



HIGH PERFORMANCE FLUOROPOLYMER AND
FLUOROPLASTIC TUBING AND PIPE



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TRANSPORT CRITICAL FLUID WITH CONFIDENCE™

P: 973-300-3344

F: 973-300-3345

E: sales@altaflo.com, customerservice@altaflo.com

A: 23 Wilson Drive, Sparta, NJ 07871

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HANLEY CONTROLS

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PTFE (polytetrafluoroethylene) was first developed by the E.I. DuPont Co. PTFE is the most flexible of all fluoropolymers offered. ALTAFLUOR® 100 PTFE has the broadest temperature range of any fluoropolymer and can resist highly corrosive liquids and gases even at elevated temperatures. The smooth surface finish, lowest coefficient of friction and lubricity make it ideal for bushing or bearing applications. Lengths may be limited due to batch size - please call to confirm available lengths at time of order. ALTAFLUOR® 100 is compatible with most standard fittings (not suitable for use with flare-type fittings).

ALTAFLUOR® 100 FEATURES

- 100% virgin grade PTFE resins
- Most flexible fluoropolymer
- Chemically inert and resistant to nearly all industrial chemicals and solvents
- Low permeability
- Smooth non-stick surface finish
- Lowest coefficient of friction
- Excellent electrical properties
- Non-Flammable
- Non-Toxic
- FDA Compliant
- Suitable for use with conventional fittings

APPLICATIONS

- Laboratory
- Chemical Process
- Analytical and process equipment
- Cryogenic applications
- Electrical applications
- High Temperature applications
- Automotive

SPECIFICATIONS

General: Meets or exceeds the requirements listed in ASTM D 3295 (except for dimensional on specific items)

Temperature: -410° F to 500° F continuous / 550° F short-term

Flammability: PTFE tubing resists combustion and does not promote flame spread. PTFE resin used for production of ALTAFLUOR® 100 series is UL 94 VO rated

FDA: PTFE is approved for use in food contact applications in compliance with FDA regulation: 21 CFR 177.1550

ALTAFLUOR® 100 PTFE - TUBING

PART NUMBER	ID	OD	+/-	WALL	+/-
Industrial Wall					
100-0062-015-XX	1/32	1/16	.003	0.015	.003
100-0094-030-XX	1/32	3/32	.005	0.030	.005
100-0125-030-XX	1/16	1/8	.005	0.030	.005
100-0188-030-XX	1/8	3/16	.005	0.030	.005
100-0250-030-XX	3/16	1/4	.005	0.030	.005
100-0313-030-XX	1/4	5/16	.005	0.030	.005
100-0375-030-XX	5/16	3/8	.005	0.030	.005
100-0500-030-XX	7/16	1/2	.005	0.030	.005
Custom Wall					
100-0250-040-XX	0.17	1/4	.005	0.040	.005
100-0375-040-XX	0.295	3/8	.005	0.040	.003
100-0250-047-XX	5/32	1/4	.005	0.047	.005
Heavy Wall					
100-0250-062-XX	1/8	1/4	.005	0.062	.005
100-0313-062-XX	3/16	5/16	.005	0.062	.005
100-0375-062-XX	1/4	3/8	.005	0.062	.005
100-0500-062-XX	3/8	1/2	.005	0.062	.005
Metric					
100-0157-040-XX	2mm	4mm		1mm	
	0.079	157	.005	0.040	.005
100-0236-040-XX	4mm	6mm		1mm	
	0.157	0.236	.005	0.040	.005
100-0315-040-XX	6mm	8mm		1mm	
	0.236	0.315	.005	0.040	.005
100-0394-040-XX	8mm	10mm		1mm	
	0.315	0.394	.005	0.040	.005
100-0472-040-XX	10mm	12mm		1mm	
	0.394	0.472	.005	0.040	.005
100-0354-059-XX	6mm	9mm		1.5mm	
	0.236	0.354	.005	0.590	.005

Stocked in natural color - please consult factory for details on available colors.



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Due to the nature of applications involving the use of fluoropolymers, we suggest that all customers test product within the conditions specific to their application prior to use.

ALTAFLUOR® 100 PTFE - BEND RADIUS AND WORKING PRESSURE CHART

PART NUMBER	OD	WALL	ID	BEND RADIUS	WORKING PRESSURE @ 73°F
Industrial Wall					
100-0062-015-XX	1/16	0.015	1/32	3/8"	270
100-0094-030-XX	3/32	0.030	1/32	1/2"	350
100-0125-030-XX	0.125	0.030	0.062	1/2"	443
100-0188-030-XX	0.188	0.030	0.125	3/4"	254
100-0250-030-XX	0.250	0.030	0.188	1"	172
100-0313-030-XX	0.313	0.030	0.250	1-3/4"	120
100-0375-030-XX	0.375	0.030	0.313	1-3/4"	100
100-0500-030-XX	0.500	0.030	0.438	6"	71
Custom Wall					
100-0250-040-XX	0.250	0.040	0.170	1"	310
100-0250-047-XX	0.250	0.047	0.156	3/4"	360
Heavy Wall					
100-0250-062-XX	0.250	0.062	0.125	1/2"	398
100-0313-062-XX	0.313	0.062	0.188	1"	356
100-0375-062-XX	0.375	0.062	0.250	3/4"	248
100-0500-062-XX	0.500	0.062	0.375	2-1/2"	150
Metric					
100-0157-040-XX	0.157	0.04	0.079	3/4"	455
	4mm	1mm	2mm		
100-0236-040-XX	0.236	0.040	0.157	1"	208
	6mm	1mm	4mm		
100-0315-040-XX	0.315	0.040	0.236	1-1/2"	156
	8mm	1mm	6mm		
100-0394-040-XX	0.394	0.040	0.315	2"	125
	10mm	1mm	8mm		
100-0472-040-XX	0.472	0.040	0.394	4"	104

The above information is based on tests performed at 73° F and can vary in individual applications based on parameters such as temperature, chemical concentration, pressure, etc. Please consult factory for details. For an estimate on burst pressure at ambient temperature we consider a 3:1 ratio when exposure temperature is 73° F. However Altaflo does not recommend exceeding the suggested Working Pressure listed.

ALTAFLUOR® 100 PTFE - PHYSICAL PROPERTIES

PHYSICAL PROPERTY	ASTM TEST METHOD	UNITS	VALUES
Upper Service Temp. Long Term			500° F
Upper Service Temp. Short Term			550° F
Specific Gravity	D 792		2.15
Tensile Strength	D 1708	PSI	2500-3000
Elongation	D 638	%	200-400
Flex Modulus	D 790	PSI	27,000
MIT Flex Life	D 2176		1,000,000+
Hardness	D 2240	Shore D	60



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FEP (fluorinated ethylene propylene) is an economical choice for applications requiring chemical resistance in combination with broad temperature exposure. ALTAFLUOR® 200 FEP offers excellent clarity, which makes it ideal for sight glass/flow monitoring applications. Additionally, the outstanding UV transmission rate of FEP makes it a clear choice for UV water purification systems. ALTAFLUOR® 200 Series FEP will not impart taste or odor. ALTAFLUOR® 200 tubing may be used with flare or conventional fittings.

ALTAFLUOR® 200 FEATURES

- 100% virgin grade high performance resins used to resist stress cracking
- Chemically inert to most industrial chemicals and solvents
- High thermal stability
- Excellent UV transmission
- Low permeability
- Moisture absorption nearly zero
- FDA compliant for food contact
- Non-flammable
- Superior electrical insulation properties
- Available in smooth bore, convoluted and coiled hose constructions

APPLICATIONS

- Chemical process
- Laboratory applications
- UV water purification systems
- Ground water monitoring
- Food processing
- Electrical Insulation
- Automotive
- Paint Spray

SPECIFICATIONS

General: Meets or exceeds the requirements listed in ASTM D 3296 and ASTM D 2116 Type IV

Temperature: -100°F to 400°F

Flammability: FEP resists combustion and does not promote flame spread

FDA: ALTAFLUOR® 200 FEP is approved for use in food contact applications in compliance with FDA regulation: 21 CFR 177.1550

USP CLASS VI: ALTAFLUOR® 200 FEP meets the requirements of USP Class VI

NSF: ALTAFLUOR® 200 FEP tubing is certified to NSF 51, NSF 61 and NSF 372



This ALTAFLUOR® 200 FEP has been tested and certified by WQA against NSF/ANSI 51, NSF/ANSI 61 to Commercial Hot (180° F/82° C), and NSF/ANSI 372 for lead free compliance.

ALTAFLUOR® 200 - FEP TUBING

PART NUMBER	ID	OD	+/-	WALL	+/-
Industrial Wall					
200-0062-015-XX	1/32	1/16	.003	0.015	.003
200-0125-030-XX	1/16	1/8	.004	0.030	.003
200-0156-030-XX	3/32	5/32	.004	0.030	.003
200-0188-030-XX	1/8	3/16	.004	0.030	.003
200-0250-030-XX	3/16	1/4	.004	0.030	.003
200-0313-030-XX	1/4	5/16	.005	0.030	.003
200-0375-030-XX	5/16	3/8	.005	0.030	.003
200-0438-030-XX	3/8	7/16	.005	0.030	.003
200-0500-030-XX	7/16	1/2	.005	0.030	.003
200-0562-030-XX†	1/2	9/16	.005	0.030	.003
200-0625-030-XX†	9/16	5/8	.005	0.030	.003
200-0688-030-XX†	5/8	11/16	.005	0.030	.003
200-0750-030-XX†	11/16	3/4	.005	0.030	.003
Heavy Wall					
200-0188-062-XX	1/16	3/16	.005	0.062	.003
200-0250-062-XX	1/8	1/4	.005	0.062	.003
200-0313-062-XX	3/16	5/16	.005	0.062	.003
200-0375-062-XX	1/4	3/8	.005	0.062	.003
200-0438-062-XX	5/16	7/16	.005	0.062	.003
200-0500-062-XX	3/8	1/2	.005	0.062	.003
200-0625-062-XX	1/2	5/8	.005	0.062	.003
200-0750-062-XX	5/8	3/4	.005	0.062	.003
200-0875-062-XX†	3/4	7/8	.005	0.062	.003
200-1000-062-XX*	7/8	1	.005	0.062	.003
200-1125-062-XX*	1	1-1/8	.006	0.062	.003
200-1250-062-XX**	1-1/8	1-1/4	.006	0.062	.003
200-1375-062-XX**	1-1/4	1-3/8	.008	0.062	.003
200-1500-062-XX**†	1-3/8	1-1/2	.010	0.062	.003
200-1625-062-XX**†	1-1/2	1-5/8	.012	0.062	.003
200-1750-062-XX**†	1-5/8	1-3/4	.015	0.062	.003
200-2000-062-XX**†	1-7/8	2	.015	0.062	.003
200-2125-062-XX**†	2	2-1/8	.015	0.062	.003
Stock Custom Size					
200-0250-040-XX	.170	1/4	.004	0.040	.003
200-0250-047-XX	.156	1/4	.004	0.047	.003
200-0375-047-XX	.281	3/8	.015	0.047	.003
200-1100-050-XX*	1	1.10	.010	0.050	.003

* Straight length or reels

** Straight lengths only

† Custom item - please consult factory for lead time and minimum order requirements.

