

A red line graph with several peaks and valleys, resembling a signal or waveform, positioned above the title.

PTFE TUBING

Key properties of PTFE

- PTFE has the lowest coefficient of friction of all polymers.
- Useful in high temperature applications.
- Very good chemical resistance to all common solvents, acids and bases.
- PTFE is virtually unaffected by oxygen, ozone and UV light.
- Excellent dielectric insulation properties.
- The working temperature of PTFE is extremely broad, ranging from 260°C (500°F) to -270°C (-454°F).

	PROPERTY	SPECIFICATION	UNIT		
General	Continuous service temperature	Maximum	°C	260	
			°F	500	
	Chemical resistance		–	Excellent	
	Specific gravity	D 792	–	2.15	
Electrical	Dielectric constant	D 150 at 10 ³ Hz	–	2.1	
		D 150 at 10 ⁶ Hz	–	2.1	
	Dielectric dissipation factor	D 150 at 10 ³ Hz	–	0.0002	
		D 150 at 10 ⁶ Hz	–	0.0002	
	Dielectric strength (short term) 10 mils film	D 149	Volt/mil	>1 400	
Volume resistivity	D 257	Ohm • cm	>10 ¹⁸		
Enviromental	Water absorption	D 570	%	< 0.01	
	Weather resistance	–	–	Excellent	
	Oxygene index	D 2863	%	>95	
	Flammability	UL 94	–	V-0	
Mechanical	Tensile strength	D 1708, D 638	psi	3 500	
	Elongation	D 1708, D 638	%	300	
	Compressive strength	D 695	psi	3 500	
	Impact strength	D 256 at +23°C	Ft-Lb/in	3.5	
	Flexural Modulus	D 790 at +23°C	psi	90 000	
	Tensile Modulus	D 638	psi	80 000	
	Hardness	D 2240	–	D-60	
Thermal	Melting point		° C	327	
			° F	620	
	Thermal conductivity	C-177	BTU/hr/ft ² /°F.in	1.7	
	Deflection temperature 66 psi 264 psi	D 648		° C	122
					55
	Deflection temperature 66 psi 264 psi	D 648		° F	252
					131

Standard sizes (mm): PTFE tubing

Optinova is specialist in custom made sizes, we can produce basically any size. Optinova produces tubing from miniature sizes, with an inside diameter from below 0.10 mm, to industrial sizes. Wall sizes are available from below 0.10 mm up to 5.00 mm. Standard sizes are listed below.

ID (mm)	ID tol. +/- mm	OD (mm)	Wall (mm)	Wall tol. +/- (mm)
1.00	0.05	2.00	0.50	0.10
1.00	0.05	3.00	1.00	0.20
1.50	0.10	2.50	0.50	0.10
1.50	0.10	3.00	0.75	0.12
1.50	0.10	3.50	1.00	0.20
2.00	0.10	3.00	0.50	0.10
2.00	0.10	4.00	1.00	0.20
2.50	0.15	3.50	0.50	0.10
2.50	0.15	4.00	0.75	0.12
2.50	0.15	4.50	1.00	0.20
3.00	0.15	4.00	0.50	0.10
3.00	0.15	4.50	0.75	0.12
3.00	0.15	5.00	1.00	0.20
3.50	0.15	4.50	0.50	0.10
3.50	0.15	5.00	0.75	0.12
3.50	0.15	5.50	1.00	0.20
4.00	0.15	5.00	0.50	0.10
4.00	0.15	5.50	0.75	0.12
4.00	0.15	6.00	1.00	0.20
4.00	0.15	7.00	1.50	0.25
4.50	0.20	6.50	1.00	0.20
5.00	0.20	6.00	0.50	0.10
5.00	0.20	6.50	0.75	0.12
5.00	0.20	7.00	1.00	0.20
5.00	0.20	8.00	1.50	0.25
5.00	0.20	9.00	2.00	0.30
5.50	0.20	7.50	1.00	0.20
6.00	0.20	7.00	0.50	0.10
6.00	0.20	8.00	1.00	0.20
6.00	0.20	9.00	1.50	0.25
6.00	0.20	10.00	2.00	0.30
6.50	0.20	8.00	0.75	0.12
7.00	0.20	8.00	0.50	0.10
7.00	0.20	9.00	1.00	0.20
7.00	0.20	10.00	1.50	0.25

