

VERSILON™
Fluid Performance



Versilon™ F-5500-A

Pumpable Dry Cleaning Fluid Line & Solvent Recovery Tubing

Description

Made of a proprietary fluoroelastomer, Versilon™ F-5500-A tubing has both the physical and chemical characteristics that make it ideal for severe environments, such as dry cleaning fluid lines and solvent recovery systems, where other flexible tubes fail. Versilon™ F-5500-A tubing can be used in continuous service with temperatures as high as 400°F (204°C). Versilon™ F-5500-A tubing's opaque black color helps protect light-sensitive materials being transferred and will not prematurely crack and age when exposed to ozone, sun and weather. A food grade tubing formulation is available upon request.

Reduced Outgassing

Through a high temperature, time controlled, post-cure process, virtually all processing residuals are driven from Versilon™ F-5500-A. This allows for use in applications where minimal outgassing is required. This condition can be desirable in numerous applications such as in the aerospace industry, where preventing contamination of highly sensitive instrumentation may be critical.

Excellent Chemical Resistance

Versilon™ F-5500-A tubing provides excellent resistance to corrosive chemicals, oils, fuels, solvents and most mineral acids. Versilon™ F-5500-A tubing is highly flexible and resilient, making it the ideal choice in peristaltic pumping of extremely corrosive materials. Refer to the "Effect of Chemical and Temperature Environments on Physical Properties" chart on the back for a listing of common chemicals and their relative effect on the physical properties of Versilon™ F-5500-A tubing.

Features and Benefits

- Provides continuous service at temperatures up to 400ºF (204ºC)
- Excellent resistance to corrosive chemicals, oils, fuels and solvents
- Resists ozone, sunlight and weathering
- Opaque black color helps protect light-sensitive fluids

Typical Applications

- Solvent recovery systems
- Process monitoring equipment
- Peristaltic pumping of concentrated acids
- Fuel lubrication lines in high temperature equipment
- O-rings, seals and gasketing
- Caustic hot air exhaust and sampling
- Dry cleaning fluid lines
- Chemical processing

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Versilon™ F-5500-A

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Versilon™ F-5500-A

Part Number	ID		OD		Wall Thickness		Min. Bend Radius		Max. Working Pressure		Vacuum Rating		Length
	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	73°F (psi)*	275°F (psi)*	73°F (inHg)	275°F (inHg)	(ft)
AGN00002	1/16	1.59	1/8	3.18	1/32	0.79	1/4	6.35	18	12	29.9	29.9	50
AGN00007	1/8	3.18	1/4	6.35	1/16	1.59	1/2	12.70	19	13	29.9	29.9	50
AGN00012	3/16	4.76	5/16	7.94	1/16	1.59	3/4	19.05	15	9	29.9	29.9	50
AGN00017	1/4	6.35	3/8	9.53	1/16	1.59	1	25.40	13	8	25.0	20.0	50
AGN00022	5/16	7.94	7/16	11.11	1/16	1.59	1-1/4	31.75	11	6	15.0	10.0	50
AGN00027	3/8	9.53	1/2	12.70	1/16	1.59	2	50.80	10	5	10.0	5.0	50

* 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	60
Color	—	Black
Opacity	—	Opaque
Tensile Strength, psi (MPa)	D412	1400 (9.3)
Ultimate Elongation, %	D412	300
Tear Resistance, lb-f/in (kN/m)	D1004	100 (17.5)
Specific Gravity	D792	1.90
Water Absorption, % at 73°F (23°C) for 24 hrs.	D570	0.23
Compression Set Constant Deflection, % at 158°F (70°C) for 22 hrs.	D395	37
Maximum Recommended Operating Temp., °F (°C)	—	400 (204)
Brittleness by Impact Temp., °F (°C)	D746	-60 (-51)
Tensile Stress, psi (MPa) @ 100% Elongation	D412	350 (2.4)
Tensile Set, %	D412	13

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 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.

Effect of Chemical and Temperature Environments on Physical Properties

Versilon Tubing at Room Temperature** and Percent of Original Properties Retained after 28-Day Exposure

Environment	Percentage Retained					% Weight Change	% Volume Change
	Tensile	Ultimate % Elongation	100% Modulus (psi)	200% Modulus (psi)	300% Modulus (psi)		
Original Properties	1350	300	350	800	1300	—	—
ASTM Oil #3 at 300°F	90	92	103	99	98	+2	+5
Ethyl Alcohol 99%	67	103	64	61	65	+2	+5
Hydrochloric Acid 37%	86	109	81	75	78	+3	+5
Hydrofluoric Acid 48%	85	109	85	78	79	+1	+1
Nitric Acid 10% (156°F)	76	99	74	65	72	+50	+94
Nitric Acid 60%	86	106	79	76	81	+3	+4
Perchloroethylene	71	108	68	64	65	+4	+6
Sodium Hydroxide 40%	94	96	94	91	98	-1	-1
Sulfuric Acid 50%	94	94	96	96	98	-1	-1
Sulfuric Acid 98% (158°F)	84	94	93	87	90	+14	+20
Sulfuric Acid 98%	93	97	95	91	94	+6	+9
Tolulene	56	91	64	62	62	+6	+15
Water at 158°F	87	105	89	83	82	+1	+1
Methylene Chloride	41	67	61	59	—	+13	+20
Air at 400°F	111	95	107	112	117	-3	-4

** Room temperature is 73°F, 50% Relative Humidity, ASTM D471.

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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.

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