

Extruded PTFE Rods / Tubes

The extruded PTFE rods/tubes are generally used as machining stock to create shapes for any number of chemical, electrical and mechanical components (such as seals, caps, etc.) where the outstanding performance characteristics of PTFE are required.

Material Specifications

Color	White
Shape	Round
FDA	ASTM D6261, FDA Compliant 21 CFR 177.1660
Fabrication	Extruded
Country of Origin	China

Physical Properties

	Metric	English
Density	2.15 - 2.3 g/cc	0.0777 - 0.0831 lb/in ³
Water Absorption	0 - 0.03 %	0 - 0.03 %
Linear Mold Shrinkage	0.01 - 0.058 cm/cm	0.01 - 0.058 in/in

Mechanical Properties

Hardness, Rockwell R	58	58
Hardness, Shore A	98	98
Hardness, Shore D	50 - 59	50 - 59
Tensile Strength, Ultimate	10 - 43 MPa	1450 - 6240 psi
Tensile Strength, Yield	9 - 30 MPa	1310 - 4350 psi
Elongation at Break	50 - 650 %	50 - 650 %
Tensile Modulus	0.4 - 1.8 GPa	58 - 261 ksi
Flexural Modulus	0.5 - 0.7 GPa	72.5 - 102 ksi
Compressive Yield Strength	10 - 15 MPa	1450 - 2180 psi

Poisson's Ratio	0.46	0.46
Shear Strength	5 MPa	725 psi
Tensile Impact Strength	670 kJ/m ²	319 ft-lb/in ²
Coefficient of Friction	0.06 - 0.1	0.06 - 0.1
Limiting Pressure Velocity	0.063 MPa-m/sec	1800 psi-ft/min

Electrical Properties

Electrical Resistivity	1e+011 - 1e+018 ohm-cm	1e+011 - 1e+018 ohm-cm
Surface Resistance	1e+011 - 1e+018 ohm	1e+011 - 1e+018 ohm
Dielectric Constant	2.1	2.1
Dielectric Constant, Low Frequency	2.1	2.1
Dielectric Strength	18 - 105 kV/mm	457 - 2670 kV/in
Dissipation Factor	0.0001 - 0.0003	0.0001 - 0.0003
Dissipation Factor, Low Frequency	0.0001 - 0.0003	0.0001 - 0.0003
Arc Resistance	300 sec	300 sec

Thermal Properties

CTE, linear -100°C	86 µm/m-°C	47.8 µin/in-°F
CTE, linear 20°C	79 - 150 µm/m-°C	43.9 - 83.3 µin/in-°F
CTE, linear 100°C	100 - 140 µm/m-°C	55.6 - 77.8 µin/in-°F
CTE, linear 250°C	170 - 220 µm/m-°C	94.4 - 122 µin/in-°F
Specific Heat Capacity	1.2 - 1.4 J/g-°C	0.287 - 0.335 BTU/lb-°F
Thermal Conductivity	0.24 - 0.35 W/m-K	1.67 - 2.43 BTU-in/hr-ft ² -°F
Melting Point	330 °C	626 °F
Maximum Service Temperature, Air	260 - 290 °C	500 - 554 °F
Deflection Temperature at 0.46 MPa (66 psi)	73 °C	163 °F
Deflection Temperature at 1.8 MPa (264 psi)	45 - 100 °C	113 - 212 °F
Minimum Service Temperature, Air	-200 °C	-328 °F
Flammability, UL94	V-0	V-0
Oxygen Index	95%	95%

The OD is oversized and the ID is undersized for finishing to the sizes listed.

Check out our available PTFE rods and tubes below:

RODS

Dia.(mm)	Weight of meter in KG
4	0.03
4.5	0.03
5	0.04
5.1	0.04
5.2	0.05
5.5	0.05
5.6	0.05
6	0.06
6.2	0.07
6.3	0.07
6.5	0.07
6.6	0.08
7	0.08
7.2	0.09
7.5	0.10
7.6	0.10
8	0.11
8.2	0.12
8.5	0.12
8.6	0.13
9	0.14
9.2	0.15
9.6	0.16
9.9	0.17
10	0.17
10.2	0.18
10.3	0.18
10.4	0.19
10.5	0.19
11	0.21
11.2	0.22
11.5	0.23
12	0.25
12.2	0.26
12.5	0.27
12.7	0.28
13	0.29
13.2	0.30
13.5	0.31
13.9	0.33
14	0.34
14.2	0.35
14.5	0.36
14.6	0.37
15	0.39
15.3	0.40
15.5	0.42