ID (mm)	ID tol. +/- mm	OD (mm)	Wall (mm)	Wall tol. +/- (mm)
7.50	0.20	9.50	1.00	0.20
8.00	0.20	9.00	0.50	0.10
8.00	0.20	9.50	0.75	0.15
8.00	0.20	10.00	1.00	0.20
8.00	0.20	12.00	2.00	0.30
8.50	0.30	10.50	1.00	0.20
9.00	0.30	10.00	0.50	0.10
9.00	0.30	10.50	0.75	0.12
9.00	0.30	11.00	1.00	0.20
9.00	0.30	12.00	1.50	0.25
10.00	0.30	11.00	0.50	0.10
10.00	0.30	12.00	1.00	0.20
10.00	0.30	13.00	1.50	0.25
10.00	0.30	14.00	2.00	0.30
10.00	0.30	15.00	2.50	0.30
11.00	0.30	13.00	1.00	0.20
12.00	0.30	14.00	1.00	0.20
12.00	0.30	15.00	1.50	0.25
12.00	0.30	16.00	2.00	0.30
13.00	0.50	15.00	1.00	0.20
13.00	0.50	16.00	1.50	0.25
13.00	0.50	17.00	2.00	0.30
14.00	0.50	16.00	1.00	0.20
14.00	0.50	17.00	1.50	0.25
14.00	0.50	18.00	2.00	0.30
15.00	0.50	17.00	1.00	0.20
15.00	0.50	18.00	1.50	0.25
16.00	0.50	18.00	1.00	0.20
16.00	0.50	19.00	1.50	0.25
16.00	0.50	20.00	2.00	0.30
16.50	0.50	19.50	1.50	0.25
17.00	0.50	20.00	1.50	0.25
18.00	0.50	20.00	1.00	0.20
18.00	0.50	21.00	1.50	0.25
18.00	0.50	22.00	2.00	0.30
19.00	0.50	21.00	1.00	0.20
19.00	0.50	22.00	1.50	0.25

Standard sizes (inch): PTFE tubing

Optinova is specialist in custom made sizes, we can produce basically any size. Optinova produces tubing from miniature sizes, with an inside diameter from below 0.10 mm, to industrial sizes. Wall sizes are available from below 0.10 mm up to 5.00 mm.

ID (inch)	ID tol. +/- (inch)	OD (inch)	Wall (inch)	Wall tol. +/- (inch)
1/32	0.002	1/16	1/64	0.003
1/16	0.004	1/8	1/32	0.005
1/16	0.004	1/16	1/16	0.012
3/32	0.006	1/8	1/64	0.003
1/8	0.006	5/32	1/64	0.003
1/8	0.006	3/16	1/32	0.005
1/8	0.006	1/4	1/16	0.012
5/32	0.006	1/4	3/64	0.008
3/16	0.008	1/4	1/32	0.006
3/16	0.008	5/16	1/16	0.012
1/4	0.008	5/16	1/32	0.005
1/4	0.008	3/8	1/16	0.012
1/4	0.008	1/2	1/8	0.020
5/16	0.008	3/8	1/16	0.012
3/8	0.012	7/16	1/32	0.005
3/8	0.012	1/2	1/16	0.012
7/16	0.012	1/2	1/32	0.005
1/2	0.020	9/16	1/32	0.005
1/2	0.020	5/8	1/16	0.012
9/16	0.020	5/8	1/32	0.005
5/8	0.020	1 1/16	1/32	0.005
5/8	0.020	3/4	1/16	0.012
1 1/16	0.020	3/4	1/32	0.005
3/4	0.020	7/8	1/16	0.012

Standard tolerances: PTFE tubing

ID (mm)	Tolerance mm	Wall mm	Tolerance mm
0.10-1.00	+/-0.05	0.10-0.19	+/-0.03
1.01-2.00	+/-0.10	0.20-0.29	+/-0.05
2.01-4.00	+/-0.15	0.30-0.49	+/-0.07
4.01-8.00	+/-0.20	0.50-0.69	+/-0.10
8.01-12.50	+/-0.30	0.70-0.79	+/-0.12
12.51-25.00	+/-0.50	0.80-0.99	+/-0.15
		1.00-1.24	+/-0.20
		1.25-1.50	+/-0.25
		1.51-3.00	+/-0.30
		>3.00	+/-0.50

Bending radius for PTFE at 25° C