Additional sizes up to 4" OD are available as custom extrusions - minimum order requirements may apply. Please contact Altaflo office for details. Stocked in natural color - please consult factory for details on available colors.

Due to the nature of applications involving the use of fluoropolymers, we suggest that all customers test product within the conditions specific to their application prior to use.

ALTAFLUOR® 200 - FEP TUBING

PART NUMBER	ID	OD	+/-	WALL	+/-
Metric Sizes					
200-0157-040-XX	.079	.157	.005	0.040	.003
	2mm	4mm		1mm	
200-0197-040-XX†	.118	.197	.005	0.040	.003
	3mm	5mm		1mm	
200-0236-040-XX	.157	.236	.005	0.040	.003
	4mm	6mm		1mm	
200-0276-040-XX†	.197	.276	.005	0.040	.003
	5mm	7mm		1mm	
200-0315-040-XX	.236	.315	.005	0.040	.003
	6mm	8mm		1mm	
200-0354-040-XX†	.276	.354	.005	0.040	.003
	7mm	9mm		1mm	
200-0394-040-XX	.315	.394	.005	0.040	.003
	8mm	10mm		1mm	
200-0433-040-XX†	.354	.433	.005	0.040	.003
	9mm	11mm		1mm	
200-0472-040-XX	.394	.472	.005	0.040	.003
	10mm	12mm		1mm	
200-0512-040-XX†	.433	.512	.005	0.040	.003
	11mm	13mm		1mm	
200-0551-040-XX	.472	.551	.005	0.040	.003
	12mm	14mm		1mm	
200-0630-040-XX	.551	.630	.005	0.040	.003
	14mm	16mm		1mm	
200-0354-059-XX†	.236	.354	.005	0.059	.003
	6mm	9mm		1.5mm	
200-0472-059-XX†	.354	.472	.005	0.059	.003
	9mm	12mm		1.5mm	

* Straight length or reels

** Straight lengths only

† Custom item - please consult factory for lead time and minimum order requirements.

Additional sizes up to 4" OD are available as custom extrusions - minimum order

requirements may apply. Please contact Altaflo office for details. Stocked in natural color -

please consult factory for details on available colors.

ALTAFLUOR® 200 FEP - BEND RADIUS AND WORKING PRESSURE CHART

PART NUMBER	OD	WALL	ID	BEND RADIUS	WORKING PRESSURE @ 73°F
200-0125-030-XX	0.125	0.030	0.062	1/2"	445
200-0156-030-XX	0.156	0.030	0.094	1/2"	357
200-0188-030-XX	0.188	0.030	0.125	3/4"	296
200-0188-062-XX	0.188	0.062	0.062	1/2"	612
200-0250-030-XX	0.250	0.030	0.188	1"	223
200-0250-040-XX	0.250	0.040	0.170	1"	297
200-0250-047-XX	0.250	0.047	0.156	3/4"	349
200-0250-062-XX	0.250	0.062	0.125	1/2"	460
200-0313-030-XX	0.313	0.030	0.250	1-3/4"	178
200-0313-062-XX	0.313	0.062	0.188	1"	368
200-0375-030-XX	0.375	0.030	0.313	2-1/2"	148
200-0375-062-XX	0.375	0.062	0.250	1"	307
200-0438-030-XX	0.438	0.030	0.375	3-1/2"	127
200-0438-062-XX	0.438	0.062	0.313	2"	263
200-0500-030-XX	0.500	0.030	0.438	6"	111
200-0500-062-XX	0.500	0.062	0.375	2"	230
200-0625-030-XX	0.625	0.030	0.562	6-1/2"	89
200-0625-062-XX	0.625	0.062	0.500	3"	184
200-0750-030-XX	0.750	0.030	0.688	8"	74
200-0750-062-XX	0.750	0.062	0.625	6"	153
200-0875-062-XX	0.875	0.062	0.750	12"	132
200-1000-062-XX	1.000	0.062	0.875	22"	115
200-1125-062-XX	1.125	0.062	1.000	30"	75
200-1250-062-XX	1.250	0.062	1.125	N/A	70
Metric Sizes					
200-0157-040-XX	.157	0.040	.079	1-1/2"	464
	4mm	1mm	2mm		
200-0197-040-XX†	.197	0.040	.118	1-3/4"	309
	5mm	1mm	3mm		
200-0236-040-XX	.236	0.040	.157	2-1/2"	232
	6mm	1mm	4mm		
200-0276-040-XX†	.276	0.040	.197	2-3/4"	186
	7mm	1mm	5mm		
200-0315-040-XX	.315	0.040	.236	4"	155
	8mm	1mm	6mm		
200-0354-040-XX†	.354	0.040	.276		
	9mm	1mm	7mm		
200-0394-040-XX	.394	0.040	.315		
	10mm	1mm	8mm		
200-0433-040-XX†	.433	0.040	.354		
	11mm	1mm	9mm		
200-0472-040-XX	.472	0.040	.394		
	12mm	1mm	10mm		
200-0512-040-XX†	.512	0.040	.433		
	13mm	1mm	11mm		
200-0551-040-XX	.551	0.040	.472		
	14mm	1mm	12mm		
200-0630-040-XX	.630	0.040	.551		
	16mm	1mm	14mm		
200-0354-059-XX†	.354	0.059	.236		
	9mm	1.5mm	6mm		
200-0472-059-XX†	.472	0.059	.354		
	12mm	1.5mm	9mm		



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ALTAFLUOR® 200 SERIES FEP - PHYSICAL PROPERTIES

PHYSICAL PROPERTY	ASTM TEST METHOD	UNITS	VALUES
Upper Service Temp.			400° F
Specific Gravity	D 792		2.15
Tensile Strength	D 1708	PSI	4000
Elongation	D 638	%	400
Flex Modulus	D 790	PSI	90,000
MIT Flex Life	D 2176		200,000
Hardness	D 2240	Shore D	57-60

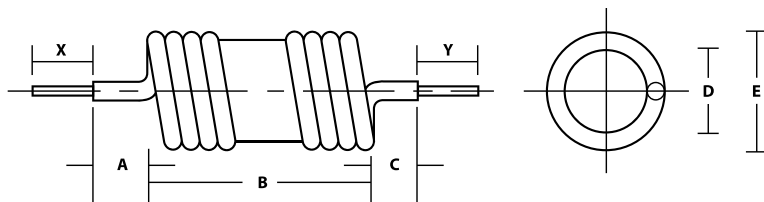
NOTE: The values represented are based on the use of 100% virgin grade high performance - low melt flow FEP resin as used in the production of ALTAFLUOR® 200 Series Tubing. When comparing data it is critical that performance values are listed for the grade of resin used.

ALTAFLUOR® 200 FEP - SCHEDULE 40 PIPE

PART NUMBER	NOMINAL SIZE	ACTUAL OD	WALL	STOCK LENGTH
200-0540-088-0C	1/4"	.540" ± .010	.088" +.020,-0	10 FT
200-0840-109-0C	1/2"	.840" ± .010	.109" +.020,-0	10 FT
200-1050-113-0C	3/4"	1.050" ± .010	.113" +.020,-0	10 FT
200-1315-133-0C	1"	1.315" ± .010	.133" +.020,-0	10 FT
200-1660-140-0C*	1-1/4"	1.660" ± .015	.140" +.020,-0	10 FT
200-1900-145-0C*	1-1/2"	1.900" ± .015	.145" +.020,-0	10 FT
200-2375-154-0C*	2"	2.374" ± .015	.154" +.020,-0	10 FT

*Custom item - please consult factory for lead time and minimum order requirements. Additional sizes and Schedule 80 Pipe available upon request.

ALTAFLUOR® 200 FEP - COILED HOSE



Custom item - see Coiled Hose Order Form for ordering information. Please consult factory for additional details.

ALTAFLUOR® 200 FEP - STANDARD CONVOLUTED CONSTRUCTION

PART NUMBER	NOMINAL OD SIZE	ID MIN	ID MAX	OD MAX	NOMINAL WALL	CONVOLUTIONS PER INCH
20C-0375-020-XX*	3/8	0.251	0.275	0.375	0.020	6
20C-0500-023-XX*	1/2	0.364	0.375	0.500	0.023	6
20C-0625-025-XX*	5/8	0.485	0.500	0.625	0.025	5.5
20C-0750-025-XX*	3/4	0.608	0.625	0.750	0.025	5
20C-0875-025-XX*	7/8	0.730	0.750	0.875	0.025	4
20C-1000-025-XX*	1	0.860	0.875	1.000	0.025	3.5

*Custom item - please consult factory for lead time and minimum order requirements. Please see ALTAFLUOR® 200 Ultra-Flex for stock items.

