)	(in)	(ft)	(in)	73°F (psi)	212°F (psi)	400°F (psi)
TSC367-0125-031-50	1/16	1/8	1/32	50	1/2	379	165	87
TSC367-0250-062-50	1/8	1/4	1/16	50	1/2	383	167	88
TSC367-0250-047-50	5/32	1/4	3/32	50	3/4	266	116	61
TSC367-0250-031-50	3/16	1/4	1/32	50	1	163	71	37
TSC367-0312-031-50	1/4	5/16	1/32	50	1-3/4	129	56	29
TSC367-0375-062-50	1/4	3/8	1/16	50	1	230	100	53
TSC367-0500-062-50	3/8	1/2	1/16	50	2	164	71	38

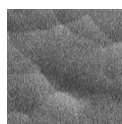
Custom sizes and lengths available upon request. Metric sizes available. Available in long continuous lengths.

\* Safety factor of 4 to 1 ratio of burst pressure to working pressure ASTM D1599.  
 \*\* Additional lengths available upon request.

### Typical Physical Properties

Property	ASTM Method	Value or Rating
Surface Smoothness, microns (based on 1/4" x 3/8" tubing)	—	1.7
Durometer Hardness (Shore D), 1 sec	D2240	58
Color	—	Clear
Maximum Recommended Operating Temp., °F (°C)	—	450 (232)
Low Temp. Embrittlement, °F (°C)	—	-320 (-196)
Specific Gravity	D792	2.15
Water Absorption, %	D570	<0.03
UL Flammability Test	UL94	V-0
Dielectric Strength, V/mil (kV/mm)	D149	900-1,000 (35-40)
Tensile Strength, psi (MPa)	D1708	3,750 (26)
Elongation, %, @ 73°F	D1708	300
Melting Point, °F (°C)	D3307	536-554 (280-290)
Haze, %	—	0.83
UV Transmission, % @ 254 nm (0.008" thickness)	D-1003	89
Refractive Index	D-542	1.34
Flexural Modulus, psi (MPa) @ 73°F	D-790	67,000 (462)
Coefficient of Thermal Expansion, in./in./°F	D-696	7 x 10 <sup>-5</sup> to 11 x 10 <sup>-5</sup>

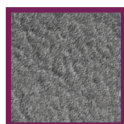
Unless otherwise noted, all tests were conducted at room temperature 73°F (23°C). Values shown were determined on 0.075" (6.35 mm) thick extruded strip, 0.075" (6.35 mm) thick molded ASTM plaques or molded ASTM durometer buttons. Size of tubing tested is 1/8" ID x 1/4" OD.



Versilon™ Tubing Made from a High-Purity PFA Resin  
Avg. Cell Size - 30 microns



Versilon™ Tubing Made from Standard PFA Resin  
Avg. Cell Size - 20 microns

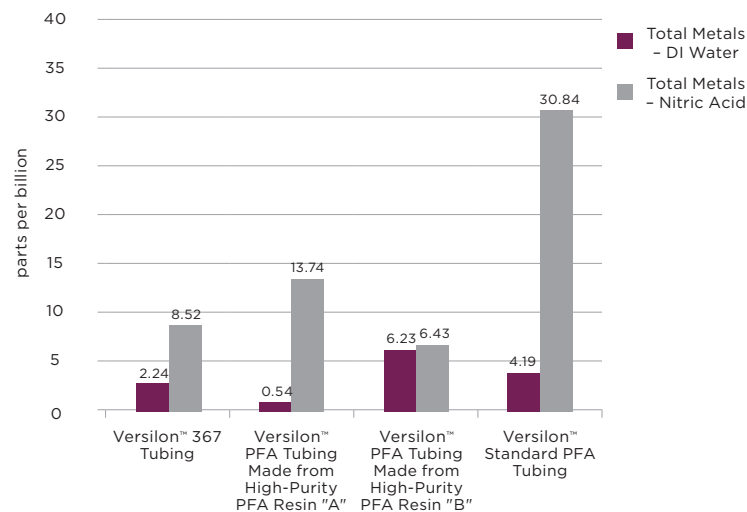


Versilon™ 367 Tubing  
Avg. Cell Size - 5 microns

### Comparative Surface Smoothness Characteristics

Tubing Type	RMS (microns)	Variability: Peak-to-Valley (microns)
Versilon™ 367 Tubing	1.678	1.216
Versilon™ PFA Made from High-Purity PFA Resin	10.917	8.650
Versilon™ Standard PFA	13.942	10.721

### Comparative Total Trace Metal Extractables DI and Nitric Acid Extraction



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 pressure, 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.



**Saint-Gobain Performance Plastics**  
 210 Harmony Road  
 Mickleton, NJ 08056  
 1-800-543-8823  
 Tel: (856) 423-6630  
 Fax: (856) 423-8182

www.processsystems.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.

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