



FEP is chemically resistant to most industrial fluids and gasses. The coiling technique allows for the highest volume of water to be circulated close to the UV bulb. Water flows counterclockwise in a left helix or clockwise in a right helix.

- Resistant to UV light at 254 nm wavelength
- Virtually unaffected by oxygen & ozone for combination treatments
- High operating temperatures
- Tubing approved to NSF 51
- Material approved to FDA 21 CFR 177.1550

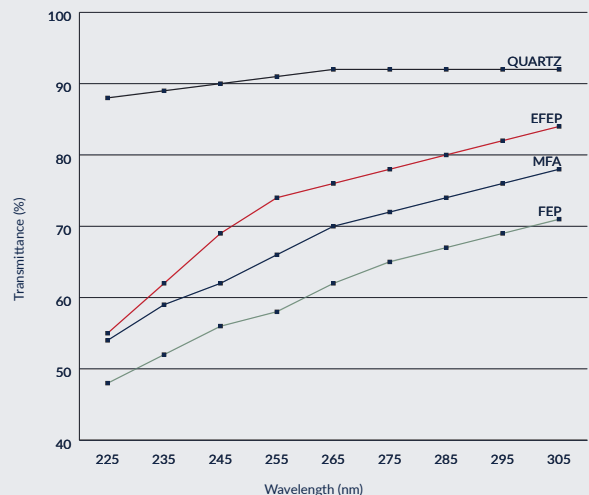
FEP Coil

Our tubing is available in different dimensions, sizes and material combinations. We can customize the tubing colors for your specific needs. Testing is done at various points during production to ensure consistent quality standards.

Applications

- UV sterilization equipment
- Water purification devices
- Drinking water treatment
- Pharmaceutical processing
- Food production
- Air sampling

Fluoropolymers' UV Transmittance



Standard sizes

Tube ID (in/mm)	Tube OD (in/mm)	Wall (in/mm)	Coil ID (in/mm)	Coil Helix	Burst Pressure (calc at 50°C in psi)
0.200/5.08	0.250/6.35	0.025/0.64	0.750/19.05	Left	700
0.250/6.35	0.270/6.86	0.010/0.25	0.750/19.05	Left	230
0.250 /6.35	0.281/7.14	0.013/0.33	0.875/22.23	Right	290
0.375/9.35	0.425/10.80	0.025/0.64	0.875/22.23	Right/Left	370
0.438/11.12	0.500/12.70	0.032/0.81	1.750/44.45	Right/Left	390
0.500/12.70	0.560/14.20	0.030/0.76	2.50/ 63.50	Right	330
0.500/12.70	0.550/14.00	0.250/6.35	1.75/44.50	Right	280
0.500/12.70	0.550/14.00	0.250/6.35	0.875/22.20	Right	280

Advantages of the coiling design and FEP over quartz glass tube in UV disinfection of water

- Quartz glass tubes are expensive, fragile, and difficult to clean.
- Coil design is more mechanically efficient than tube design for UV systems, regardless of the material.
- Optinova has perfected the coiling technique with a lower ratio of coil ID to tube OD.
- The closer the coil is to the UV light source, the greater the efficiency.
- The coil design exposes a greater volume of water to UV light in a smaller, more compact package, which is a desirable feature.
- The coil is best suited for small-scale units due to its compact nature, but larger coil designs are available upon request.
- The coil creates added turbulence in the water, which is a desirable feature.
- Using fittings for water source connection is recommended over forming pigtails, which are labor-intensive and create potential failure points.
- Coils made of EFEP offer greater UV transparency and a smoother surface finish than other options.
- All coils should be used in conjunction with conventional filters to remove sediments, minerals, and odors.
- Low doses of UV light are effective in inactivating organisms
- FEP does not get degraded under UV light at a wavelength of 254 nanometers

Material properties

	Unit	FEP
Wall	mm (inches)	>0.3-4.0 (>0.01-0.16)
Density	g/m ³	2.15
Specific gravity		2.15
Transparency		Very good
Sterilization		EtO, Steam
Environmental		
Water absorption	%	<0.01
Weather resistance		Excellent
Chemical resistance		Very good
Flammability		V-0
Oxygen index	%	>95
Thermal		
Melting point	°C (°F)	257-275 (495-527)
Thermal conductivity	BTU/h/ft/°F	1.4
Min/Max service temp	°C (°F)	-200/200 (-328/390)
Shrink temperature	°C (°F)	149-232 (300-450)
Deflection temp (66 psi)	°C (°F)	59 (138)
Deflection temp (264 psi)	°C (°F)	57 (134)
Mechanical		
Tensile strength at break	MPa	20-28
Elongation at break	%	300-325
Compressive strength	psi	2 200
Impact strength	Ft-Lb/in	No Break
Flexural Modulus	MPa	550-700
Tensile Modulus	psi	50 000
Hardness	Shore D	55-60
Electrical		
Dielectric const at 103 Hz		2.1
Dielectric const at 106 Hz		2.1
Dielectric DF at 103 Hz		0.0001
Dielectric DF at 106 Hz		0.0008
Volume resistivity (D 257)	Ohm	