

# ALTAFLUOR® 400 PFA

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**



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# ALTAFLUOR® 400 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

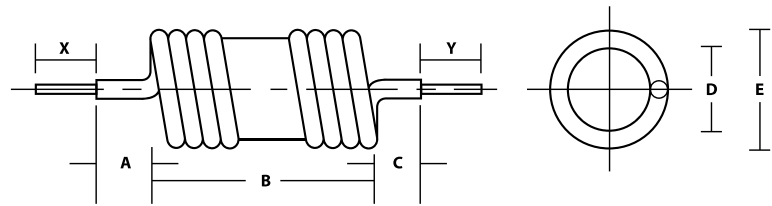
\*Custom item - please consult factory for lead time and minimum order requirements.

## 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.



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# ALTAFLUOR® 400 PFA

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.

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