

# UHP-FEP Fluoropolymer Tubing

## FEATURES

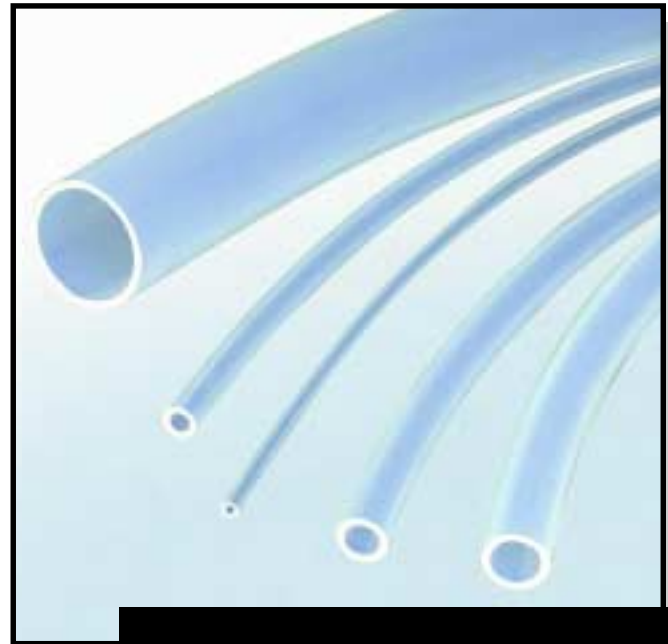
- Extremely low levels of extractable ions
- Wide service temperature range
- Excellent chemical resistance
- Excellent thermal stability
- Smooth surfaces

## DESCRIPTION

AMETEK introduces a new addition to its line of high quality fluoropolymer tubing. This new material is an ultrahigh-purity FEP resin. Designated UHP-FEP, the resin is designed primarily for ultrahigh-purity applications requiring very low levels of metal and other ion extractability. It offers the better value of FEP as compared to that of the PFA materials currently used. This extrusion grade resin is ideally suited for tubing, as the surface of the tubing is very smooth allowing no sites for contamination buildup. It is ideally suited for a variety of chemical transport applications both in the semi-conductor facility as well as in OEM equipment. It is available in a complete range of standard or custom sizes up to 2-inch diameter.

With its unique honeycomb capability, AMETEK can also produce heat exchangers utilizing this tubing. The resultant heat exchanger combines the unique corrosion resistant character of FEP but also deals with the heating or cooling of high purity chemicals.

For application of UHP-FEP to your process needs, contact your AMETEK Regional Manager or our technical staff at 1-800-441-7777 for a consultation.



**UHP-FEP FLUOROPOLYMER TUBING**

## TUBING EXTRACTION RESULTS (ppb)

Element	PFA-UHP	FEP-UHP
Aluminum	0.1	0.5
Calcium	ND	ND
Chromium	0.4	ND
Copper	2.0	0.1
Iron	ND	ND
Magnesium	0.4	ND
Molybdenum	0.4	0.1
Nickel	3.1	ND
Zinc	ND	ND

*Testing by Balazs Analytical Laboratories  
Leaching in 70% HNO<sub>3</sub>, 7 days at room temperature*

# UHP-FEP Fluoropolymer Tubing

## PROPERTIES TABLE

Property	Test Method	Unit	Value
Melting Point	ASTM D4591	°C	260
Specific Gravity	ASTM D792	g/cm <sup>3</sup>	2.14
Tensile Strength at Break (23°C)	ASTM D638	psi	4,350
Elongation at Break (23°C)	ASTM D638	%	350

## STANDARD SIZES AVAILABLE

TUBING DIMENSIONS Inside Dimension x Outside Dimension (in.)	WALL THICKNESS (in.)
0.031 x 0.063	0.016
0.063 x 0.125	0.031
0.187 x 0.250	0.031
0.156 x 0.250	0.031
0.313 x 0.375	0.031
0.438 x 0.500	0.031
0.688 x 0.750	0.031
0.125 x 0.250	0.062
0.250 x 0.375	0.062
0.375 x 0.500	0.062
0.500 x 0.625	0.062
0.625 x 0.750	0.062
0.750 x 0.875	0.062
0.875 x 1.00	0.062

Please contact AMETEK Chemical Products for pricing and availability. We also produce additional custom sizes.

Fluoropolymer resins are generally considered inert to most chemicals. Under certain conditions of pressure and temperature, or combinations of chemicals, fluoropolymer tubing should not be used. Please contact AMETEK for discussion of your specific process to be certain that our products are appropriate for your intended use.

Adequate ventilation should be used where fluoropolymers are heated during tube repairs. Flu-like symptoms may occur from exposure to vapors evolved from fluoropolymers at very high temperatures, up to 800°F or from smoking materials that contain particles of fluoropolymers. Symptoms pass within 48 hours and are the only adverse effects observed in humans to date. Unheated fluoropolymers are essentially inert and are nonirritating to the skin.

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