ALTAFLUOR® 200 FEP - ULTRA FLEX CONVOLUTED CONSTRUCTION

PART NUMBER	NOMINAL OD SIZE	ID MIN	ID MAX	OD MAX	NOMINAL WALL	CONVOLUTIONS PER INCH
20U-0375-020-XX	3/8	0.251	0.275	0.375	0.020	9
20U-0500-023-XX	1/2	0.364	0.375	0.500	0.023	9
20U-0625-025-XX	5/8	0.485	0.500	0.625	0.025	9
20U-0750-025-XX	3/4	0.608	0.625	0.750	0.025	8
20U-1000-025-XX	1	0.860	0.875	1.000	0.025	8



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ALTAFLUOR® 2E0 ENVIRO SERIES FEP (fluorinated ethylene propylene), is designed specifically for use in environmental sampling applications. This cost effective choice is the preferred product for applications requiring the purity of FEP without exposure to aggressive chemical or other harsh conditions. ALTAFLUOR® 2E0 Series FEP does not impart taste, odor or other contaminants. For more critical application requirements, we suggest the use of ALTAFLUOR® 200 FEP or ALTAFLUOR® 400 PFA Tubing.

ALTAFLUOR® 2E0 FEATURES

- Excellent UV transmission
- Low permeability
- High thermal stability
- Excellent clarity
- Moisture absorption nearly zero
- Does not impart taste, odor or contaminants
- Non-flammable

APPLICATIONS

- Ground water monitoring
- Air sampling
- Laboratory applications
- Water process
- UV water purification systems

SPECIFICATIONS

General: FEP meets the requirements listed in ASTM D2116

Temperature: -100°F to 400°F

Flammability: FEP is non-combustible and does not promote flame spread

ALTAFLUOR® 2E0 FEP ENVIRO - ENVIRO TUBING

PART NUMBER	ID	OD	+/-	WALL	+/-
2E0-0250-030-XX	3/16	1/4	.005	.030	.003
2E0-0313-030-XX	1/4	5/16	.005	.030	.003
2E0-0375-030-XX	5/16	3/8	.005	.030	.003
2E0-0500-030-XX	7/16	1/2	.005	.030	.003
2E0-0250-040-XX	.170	1/4	.005	.040	.003
2E0-0375-062-XX	1/4	3/8	.005	.062	.003
2E0-0500-062-XX	3/8	1/2	.005	.062	.003

Additional sizes up to 4" OD are available as custom extrusions - minimum order requirements may apply. Please contact Altaflo office for details. This tubing is not recommended for aggressive chemical applications - please refer to ALTAFLUOR® 200 or ALTAFLUOR® 400.

ALTAFLUOR® 2E0 FEP ENVIRO - BEND RADIUS AND WORKING PRESSURE CHART

PART NUMBER	OD	WALL	ID	BEND RADIUS	WORKING PRESSURE @ 73°F
2E0-0250-030-XX	0.250	.030	0.188	1"	195
2E0-0313-030-XX	0.313	.030	0.250	1-3/4"	156
2E0-0375-030-XX	0.375	.030	0.313	2-1/2"	130
2E0-0500-030-XX	0.500	.030	0.438	6"	97
2E0-0250-040-XX	0.250	.040	0.170	1"	260
2E0-0375-062-XX	0.375	.062	0.250	1"	269
2E0-0500-062-XX	0.500	.062	0.375	2"	200

The above information is based on tests performed at 73° F and can vary in individual applications based on parameters such as temperature, chemical concentration, pressure, etc. Please consult factory for details. For an estimate on burst pressure at ambient temperature we consider a 3:1 ratio when exposure temperature is 73° F. However Altaflo does not recommend exceeding the suggested Working Pressure listed.

ALTAFLUOR® 2E0 FEP ENVIRO - PHYSICAL PROPERTIES

PHYSICAL PROPERTY	ASTM TEST METHOD	UNITS	VALUES
Upper Service Temp. Long Term			400° F
Specific Gravity	D 792		2.12-2.17
Tensile Strength	D 1708	PSI	3500
Elongation	D 638	%	300-400
Flex Modulus	D 790	PSI	90,000
MIT Flex Life	D 2176		5000
Hardness	D 2240	Shore D	57-60



P: 973-300-3344

F: 973-300-3345

E: sales@altaflo.com

A: 23 Wilson Drive, Sparta, NJ 07871

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THV FLEX (tetrafluoroethylene-hexafluoropropylene-vinylidene fluoride) has a unique combination of properties making it the preferred choice for many applications. THV is ideal for use in applications requiring excellent UV light transmission combined with the safety and flexibility of plastic. THV FLEX grade has the flexibility of traditional PVC flex tubing combined with chemical resistance much closer to that of FEP. THV is available in a variety of compositions each designed for specific performance values. ALTAFLUOR® 350 Series uses THV FLEX grade, which allows for greatest flexibility, permeation resistance and good chemical resistance, but with slightly reduced upper service temperature over other grades. ALTAFLUOR® 350 also has excellent bondability with other materials, which allows for multi-layer extrusions. For more product specific information please contact your ALTAFLUOR representative.

ALTAFLUOR® 350 FEATURES

- 100% Virgin THV 221 FLEX Grade
- Highest UV and visible light transmission of any fluoropolymer
- Most flexible fluoropolymer
- Good chemical resistance
- Superior weatherability
- Excellent bondability
- Excellent ozone resistance
- Extremely low permeation

APPLICATIONS

- Laboratory
- Solar energy
- UV purification systems
- Fiber optic
- Chemical process

SPECIFICATIONS

Temperature: -40 °F to 212 °F

Flammability: THV Flex grade resin is UL 94 V0 rated. THV FLEX grade resists combustion and does not promote flame spread

ALTAFLUOR® 350 THV FLEX - TUBING

PART NUMBER	ID	OD	+/-	WALL	+/-
350-0250-030-0C	3/16	1/4	.004	0.030	.003
350-0250-040-0C	.170	1/4	.004	0.040	.003
350-0250-062-0C	1/8	1/4	.005	0.062	.003
350-0375-062-0C	1/4	3/8	.005	0.062	.003

Additional sizes are available as custom items - minimum order requirements may apply. Please consult factory for additional sizes and availability.

ALTAFLUOR® 350 THV FLEX - BEND RADIUS AND WORKING PRESSURE CHART

PART NUMBER	OD	WALL	ID	BEND RADIUS	WORKING PRESSURE @ 73°F
350-0250-030-0C	0.250	0.030	0.188	1"	223
350-0250-040-0C	0.250	0.040	0.170	1"	297
350-0250-062-0C	0.250	0.062	0.125	1/2"	460
350-0375-062-0C	0.375	0.062	0.250	1"	307

The above information is based on tests performed at 73° F and can vary in individual applications based on parameters such as temperature, chemical concentration, pressure, etc. Please consult factory for details. For an estimate on burst pressure at ambient temperature we consider a 3:1 ratio when exposure temperature is 73° F. However Altaflo does not recommend exceeding the suggested Working Pressure listed.

ALTAFLUOR® 350 SERIES THV FLEX - PHYSICAL PROPERTIES

PHYSICAL PROPERTY	ASTM TEST METHOD	UNITS	VALUES
Upper Service Temp. Long Term			180° F
Specific Gravity	D 792		1.95
Tensile Strength	D 638	PSI	2900
Elongation	D		600
Flex Modulus	D 790	PSI	12,000
MIT Flex Life			N/A
Hardness	D 2240	Shore D	44

The above information is based on tests performed at 73° F and can vary in individual applications based on parameters such as temperature, chemical concentration, pressure, etc. Please consult factory for details. For an estimate on burst pressure at ambient temperature we consider a 3:1 ratio when exposure temperature is 73° F. However Altaflo does not recommend exceeding the suggested Working Pressure listed.



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PFA (perfluoroalkoxy) is the product of choice for applications involving extreme chemical resistance combined with high temperature exposure. Although PFA is available in a variety of resin grades, ALTAFLUOR® 400 PFA tubing is made exclusively from the highest molecular weight resins available giving it superior physical properties making it suitable for even the most demanding applications. Altafluor 400 Series PFA does not impart taste or odor. ALTAFLUOR® 400 is compatible with flare or conventional type fittings.

ALTAFLUOR® 400 FEATURES

- 100% virgin grade high performance resins used to resist stress cracking
- Chemically inert to nearly all industrial chemicals and solvents
- Higher thermal stability than with FEP
- Lower permeability than with FEP
- Translucent
- Moisture absorption nearly zero
- FDA compliant for food contact
- Non-flammable
- Suitable for use with flare or conventional fittings
- Available in coiled hose and convoluted constructions
- Higher upper surface temperature vs. FEP

APPLICATIONS

- Chemical process
- Heat exchangers
- Laboratory applications
- Semiconductor
- Flow monitoring
- Food processing
- Electrical insulation
- Automotive

SPECIFICATIONS

General: Meets or exceeds the requirements listed in ASTM D 6867-03

Temperature: -300 °F to 500 °F

Flammability: UL 94 VO rated. PFA resists combustion and does not promote flame spread

FDA: ALTAFLUOR® 400 PFA is approved for use in food contact applications in compliance with FDA regulation: 21 CFR 177.1550

USP CLASS VI: ALTAFLUOR® 400 meets the requirements of USP Class VI

NSF: ALTAFLUOR® 400 PFA tubing is certified to NSF 51, NSF 61 and NSF 372



This ALTAFLUOR® 400 PFA has been tested and certified by WQA against NSF/ANSI 51, NSF/ANSI 61 to Commercial Hot (180° F/82° C), and NSF/ANSI 372 for lead free compliance.

