

ALTAFLUOR® 450 HP PFA

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 6502UHPZ HP PFA – a Semi F-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

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

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.

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.



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

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.



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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

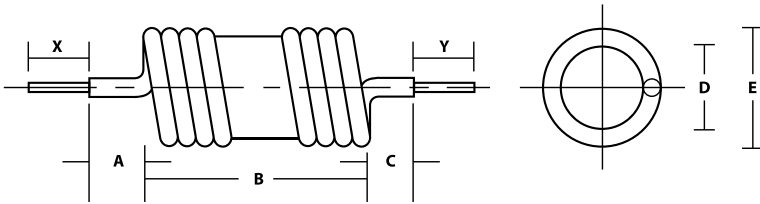
*Custom item - please consult factory for lead time and minimum order requirements.
Available in natural color only. For pigmented items, see ALTAFLUOR® 400 series.

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.



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