

# Forbest Manufacturing Co.Ltd

## Data sheet: FEP Tubing

### Key properties / advantages of FEP tubing

- More transparent / optically clear than PTFE and therefore used in monitoring equipment.
- More flexible than PTFE.
- Maximum working temperature: 200°C (392°F).

	Property	Specification	Unit		
<b>General</b>	Continuous service temperature	Maximum	°C	200	
			°F	392	
	Chemical resistance		-	Excellent	
	Specific gravity	D 792	-	2.15	
<b>Electrical</b>	Dielectric constant	D 150 at 10 <sup>3</sup> Hz	-	2.1	
		D 150 at 10 <sup>6</sup> Hz	-	2.1	
	Dielectric dissipation factor	D 150 at 10 <sup>3</sup> Hz	-	0.0001	
		D 150 at 10 <sup>6</sup> Hz	-	0.0008	
	Dielectric strength (short term) 10 mils film	D 149	Volt/mil	2 000	
Volume resistivity	D 257	Ohm-cm	>10 <sup>18</sup>		
<b>Enviromental</b>	Water absorption	D 570	%	< 0.01	
	Weather resistance	-	-	Excellent	
	Oxygene index	D 2863	%	> 95	
	Flammability	UL 94	-	V-0	
<b>Mechanical</b>	Tensile strength	D 1708, D 638	psi	3 500	
	Elongation	D 1708, D 638	%	300	
	Compressive strength	D 695	psi	2 200	
	Impact strength	D 256 at +23°C	Ft-Lb/in	No Break	
	Flexural Modulus	D 790 at +23°C	psi	95 000	
	Tensile Modulus	D 638	psi	50 000	
	Hardness	D 2240	-	D-55	
<b>Thermal</b>	Melting point		°C	270	
			°F	518	
	Thermal conductivity	C-177	BTU/hr/ft <sup>2</sup> /°F. in	1.4	
	Deflection temperature 66 psi 264 psi	D 648		°C	59
					57
	Deflection temperature 66 psi 264 psi	D 648		°F	138
134					

Standard tolerances	
OD mm	Tol mm
>1.99	+/- 0.07
2.00-3.99	+/- 0.08
4.00-7.99	+/- 0.10
8.00-9.99	+/- 0.12
10.00-11.99	+/- 0.15
12.00-15.99	+/- 0.20
16.00-17.99	+/- 0.25
18.00-19.99	+/- 0.30
20.00-23.99	+/- 0.35
24.00-29.99	+/- 0.40
etc.	

Standard tolerances	
Wall mm	Tol mm
>0.30	+/- 0.05
0.31-0.70	+/- 0.08
0.71-1.00	+/- 0.10
1.01-1.30	+/- 0.12
1.31-1.60	+/- 0.15
1.61-2.00	+/- 0.20
2.01-2.50	+/- 0.25
2.51-3.00	+/- 0.30
3.01-3.50	+/- 0.35
3.51-4.00	+/- 0.40
etc.	

Bending radius for FEP at 25° C