ALTAFLUOR® 400 PFA - TUBING

PART NUMBER	ID	OD	+/-	WALL	+/-
400-0062-015-XX	1/32	1/16	.003	0.015	.003
400-0125-030-XX	1/16	1/8	.004	0.030	.003
400-0156-030-XX	3/32	5/32	.004	0.030	.003
400-0188-030-XX	1/8	3/16	.004	0.030	.003
400-0250-030-XX	3/16	1/4	.004	0.030	.003
400-0313-030-XX	1/4	5/16	.005	0.030	.003
400-0375-030-XX	5/16	3/8	.005	0.030	.003
400-0438-030-XX	3/8	7/16	.005	0.030	.003
400-0500-030-XX	7/16	1/2	.005	0.030	.003
400-0562-030-XX*	1/2	9/16	.005	0.030	.003
400-0625-030-XX*	9/16	5/8	.005	0.030	.003
400-0688-030-XX*	5/8	11/16	.005	0.030	.003
400-0750-030-XX*	11/16	3/4	.005	0.030	.003
400-0250-040-XX	.170	1/4	.004	0.040	.003
400-0375-040-XX	.295	3/8	.005	0.040	.003
400-0250-047-XX	.156	1/4	.004	0.047	.003
400-0188-062-XX	1/16	3/16	.005	0.062	.003
400-0250-062-XX	1/8	1/4	.005	0.062	.003
400-0375-062-XX	1/4	3/8	.005	0.062	.003
400-0438-062-XX	5/16	7/16	.005	0.062	.003
400-0500-062-XX	3/8	1/2	.005	0.062	.003
400-0625-062-XX	1/2	5/8	.005	0.062	.003
400-0750-062-XX	5/8	3/4	.005	0.062	.003
400-0875-062-XX*	3/4	7/8	.005	0.062	.003
400-1000-062-XX	7/8	1	.005	0.062	.003
400-1125-062-XX	1	1-1/8	.006	0.062	.003
400-1250-062-XX**	1-1/8	1-1/4	.006	0.062	.003

* Custom item - please consult factory for lead time and minimum order requirements.

** Available in straight lengths only.

Additional sizes up to 4" OD are available as custom extrusions - minimum order requirements may apply. Please contact Altaflo office for details.

Stocked in natural color - please consult factory for details on available colors.

High Purity PFA is available - please see ALTAFLUOR® 480 SERIES UHP PFA + ALTAFLUOR® 450 SERIES HP PFA

ALTAFLUOR® 400 PFA - TUBING

PART NUMBER METRIC SIZES	ID	OD	+/-	WALL	+/-
400-0157-040-XX	.079 2mm	.157 4mm	.005 .005	0.040 1mm	.003 .003
400-0197-040-XX	.118 3mm	.197 5mm	.005 .005	0.040 1mm	.003 .003
400-0236-040-XX	.157 4mm	.236 6mm	.005 .005	0.040 1mm	.003 .003
400-0276-040-XX	.197 5mm	.276 7mm	.005 .005	0.040 1mm	.003 .003
400-0315-040-XX	.236 6mm	.315 8mm	.005 .005	0.040 1mm	.003 .003
400-0354-040-XX	.276 7mm	.354 9mm	.005 .005	0.040 1mm	.003 .003
400-0394-040-XX	.315 8mm	.394 10mm	.005 .005	0.040 1mm	.003 .003
400-0433-040-XX	.354 9mm	.433 11mm	.005 .005	0.040 1mm	.003 .003
400-0472-040-XX	.394 10mm	.472 12mm	.005 .005	0.040 1mm	.003 .003
400-0551-040-XX	.472 12mm	.551 14mm	.005 .005	0.040 1mm	.003 .003
400-0630-040-XX	.551 14mm	.630 16mm	.005 .005	0.040 1mm	.003 .003
400-0354-059-XX	.236 6mm	.354 9mm	.005 .005	0.059 1.5mm	.003 .003
400-0472-059-XX	.354 9mm	.472 12mm	.005 .005	0.059 1.5mm	.003 .003

Additional sizes up to 4" OD are available as custom extrusions - minimum order requirements may apply. Please contact Altaflo office for details.

Stocked in natural color - please consult factory for details on available colors.

NEW: High Purity PFA is available - please see ALTAFLUOR® 480 SERIES UHP PFA

ALTAFLUOR® 400 PFA - STANDARD CONVOLUTED CONSTRUCTION

PART NUMBER	NOMINAL OD SIZE	ID MIN	ID MAX	OD MAX	NOMINAL WALL	CONVOLUTIONS PER INCH
40C-0375-020-XX*	3/8	0.251	0.275	0.375	0.020	6
40C-0500-023-XX*	1/2	0.364	0.375	0.500	0.023	6
40C-0625-025-XX*	5/8	0.485	0.500	0.625	0.025	5.5
40C-0750-025-XX*	3/4	0.608	0.625	0.750	0.025	5
40C-0875-025-XX*	7/8	0.730	0.750	0.875	0.025	4
40C-1000-025-XX*	1	0.860	0.875	1.000	0.025	3.5

*Custom item - please consult factory for lead time and minimum order requirements.

ALTAFLUOR® 400 PFA - ULTRA FLEX CONVOLUTED CONSTRUCTION

PART NUMBER	NOMINAL OD SIZE	ID MIN	ID MAX	OD MAX	NOMINAL WALL	CONVOLUTIONS PER INCH
40U-0375-020-XX*	3/8	0.251	0.275	0.375	0.020	9
40U-0500-023-XX*	1/2	0.364	0.375	0.500	0.023	9
40U-0625-025XX*	5/8	0.485	0.500	0.625	0.025	9
40U-0750-025-XX*	3/4	0.608	0.625	0.750	0.025	8
40U-0875-025-XX*	7/8	0.730	0.750	0.875	0.025	8
40U-1000-025-XX*	1	0.860	0.875	1.000	0.025	8

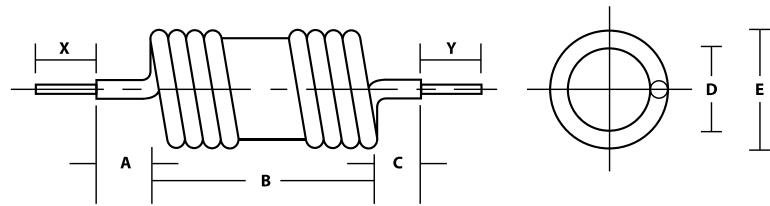
*Custom item - please consult factory for lead time and minimum order requirements.

ALTAFLUOR® 400 PFA - SCHEDULE 40 PIPE

PART NUMBER	NOMINAL SIZE	ACTUAL OD	WALL	STOCK LENGTH
400-0540-088-0C*	1/4"	.540" ± .010	.088"+.020,-0	5ft / 10ft
400-0840-109-0C*	1/2"	.840" ± .010	.109"+.020,-0	5ft / 10ft
400-1050-113-0C*	3/4"	1.050" ± .010	.113"+.020,-0	5ft / 10ft
400-1315-133-0C*	1"	1.315" ± .010	.133"+.020,-0	5ft / 10ft
400-1660-140-0C*	1-1/4"	1.660" ± .015	.140"+.020,-0	10 FT
400-1900-145-0C*	1-1/2"	1.900" ± .015	.145"+.020,-0	10 FT
400-2375-154-0C*	2"	2.374" ± .015	.154"+.020,-0	10 FT

*Custom item - please consult factory for lead time and minimum order requirements. Please see ALTAFLUOR® 480 Pipe for stock items. Additional sizes and Schedule 80 Pipe available upon request. Custom item - see Coiled Hose Order Form for ordering information. Please consult factory for additional details. 480 SERIES UHP PFA schedule 40 pipe is a stock item and available for immediate shipment.

ALTAFLUOR® 400 PFA - COILED HOSE



Custom item - see Coiled Hose Order Form for ordering information. Please consult factory for additional details.

Due to the nature of applications involving the use of fluoropolymers, we suggest that all customers test product within the conditions specific to their application prior to use.

ALTAFLUOR® 400 PFA - BEND RADIUS AND WORKING PRESSURE CHART

PART NUMBER	OD	WALL	ID	BEND RADIUS	WORKING PRESSURE @ 73°F
400-0125-030-XX	0.125	0.030	0.062	1/2"	449
400-0156-030-XX	0.156	0.030	0.094	1/2"	360
400-0188-030-XX	0.188	0.030	0.125	3/4"	299
400-0188-062-XX	0.188	0.062	0.062	1/2"	617
400-0250-030-XX	0.250	0.030	0.188	1"	225
400-0250-040-XX	0.250	0.040	0.170	1"	300
400-0250-047-XX	0.250	0.047	0.157	3/4"	352
400-0250-062-XX	0.250	0.062	0.125	1/2"	464
400-0313-030-XX	0.313	0.030	0.250	1-3/4"	179
400-0313-062-XX	0.313	0.062	0.188	1"	371
400-0375-030-XX	0.375	0.030	0.313	2-1/2"	150
400-0375-062-XX	0.375	0.062	0.250	1"	310
400-0438-030-XX	0.438	0.030	0.375	3-1/2"	128
400-0438-062-XX	0.438	0.062	0.313	2"	265
400-0500-030-XX	0.500	0.030	0.438	4"	112
400-0500-062-XX	0.500	0.062	0.375	2"	232
400-0625-030-XX	0.625	0.030	0.562	6-1/2"	90
400-0625-062-XX	0.625	0.062	0.500	3"	186
400-0750-030-XX	0.750	0.030	0.688	8"	75
400-0750-062-XX	0.750	0.062	0.625	6"	155
400-0875-062-XX	0.875	0.062	0.750	12"	133
400-1000-062-XX	1.000	0.062	0.875	22"	116
400-1125-062-XX	1.125	0.062	1.000	N/A	105
400-1250-062-XX	1.250	0.062	1.125	N/A	84

The above information is based on tests performed at 73° F and can vary in individual applications based on parameters such as temperature, chemical concentration, pressure, etc. Please consult factory for details. For an estimate on burst pressure at ambient temperature we consider a 3:1 ratio when exposure temperature is 73° F. However Altaflo does not recommend exceeding the suggested Working Pressure listed.

METRIC SIZES	OD	WALL	ID	BEND RADIUS	WORKING PRESSURE @ 73°F
400-0157-040-XX	0.157	0.040	0.078	1-1/2"	468
	4mm	1mm	2mm		
400-0236-040-XX	0.236	0.040	0.157	1-3/4"	312
	6mm	1mm	4mm		
400-0315-040-XX	0.315	0.040	0.236	2-1/2"	234
	8mm	1mm	6mm		
400-0394-040-XX	0.394	0.040	0.315	2-3/4"	187
	10mm	1mm	8mm		
400-0472-040-XX	0.472	0.040	0.394	4"	156
	12mm	1mm	10mm		

ALTAFLUOR® 400 SERIES PFA - PHYSICAL PROPERTIES

PHYSICAL PROPERTY	ASTM TEST METHOD	UNITS	VALUES
Upper Service Temp.			500° F
Specific Gravity	D 792		2.15
Tensile Strength	D 1708	PSI	4200
Elongation	D 638	%	400
Flex Modulus	D 790	PSI	90,000
MIT Flex Life	D 2176		500,000+
Hardness	D 2240	Shore D	60

The above information is based on tests performed at 73° F and can vary in individual applications based on parameters such as temperature, chemical concentration, pressure, etc. Please consult factory for details.

NOTE: The values represented above are based on the use of 100% virgin grade high performance - low melt flow PFA resin as used in the production of ALTAFLUOR® 400 Series Tubing. When comparing data it is critical that performance values are listed for the grade of resin used.

High Purity PFA is available - please see ALTAFLUOR® 480 SERIES UHP PFA + ALTAFLUOR® 450 SERIES HP PFA



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ALTAFLUOR® 450 HP PFA (high purity perfluoroalkoxy) is commonly chosen for applications involving extreme chemical resistance combined with high purity requirements. Although HP PFA is available in a variety of resin grades, ALTAFLUOR® 450 HP PFA tubing is made from a high molecular weight, high purity resin that provides excellent chemical resistance, highest purity levels (extractable data available upon request) and smooth surface finish. ALTAFLUOR 450 SERIES HP PFA does not impart taste or odor. ALTAFLUOR® 450 HP PFA tubing is ideal for use with flare or conventional fittings.

ALTAFLUOR® 450 FEATURES

- Exclusive use of Dyneon 6502UHP PFA – a Semi-57 & C-90 approved resin
- 100% Virgin High Performance Grade resin used to resist stress cracking
- Chemically inert to nearly all industrial chemicals & solvents
- High thermal stability
- Low permeation
- Translucent
- Smooth surface finish resulting in less area of particle entrapment
- Moisture absorption nearly zero
- FDA compliant for food contact
- Non-Flammable
- Suitable for use with flare or conventional fittings
- Also available in pipe, coiled hose and convoluted constructions

APPLICATIONS

- Semiconductor
- Chemical process
- Heat Exchangers
- Laboratory applications
- Flow Monitoring
- Pharmaceutical

SPECIFICATIONS

General: Meets or exceeds the requirements listed in ASTM D 6867-03

Temperature: -320 °F to 500 °F

Flammability: Resin is UL 94 V0 rated. HP PFA resists combustion and does not promote flame spread.

FDA: HP PFA is approved for use in food contact applications in compliance with FDA regulation: 21 CFR 177.1550

ALTAFLUOR® 450 HP PFA - TUBING

PART NUMBER	ID	OD	+/-	WALL	+/-
450-0125-030-0C	1/16	1/8	.004	0.030	.003
450-0250-030-0C	3/16	1/4	.004	0.030	.003
450-0250-040-0C	.170	1/4	.004	0.040	.003
450-0250-047-0C	.156	1/4	.004	0.047	.003
450-0250-062-0C	1/8	1/4	.005	0.062	.003
450-0375-062-0C	1/4	3/8	.005	0.062	.003
450-0500-062-0C	3/8	1/2	.005	0.062	.003
450-0750-062-0C	5/8	3/4	.005	0.062	.003
450-1000-062-0C	7/8	1	.005	0.062	.003
450-1250-075-0C	1.100	1.250	.008	0.075	.003

METRIC SIZES	ID	OD	+/-	WALL	+/-
450-0157-040-0C	.078	.157	.005	0.040	.003
	2mm	4mm	.005	1mm	.003
450-0236-040-0C	.157	.236	.005	0.040	.003
	4mm	6mm	.005	1mm	.003
450-0315-040-0C	.236	.315	.005	0.040	.003
	6mm	8mm	.005	1mm	.003
450-0394-040-0C	.315	.394	.005	0.040	.003
	8mm	10mm	.005	1mm	.003
450-0472-040-0C	.394	.472	.005	0.040	.003
	10mm	12mm	.005	1mm	.003

Additional sizes up to 4" OD available upon request. Please contact Altaflo office for details.

Available in natural color only. For pigmented items, see ALTAFLUOR® 400 series.

Tested and meets requirements of Semi F-57 and Semi C-90. Test results available upon request.

ALTAFLUOR® 450 HP PFA - SCHEDULE 40 PIPE

PART NUMBER	NOMINAL SIZE	ACTUAL OD	WALL	STOCK LENGTH
450-0540-088-0C	1/4"	.540" ± .010	.088" +.020,-0	10ft
450-0840-109-0C	1/2"	.840" ± .010	.109" +.020,-0	10ft
450-1050-113-0C	3/4"	1.050" ± .015	.113" +.020,-0	10ft
450-1315-133-0C	1"	1.315" ± .015	.133" +.020,-0	10ft
450-1660-140-0C	1-1/4"	1.660" ± .015	.140" +.020,-0	10ft
450-1900-145-0C	1-1/2"	1.900" ± .015	.145" +.020,-0	10ft
450-2375-154-0C	2"	2.375" ± .020	.154" +.020,-0	10ft

Altaflo maintains inventory of Schedule 40 Pipe in our 450 HP PFA Series. Schedule 40 Pipe is also available as a Custom Order in Altaflo 200, 400 & 480 Series resins.



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Due to the nature of applications involving the use of fluoropolymers, we suggest that all customers test product within the conditions specific to their application prior to use.

ALTAFLUOR® 450 HP PFA - BEND RADIUS AND WORKING PRESSURE CHART

PART NUMBER	OD	WALL	ID	BEND RADIUS	WORKING PRESSURE @ 73°F
450-0125-030-OC	0.125	0.030	0.062	1/2"	451
450-0250-030-OC	0.250	0.030	0.188	1"	226
450-0250-040-OC	0.250	0.040	0.170	1"	301
450-0250-047-OC	0.250	0.047	0.157	3/4"	353
450-0250-062-OC	0.250	0.062	0.125	1/2"	466
450-0375-062-OC	0.375	0.062	0.250	1"	311
450-0500-062-OC	0.500	0.062	0.375	2"	233
450-0750-062-OC	0.750	0.062	0.625	6"	155
450-1000-062-OC	1.000	0.062	0.875	22"	117
450-1250-075-OC	1.250	0.075	1.100	25"	75
METRIC SIZES	OD	WALL	ID	BEND RADIUS	WORKING PRESSURE @ 73°F
450-0157-040-OC	0.157	0.040	0.079	1"	468
	4mm	1mm	2mm		
450-0236-040-OC	0.236	0.040	0.157	1-3/4"	313
	6mm	1mm	4mm		
450-0315-040-OC	0.315	0.040	0.236	2-1/2"	235
	8mm	1mm	6mm		
450-0394-040-OC	0.394	0.040	0.315	2-3/4"	188
	10mm	1mm	8mm		
450-0472-040-OC	0.472	0.040	0.394	4"	156
	12mm	1mm	10mm		

The above information is based on tests performed at 73° F and can vary in individual applications based on parameters such as temperature, chemical concentration, pressure, etc. Please consult factory for details.

For an estimate on burst pressure at ambient temperature we consider a 3:1 ratio when exposure temperature is 73° F. However Altaflo does not recommend exceeding the suggested Working Pressure listed.

Additional sizes up to 2" are available.

Available in natural color only. For pigmented items, see ALTAFLUOR® 400 series.

ALTAFLUOR® 450 SERIES HP PFA - PHYSICAL PROPERTIES

PHYSICAL PROPERTY	ASTM TEST METHOD	UNITS	VALUES
Upper Service Temp.			500° F
Specific Gravity	D 792		2.15
Tensile Strength	D 1708	PSI	4500
Elongation	D 638	%	400
Flex Modulus	D 790	PSI	90,000
MIT Flex Life	D 2176		500,000
Hardness	D 2240	Shore D	60

The above information is based on tests performed at 73° F and can vary in individual applications based on parameters such as temperature, chemical concentration, pressure, etc. Please consult factory for details.

NOTE: The values represented above are based on the use of 100% virgin grade high performance - low melt flow PFA resin as used in the production of ALTAFLUOR® 450 Series Tubing. When comparing data it is critical that performance values are listed for the grade of resin used.



P: 973-300-3344

F: 973-300-3345

E: sales@altaflo.com

A: 23 Wilson Drive, Sparta, NJ 07871

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ALTAFLUOR® 450 HP PFA - STANDARD CONVOLUTED CONSTRUCTION

PART NUMBER	NOMINAL OD SIZE	ID MIN	ID MAX	OD MAX	NOMINAL WALL	CONVOLUTIONS PER INCH
45C-0375-020-0C*	3/8	0.251	0.275	0.375	0.020	6
45C-0500-023-0C*	1/2	0.364	0.375	0.500	0.023	6
45C-0625-025-0C*	5/8	0.485	0.500	0.625	0.025	5.5
45C-0750-025-0C*	3/4	0.608	0.625	0.750	0.025	5
45C-0875-025-0C*	7/8	0.730	0.750	0.875	0.025	4
45C-1000-025-0C*	1	0.860	0.875	1.000	0.025	3.5

*Custom item - please consult factory for lead time and minimum order requirements.

Available in natural color only. For pigmented items, see ALTAFLUOR® 400 series.

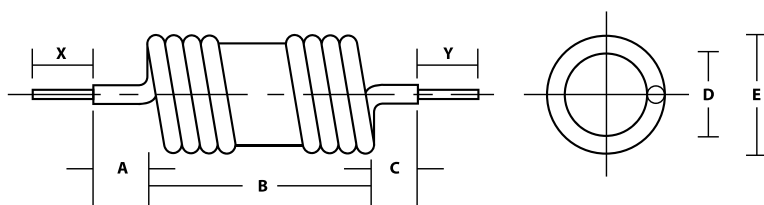
ALTAFLUOR® 450 HP PFA - ULTRA FLEX CONVOLUTED CONSTRUCTION

PART NUMBER	NOMINAL OD SIZE	ID MIN	ID MAX	OD MAX	NOMINAL WALL	CONVOLUTIONS PER INCH
45U-0375-020-0C*	3/8	0.251	0.275	0.375	0.020	9
45U-0500-023-0C*	1/2	0.364	0.375	0.500	0.023	9
45U-0625-025-0C*	5/8	0.485	0.500	0.625	0.025	9
45U-0750-025-0C*	3/4	0.608	0.625	0.750	0.025	8
45U-0875-025-0C*	7/8	0.730	0.750	0.875	0.025	8
45U-1000-025-0C*	1	0.860	0.875	1.000	0.025	8

*Custom item - please consult factory for lead time and minimum order requirements.

Available in natural color only. For pigmented items, see ALTAFLUOR® 400 series.

ALTAFLUOR® 450 HP PFA - COILED HOSE



Custom item - see Coiled Hose Order Form for ordering information. Please consult factory for additional details.

The CLEAR CHOICE for semiconductor, pharmaceutical, and other critical chemical systems

ALTAFLUOR® DCHP SERIES DUAL CONTAINMENT TUBING provides end users with an integrated fluid flow solution for critical processes where high purity and safety are primary concerns.

The inner tube, produced exclusively from 100% Virgin Dyneon 6502UHPZ HP PFA resin, ensures highest purity levels in critical applications. The outer tube, constructed of 100% Virgin grade FEP not only provides excellent clarity for visual inspection, but offers enhanced protection against product damage or personal injury from possible leaks that may occur during the chemical delivery process. The Tube-in-Tube design does not introduce contaminants during the installation process and the ability to provide ALTAFLUOR® DCHP Dual Containment Tubing in long continuous lengths reduces the need for excess connections thereby reducing the overall system cost.

KEY PROPERTIES

- Exclusive use of Dyneon 6502UHPZ HP PFA SEMI F-57 & C-90 approved resin
- Produced and packaged in a clean room environment
- Ends capped - custom dual containment end caps
- Excellent chemical resistance
- Low permeability
- Extremely low extractable levels: metallic and organic
- Smooth surface finish
- Excellent mechanical performance
- Laser marked for complete traceability
- Flame resistant - fluoropolymers meet UL 94 VO

CUSTOM APPLICATIONS

- Custom laser marking
- Custom packaging: straight lengths, short cut-to-length pieces; long continuous lengths
- Private Labeling
- Additional sizes and material selections available upon request

ALTAFLUOR® DCHP SERIES DUAL CONTAINMENT

PART NUMBER	PRIMARY TUBING (DYNEON 6502UHPZ HP PFA)	OUTER TUBING (FEP)	PSI@72F (PRIMARY)	WT/FT (LBS)
DCHP-0250-0500	5/32 ID x 1/4 OD x .047 W	3/8 ID x 1/2 OD x .062 W	355	.11
DCHP-0375-0750	1/4 ID x 3/8 OD x .062 W	5/8 ID x 3/4 OD x .062 W	315	.18
DCHP-0500-0750	3/8 ID x 1/2 OD x .062 W	5/8 ID x 3/4 OD x .062 W	235	.21
DCHP-0750-1000	5/8 ID x 3/4 OD x .062 W	7/8 ID x 1 OD x .062 W	155	.30
DCHP-1000-1250	7/8 ID x 1 OD x .062 W	1.10 ID x 1.250 OD x .062 W	120	.44

PACKAGING: Coils of 100 FT or less are packaged in heavy gauge heat-sealed double polybags. Longer lengths are supplied on plastic clean-room compatible reels. A Partial Reel charge may apply for reel lengths less than 500 FT. For certifications see 450 Series HP PFA section



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P: 973-300-3344
 F: 973-300-3345
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ALTAFLUOR® 480 UHP PFA (ultra high purity perfluoroalkoxy) is the product of choice for applications involving extreme chemical resistance combined with high purity requirements. Although HP PFA is available in a variety of resin grades, ALTAFLUOR® 480 UHP PFA tubing is made exclusively from a high molecular weight, high purity resin that provides excellent chemical resistance, (even to common fluorosurfactants), highest purity levels, low permeation levels and smoothest surface finish. Altafluor 480 Series UHP PFA does not impart taste or odor. Unlike standard HP PFA tubing products, ALTAFLUOR® 480 Series UHP PFA has superior flex life values comparable to those of PTFE. ALTAFLUOR® 480 UHP PFA tubing is ideal for use with flare or conventional fittings.

ALTAFLUOR® 480 FEATURES

- Exclusive use of Daikin AP-231SH UHP PFA Semi -F57 approved resin
- 100% virgin grade high performance resins used to resist stress cracking
- Chemically inert to nearly all industrial chemicals and solvents
- Highest thermal stability
- Lowest permeation (even with aggressive chemicals such as HCL)
- Translucent
- Smoothest surface finish resulting in less area of particle entrapment
- Moisture absorption nearly zero
- FDA compliant for food contact
- Non-flammable
- Suitable for use with flare or conventional fittings
- Available in coiled hose and convoluted constructions
- Superior resistance to common fluorosurfactants vs. other PFA and HP PFA
- Greatest flex life values compared with other PFA and HP PFA materials

APPLICATIONS

- Semiconductor
- Chemical process
- Heat exchangers
- Laboratory applications
- Flow monitoring
- Pharmaceutical

SPECIFICATIONS

General: Meets or exceeds the requirements listed in ASTM D 6867-03

Temperature: -320 °F to 500 °F

Flammability: UL 94 VO rated. UHP PFA resists combustion and does not promote flame spread

FDA: UHP PFA is approved for use in food contact applications in compliance with FDA regulation: 21 CFR 177.1550

USP CLASS VI: ALTAFLUOR® meets the requirements of USP Class VI

NSF: ALTAFLUOR® 480 UHP PFA tubing is certified to NSF 51, NSF 61 and NSF 372



This ALTAFLUOR® 480 UHP PFA has been tested and certified by WQA against NSF/ANSI 51, NSF/ANSI 61 to Commercial Hot (180° F/82° C), and NSF/ANSI 372 for lead free compliance.

ALTAFLUOR® 480 UHP PFA - TUBING

PART NUMBER	ID	OD	+/-	WALL	+/-
480-0125-030-OC	1/16	1/8	.004	0.030	.003
480-0250-030-OC	3/16	1/4	.004	0.030	.003
480-0250-040-OC	.170	1/4	.004	0.040	.003
480-0250-047-OC	.156	1/4	.004	0.047	.003
480-0250-062-OC	1/8	1/4	.005	0.062	.003
480-0375-062-OC	1/4	3/8	.005	0.062	.003
480-0500-062-OC	3/8	1/2	.005	0.062	.003
480-0750-062-OC	5/8	3/4	.005	0.062	.003
480-1000-062-OC	7/8	1	.005	0.062	.003
480-1250-075-OC	1.100	1.250	.008	0.075	.003
METRIC SIZES	ID	OD	+/-	WALL	+/-
480-0157-040-OC	2mm	4mm	.005	1mm	.003
	.078	.157	.005	0.040	.003
480-0236-040-OC	4mm	6mm	.005	1mm	.003
	.157	.236	.005	0.040	.003
480-0315-040-OC	6mm	8mm	.005	1mm	.003
	.236	.315	.005	0.040	.003
480-0394-040-OC	8mm	10mm	.005	1mm	.003
	.315	.394	.005	0.040	.003
480-0472-040-OC	10mm	12mm	.005	1mm	.003
	.394	.472	.005	0.040	.003

Additional sizes up to 4" OD available upon request. Please contact Altaflo office for details.

Available in natural color only. For pigmented items, see ALTAFLUOR® 400 series.

Tested and meets requirements of Semi F-57 and Semi F-90. Test results available upon request.

ALTAFLUOR® 480 UHP PFA - SCHEDULE 40 PIPE

PART NUMBER	NOMINAL SIZE	ACTUAL SIZE	WALL
480-0540-088-OC	1/4"	.540" ± .010	.088"±.020,-0
480-0840-109-OC	1/2"	.840" ± .010	.109"±.020,-0
480-1050-113-OC	3/4"	1.050" ± .015	.113"±.020,-0
480-1315-133-OC	1"	1.315" ± .015	.133"±.020,-0
480-1660-140-OC	1-1/4"	1.660" ± .015	.140"±.020,-0
480-1900-145-OC	1-1/2"	1.900" ± .015	.145"±.020,-0
480-2375-154-OC	2"	2.375" ± .020	.154"±.020,-0

ALTAFLUOR® 480 series UHP PFA schedule 40 pipe is considered custom. Minimum order requirements may apply. Standard length is 10ft but may be cut into shorter lengths for shipment if needed. For stock HP PFA schedule 40 pipe please see our ALTAFLUOR® 450 series HP PFA pipe.

Due to the nature of applications involving the use of fluoropolymers, we suggest that all customers test product within the conditions specific to their application prior to use.

ALTAFLUOR® 480 UHP PFA - BEND RADIUS AND WORKING PRESSURE CHART

PART NUMBER	OD	WALL	ID	BEND RADIUS	WORKING PRESSURE @ 73°F
480-0125-030-OC	0.125	0.030	0.062	1/2"	451
480-0250-030-OC	0.250	0.030	0.188	1"	226
480-0250-040-OC	0.250	0.040	0.170	1"	301
480-0250-047-OC	0.250	0.047	0.157	3/4"	353
480-0250-062-OC	0.250	0.062	0.125	1/2"	466
480-0375-062-OC	0.375	0.062	0.250	1"	311
480-0500-062-OC	0.500	0.062	0.375	2"	233
480-0750-062-OC	0.750	0.062	0.625	6"	155
480-1000-062-OC	1.000	0.062	0.875	22"	117
480-1250-075-OC	1.250	0.075	1.100	25"	75
METRIC SIZES	OD	WALL	ID	BEND RADIUS	WORKING PRESSURE @ 73°F
480-0236-040-OC	0.236	0.040	0.157	1-3/4"	313
	6mm	1mm	4mm		
480-0315-040-OC	0.315	0.040	0.236	2-1/2"	235
	8mm	1mm	6mm		
480-0394-040-OC	0.394	0.040	0.315	2-3/4"	188
	10mm	1mm	8mm		

The above information is based on tests performed at 73° F and can vary in individual applications based on parameters such as temperature, chemical concentration, pressure, etc. Please consult factory for details.

For an estimate on burst pressure at ambient temperature we consider a 3:1 ratio when exposure temperature is 73° F. However Altaflo does not recommend exceeding the suggested Working Pressure listed.

Additional sizes up to 2" are available.

Available in natural color only. For pigmented items, see ALTAFLUOR® 400 series.

ALTAFLUOR® 480 SERIES UHP PFA - PHYSICAL PROPERTIES

PHYSICAL PROPERTY	ASTM TEST METHOD	UNITS	VALUES
Upper Service Temp.			500° F
Specific Gravity	D 792		2.15
Tensile Strength	D 1708	PSI	4500
Elongation	D 638	%	400
Flex Modulus	D 790	PSI	90,000
MIT Flex Life	D 2176		1,750,000
Hardness	D 2240	Shore D	60

The above information is based on tests performed at 73° F and can vary in individual applications based on parameters such as temperature, chemical concentration, pressure, etc. Please consult factory for details.

NOTE: The values represented above are based on the use of 100% virgin grade high performance - low melt flow PFA resin as used in the production of ALTAFLUOR® 480 Series Tubing. When comparing data it is critical that performance values are listed for the grade of resin used.



P: 973-300-3344

F: 973-300-3345

E: sales@altaflo.com

A: 23 Wilson Drive, Sparta, NJ 07871

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ALTAFLUOR® 480 UHP PFA - STANDARD CONVOLUTED CONSTRUCTION

PART NUMBER	NOMINAL OD SIZE	ID MIN	ID MAX	OD MAX	NOMINAL WALL	CONVOLUTIONS PER INCH
48C-0375-020-0C*	3/8	0.251	0.275	0.375	0.020	6
48C-0500-023-0C*	1/2	0.364	0.375	0.500	0.023	6
48C-0625-025-0C*	5/8	0.485	0.500	0.625	0.025	5.5
48C-0750-025-0C*	3/4	0.608	0.625	0.750	0.025	5
48C-0875-025-0C*	7/8	0.730	0.750	0.875	0.025	4
48C-1000-025-0C*	1	0.860	0.875	1.000	0.025	3.5

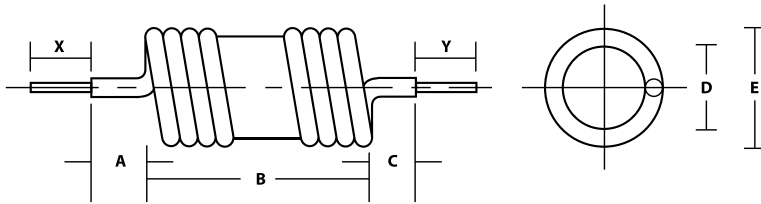
*Custom item - please consult factory for lead time and minimum order requirements.
Available in natural color only. For pigmented items, see ALTAFLUOR® 400 series.

ALTAFLUOR® 480 UHP PFA - ULTRA FLEX CONVOLUTED CONSTRUCTION

PART NUMBER	NOMINAL OD SIZE	ID MIN	ID MAX	OD MAX	NOMINAL WALL	CONVOLUTIONS PER INCH
48U-0375-020-0C*	3/8	0.251	0.275	0.375	0.020	9
48U-0500-023-0C*	1/2	0.364	0.375	0.500	0.023	9
48U-0625-025-0C*	5/8	0.485	0.500	0.625	0.025	9
48U-0750-025-0C*	3/4	0.608	0.625	0.750	0.025	8
48U-0875-025-0C*	7/8	0.730	0.750	0.875	0.025	8
48U-1000-025-0C*	1	0.860	0.875	1.000	0.025	8

*Custom item - please consult factory for lead time and minimum order requirements.
Available in natural color only. For pigmented items, see ALTAFLUOR® 400 series.

ALTAFLUOR® 480 UHP PFA - COILED HOSE



Custom item - see Coiled Hose Order Form for ordering information. Please consult factory for additional details.

The CLEAR CHOICE for semiconductor, pharmaceutical, and other critical chemical systems

ALTAFLUOR® DC SERIES DUAL CONTAINMENT TUBING provides end users with an integrated fluid flow solution for critical processes where high purity and safety are primary concerns.

The inner tube, produced exclusively from 100% Virgin Daikin AP231SH UHP PFA resin, ensures the greatest overall performance in critical and aggressive applications. The outer tube, constructed of 100% Virgin grade FEP not only provides excellent clarity for visual inspection, but offers enhanced protection against product damage or personal injury from possible leaks that may occur during the chemical delivery process. The Tube-in-Tube design does not introduce contaminants during the installation process and the ability to provide ALTAFLUOR® Dual Containment Tubing in long continuous lengths reduces the need for excess connections thereby reducing the overall system cost.

KEY PROPERTIES

- Exclusive use of Daikin AP-231SH UHP PFA Semi -F57 approved resin
- Produced and packaged in a clean room environment
- Ends capped - custom dual containment end caps
- Excellent chemical resistance - (even with common Fluorosurfactants known to attack lower PFA grades)
- Low permeability
- Extremely low extractable levels: metallic and organic
- Extremely smooth surface finish
- Highest mechanical performance vs other PFA and HP PFA tubing products
- Flex life comparable with PTFE
- Laser marked for complete traceability
- Flame resistant - fluoropolymers meet UL 94 V0

CUSTOM APPLICATIONS

- Custom laser marking
- Custom packaging: straight lengths, short cut-to-length parts
- Private Labeling
- Additional sizes and material selections available upon request

ALTAFLUOR® 480 SERIES DUAL CONTAINMENT TUBING

PART NUMBER	PRIMARY TUBING	OUTER TUBING	PSI@72F (PRIMARY)	WT/FT (LBS)
DC-0250-0500-0C	5/32 ID x 1/4 OD x .047	3/8 ID x 1/2 OD x .062	355	.11
DC-0375-0750-0C	1/4 ID x 3/8 OD x .062	5/8 ID x 3/4 OD x .062	315	.18
DC-0500-0750-0C	3/8 ID x 1/2 OD x .062	5/8 ID x 3/4 OD x .062	235	.21
DC-0750-1000-0C	5/8 ID x 3/4 OD x .062	7/8 ID x 1 OD x .062	155	.30
DC-1000-1250-0C	7/8 ID x 1 OD x .062	1.10 ID x 1.250 OD x .075	120	.44

PACKAGING: Coils of 100 FT or less are packaged in heavy gauge heat-sealed double polybags. Longer lengths are supplied on plastic clean-room compatible reels. A Partial Reel charge may apply for reel lengths less than 500 FT.

Note: For Certifications please see ALTAFLUOR® 480 Series UHP PFA section.



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 F: 973-300-3345
 E: sales@altaflo.com
 A: 23 Wilson Drive, Sparta, NJ 07871

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PVDF (Polyvinylidene Fluoride) is an abrasion resistant fluoropolymer suitable for use in applications requiring chemical resistance with low permeability. ALTAFLUOR® 500 PVDF is the most abrasion and temperature resistant of the PVDF products offered. ALTAFLUOR® 500 provides excellent abrasion resistance and mechanical strength in use with many chemicals and solvents. With its extremely low extractable levels, ALTAFLUOR® 500 is excellent for use in ultra pure water systems. ALTAFLUOR® 500 is suitable for use with conventional fittings but is not recommended for use with flare fittings.

ALTAFLUOR® 500 FEATURES

- 100% virgin grade KYNAR® PVDF
- Excellent abrasion resistance
- Low permeability
- Good chemical resistance
- UV resistant
- FDA Compliant

APPLICATIONS

- Chemical process
- Semiconductor
- Water process systems
- Aquarium

SPECIFICATIONS

General: Resins meet or exceed requirements listed in ASTM D 3222

Temperature: -20° F to 250° F

Flammability: UL 94-VO rated KYNAR® PVDF resists combustion and does not promote flame spread

FDA: KYNAR® PVDF is approved for use in food contact applications in compliance with FDA regulation 21 CFR 177.1500

NSF: ALTAFLUOR® 500 PVDF tubing is certified to NSF 51, NSF 61 and NSF 372

ALTAFLUOR® 500 PVDF - TUBING

PART NUMBER	ID	OD	+/-	WALL	+/-
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ALTAFLUOR® 500 is produced from a KYNAR® homopolymer PVDF resin and is available as a custom order. Minimum order requirements apply. Please consult factory for sizes and availability. For Flexible PVDF, please see ALTAFLUOR® 550 series.

ALTAFLUOR® 500 SERIES PVDF - PHYSICAL PROPERTIES

PHYSICAL PROPERTY	ASTM TEST METHOD	UNITS	VALUES
Upper Service Temp			250° F
Specific Gravity	D 792		1.77-1.79
Tensile Strength	D 1708	PSI	5000-7000
Elongation	D 638	%	50-200
Flex Modulus	D 790	PSI	240,000-300,000
Hardness	D 2240	Shore D	76-80

The above information is based on tests performed at 73° F and can vary in individual applications based on parameters such as temperature, chemical concentration, pressure, etc. Please consult factory for details. For an estimate on burst pressure at ambient temperature we consider a 3:1 ratio when exposure temperature is 73° F. However Altaflo does not recommend exceeding the suggested Working Pressure listed.



This ALTAFLUOR® 480 UHP PFA has been tested and certified by WQA against NSF/ANSI 51, NSF/ANSI 61 to Commercial Hot (180° F/82° C), and NSF/ANSI 372 for lead free compliance.



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PVDF FLEX (polyvinylidene fluoride - commonly known by the trade name KYNAR FLEX®) is a more flexible version of PVDF. ALTAFLUOR® 550 Tubing is resistant to many commonly used industrial fluids and gases, including ozone, and does not support the growth of fungi. For this reason ALTAFLUOR® 550 tubing is preferred for water disinfecting processes involving ozone such as aquarium, spa, pool and agriculture. Additionally, it is ideal for applications with exposure to less aggressive chemicals and lower temperature exposure (over FEP or PFA) or those requiring low extractable levels. ALTAFLUOR® 550 is available in many standard sizes available to ship from stock. Custom sizes are available upon request. * ALTAFLUOR® 550 tubing is compatible with most standard fittings (not suitable for use with flare fittings).

ALTAFLUOR® 550 FEATURES

- 100% virgin grade KYNAR FLEX® PVDF
- Chemically resistant to many industrial chemicals and solvents including acids, chlorinated chemicals, brominated chemicals, alcohols, and hydrocarbons.
- Low smoke and flame properties
- Resistant to bacteria and fungal growth
- Good abrasion resistance
- Low permeability
- Excellent creep resistance
- Excellent thermal stability
- Better flexibility (over ALTAFLUOR® 500)
- UV resistant
- Nuclear radiation resistant
- FDA compliant

APPLICATIONS

- Metal preparation
- Food and beverage
- Petrochemical processing
- High purity semiconductor
- Water purification
- Chemical process
- Ultra-pure water process systems
- Pulp and paper
- Aquarium
- Pool and spa

SPECIFICATIONS

General: Resin meets or exceeds requirements listed in ASTM D 3222

Temperature: -20° F to 212° F

Flammability: UL 94-V0 rated KYNAR FLEX® PVDF resists combustion and does not promote flame spread

FDA: KYNAR FLEX® PVDF is approved for use in food contact applications in compliance with FDA regulation 21 CFR 177.2600

NSF: ALTAFLUOR® 550 PVDF FLEX tubing is certified to NSF 51, NSF 61 and NSF 372



This ALTAFLUOR® 550 PVDF FLEX has been tested and certified by WQA against NSF/ANSI 51, NSF/ANSI 61 to Commercial Hot (180° F/82° C), and NSF/ANSI 372 for lead free compliance.

ALTAFLUOR® 550 PVDF FLEX - TUBING

PART NUMBER	ID	OD	+/-	WALL	+/-
550-0125-030-XX	1/16	1/8	.004	0.030	.003
550-0188-030-XX	1/8	3/16	.004	0.030	.003
550-0250-030-XX	3/16	1/4	.004	0.030	.003
550-0313-030-XX	1/4	5/16	.005	0.030	.003
550-0375-030-XX	5/16	3/8	.005	0.030	.003
550-0250-040-XX	0.170	1/4	.005	0.040	.003
550-0250-047-XX	5/32	1/4	.005	0.047	.003
550-0250-062-XX	1/8	1/4	.005	0.062	.003
550-0375-062-XX	1/4	3/8	.005	0.062	.003
550-0500-062-XX	3/8	1/2	.005	0.062	.003
550-0625-062-XX	1/2	5/8	.006	0.062	.003
550-0750-062-XX	5/8	3/4	.006	0.062	.003
550-1000-062-XX	7/8	1	.006	0.062	.003
METRIC SIZES	ID	OD	+/-	WALL	+/-
550-0157-040-XX	2mm	4mm	.005	1mm	.003
	0.079	0.157	.005	0.040	.003
550-0236-040-XX	4mm	6mm	.005	1mm	.003
	0.157	0.236	.005	0.040	.003
550-0315-040-XX	6mm	8mm	.005	1mm	.003
	0.236	.315	.005	0.040	.003
550-0394-040-XX	8mm	10mm	.005	1mm	.003
	0.315	0.394	.005	0.040	.003
550-0472-040-XX	10mm	12mm	.005	1mm	.003
	0.394	0.472	.005	0.040	.003

Additional sizes available - please consult factory for details.

Stocked in natural color - please consult factory for details on available colors.

Due to the nature of applications involving the use of fluoropolymers, we suggest that all customers test product within the conditions specific to their application prior to use.

ALTAFLUOR® 550 PVDF FLEX - TUBING

PART NUMBER	OD	WALL	ID	BEND RADIUS	WORKING PRESSURE @ 73°F
550-0125-030-OC	0.125	0.030	0.062	1/2"	451
550-0188-030-OC	0.188	0.030	0.125	3/4"	168
550-0250-030-OC	0.250	0.030	0.188	1"	126
550-0313-030-OC	0.313	0.030	0.250	1-3/4"	101
550-0375-030-OC	0.375	0.030	0.313	2-1/2"	84
550-0250-040-OC	0.250	0.040	0.170	1"	155
550-0250-047-OC	0.250	0.047	0.156	3/4"	177
550-0250-062-OC	0.250	0.062	0.125	1/2"	260
550-0375-062-OC	0.375	0.062	0.250	1"	174
550-0500-062-OC	0.500	0.062	0.375	2"	130
550-0625-062-OC	0.625	0.062	0.500	3"	104
550-0750-062-OC	0.750	0.062	0.625	5"	87
550-1000-062-OC	1.000	0.062	0.875	22"	65

The above information is based on tests performed at 73° F and can vary in individual applications based on parameters such as temperature, chemical concentration, pressure, etc. Please consult factory for details.

For an estimate on burst pressure at ambient temperature we consider a 3:1 ratio when exposure temperature is 73° F. However Altaflo does not recommend exceeding the suggested Working Pressure listed.

Additional sizes available - please consult factory for details.

Stocked in natural color - please consult factory for details on available colors.

ALTAFLUOR® 550 SERIES PVDF - PHYSICAL PROPERTIES

PHYSICAL PROPERTY	ASTM TEST METHOD	UNITS	VALUES
Upper Service Temp			212° F
Specific Gravity	D 792		1.78
Tensile Strength	D 1708	PSI	3500
Elongation	D 638	%	200-500
Flex Modulus	D 790	PSI	40,000-60,000
Hardness	D 2240	Shore D	57-62

The above information is based on tests performed at 73° F and can vary in individual applications based on parameters such as temperature, chemical concentration, pressure, etc. Please consult factory for details.

For an estimate on burst pressure at ambient temperature we consider a 3:1 ratio when exposure temperature is 73° F. However Altaflo does not recommend exceeding the suggested Working Pressure listed.



P: 973-300-3344

F: 973-300-3345

E: sales@altaflo.com

A: 23 Wilson Drive, Sparta, NJ 07871

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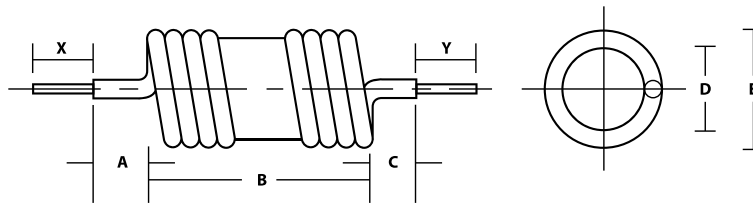
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NEOFLON® is a registered trademark of Daikin

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COILED HOSE ORDER FORM

All ALTAFLUO products are available in coiled configurations. We will manufacture to your specifications. Please use this worksheet for ordering. You can also contact our sales department to discuss specific details of your application.



COIL TUBING	COIL DIMENSIONS	INNER TUBING	COIL CONFIGURATION
OD 1/4" 3/8" 1/2" <input type="text"/> (specify)	A LEFT TAIL <input type="text"/> B RETRACTED LENGTH <input type="text"/> C RIGHT TAIL <input type="text"/> SPECIFY ONE DIMENSION D - COIL ID = <input type="text"/> RIGHT TAIL E - COIL OD = <input type="text"/>	Complete this section only if an inner tube is required. OD <input type="text"/> (specify) WALL <input type="text"/> (specify) MATERIAL PTFE FLEX <input type="text"/> (specify) COLOR NATURAL <input type="text"/> (specify) TOTAL LENGTH OF TUBE USED As required <input type="text"/> (specify) X EXTENSION OUT OF LEFT TAIL <input type="text"/> Y EXTENSION OUT OF RIGHT TAIL <input type="text"/>	If the coil configuration shown above is not suitable for your purposes, please submit a custom design. USE SHOWN CONFIGURATION CUSTOM DESIGN SUBMITTED DRAWING NUMBER: <input type="text"/> REVISION: <input type="text"/>
WALL .030" .062" <input type="text"/> (specify)			
MATERIAL PTFE FEP PFA HP-PFA UHP-PFA MFA PVDF			
COLOR NATURAL <input type="text"/> (specify)			
TOTAL LENGTH AS REQUIRED <input type="text"/> (specify)			

QUANTITY:

Company:

Name:

Email:

Phone:

Cell:

Fax:

Notes:



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ALTAFLUOR MATERIAL SELECTION CHART

	ASTM TEST	100 (PTFE)	200 (FEP)	2E0 (FEP)	350 (THV)	400 (PFA)	480 (UHP PFA)	500 (PVDF)	550 (PVDF FLEX)	700 (ETFE)
UPPER SERVICE TEMP. °F		500° F*	400° F	400° F	180° F	500° F	500° F	250° F	212° F	300° F
SPECIFIC GRAVITY	D 792	2.15	2.15	2.12-2.17	1.95	2.15	2.15	1.77-1.79	1.78	1.74
TENSILE STRENGTH PSI	D 1708	2500-3000	4000	3500	2900	4200	4500	5000-7000	3500	3100-6800
ELONGATION %	D 638	200-400	400	300-400	600	400	400	50-200	200-500	420-450
FLEX MODULUS PSI	D 790	27,000	90,000	90,000	12,000	90,000	90,000	240,000-300,000	40,000-60,000	128,000-171,000
MIT FLEX LIFE	D 2176	1,000,000+	200,000	5000	N/A	500,000+	1,750,000	N/A	N/A	N/A
HARDNESS - SHORE D	D 2240	60	57-60	57-60	44	60	60	76-80	57-62	75

The above information is based on tests performed at 73° F and can vary in individual applications based on parameters such as temperature, chemical concentration, pressure, etc. Please consult factory for details.

*ALTAFLUOR 100® SERIES PTFE Short Term Upper Service Temp: 550° F.



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