TUBES

OD(mm)	ID(mm)	Wall thick (mm)	Weight of meter in KG
13.5	5.5	4	0.26
14	7	3.5	0.25
14.5	6.5	4	0.29
15	5	5	0.35
16	4	6	0.41
16	9	3.5	0.30
16	10	3	0.27
16	12	2	0.19
17	7	5	0.41
17	9	4	0.36
17	13	2	0.21
18	10	4	0.39
18	12	3	0.31
18	14	2	0.22
19	9	5	0.48
19	10	4.5	0.45
19	13	3	0.33
19	14	2.5	0.29
19.2	11.2	4	0.42
19.3	15.3	2	0.24
20	8	6	0.58
20	10	5	0.52
20	12	4	0.44
20	14	3	0.35
20	15	2.5	0.30
20	15.5	2.25	0.28
20	16	2	0.25
20.5	16.1	2.2	0.28
20.5	16.5	2	0.26
21	7	7	0.68
21	13	4	0.47
21	17	2	0.26
21.5	13.5	4	0.48
22	9	6.5	0.70
22	10	6	0.66
22	11	5.5	0.63
22	12	5	0.59
22	13	4.5	0.54
22	14	4	0.50
22	16	3	0.39
22	18	2	0.28
22.5	12.5	5	0.60
22.5	15.5	3.5	0.46
23	9	7	0.77
23	13	5	0.62
23	14	4.5	0.58
23	17	3	0.41

RODS

Dia.(mm)	Weight of meter in KG
16	0.44
16.3	0.46
16.5	0.47
16.9	0.49
17	0.50
17.2	0.51
17.4	0.52
17.5	0.53
18	0.56
18.3	0.58
18.5	0.59
19	0.62
20	0.69
20.2	0.71
22	0.84
22.5	0.87
25	1.08
26	1.17
28	1.35
30	1.56
32	1.77
35	2.12
40	2.76
45	3.50
50	4.32
55	5.23
60	6.22
65	7.30
70	8.47
75	9.72
80	11.06

TUBES

OD(mm)	ID(mm)	Wall thick (mm)	Weight of meter in KG
23.5	13.5	5	0.64
24	13	5.5	0.70
24	16	4	0.55
24	17	3.5	0.50
24	18	3	0.44
24	18.4	2.8	0.41
24	20	2	0.30
24.5	14.5	5	0.67
25	15	5	0.69
25	17	4	0.58
25	19	3	0.46
25	20	2.5	0.39
25	21	2	0.32
25.6	21.6	2	0.33
26	12.4	6.8	0.90
26	18	4	0.61
26	20	3	0.48
26	21	2.5	0.41
26.5	15.5	5.5	0.80
26.5	19.5	3.5	0.56
27	15	6	0.87
27	17	5	0.76
27	19	4	0.64
27	20	3.5	0.57
27	21	3	0.50
28	21	3.5	0.59
28	22	3	0.52
28	23	2.5	0.44
29	10	9.5	1.28
29	19	5	0.83
29	23	3	0.54
29	25	2	0.37
30	20	5	0.86
30	25	2.5	0.48
30.5	22.5	4	0.73
31	23	4	0.75
32	15	8.5	1.38
32	18	7	1.21
32	19	6.5	1.15
32	19.4	6.3	1.12
32	22	5	0.93
32	24	4	0.77
32	25	3.5	0.69
32	26	3	0.60
32	28	2	0.41

RODS

Dia.(mm)	Weight of meter in KG
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TUBES

OD(mm)	ID(mm)	Wall thick (mm)	Weight of meter in KG
33	24	4.5	0.89
33	28	2.5	0.53
33	29	2	0.43
34	18	8	1.44
34	21	6.5	1.24
34	28	3	0.64
35	17	9	1.62
35	21	7	1.35
35	25	5	1.04
35	28	3.5	0.76
35	29	3	0.66
35.5	30.5	2.5	0.57
36	22	7	1.40
36	26	5	1.07
37	23.4	6.8	1.42
37	29	4	0.91
37	30	3.5	0.81
38	21	8.5	1.73
38	24	7	1.50
38	28	5	1.14
38	32	3	0.73
38	33	2.5	0.61
38	34	2	0.50
39	23.5	7.75	1.67
39	24	7.5	1.63
40	20	10	2.07
40	25	7.5	1.68
40	30	5	1.21
40	32	4	1.00
40	33	3.5	0.88
40	34	3	0.77
40	35	2.5	0.65
41	24	8.5	1.91
42	22	10	2.21
42	28	7	1.69
42	30	6	1.49
42	34	4	1.05
42	36	3	0.81
42	37	2.5	0.68
42	38	2	0.55
43	35	4	1.08
43	37	3	0.83

RODS

Dia.(mm)	Weight of meter in KG
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TUBES

OD(mm)	ID(mm)	Wall thick (mm)	Weight of meter in KG
43	39	2	0.57
43.5	36.5	3.5	0.97
44	40	2	0.58
44.5	36.5	4	1.12
45	30	7.5	1.94
45	33	6	1.62
45	35	5	1.38
45	37	4	1.13
45	38.6	3.2	0.92
46	30	8	2.10
46	39	3.5	1.03
46	40	3	0.89
47	41	3	0.91
48	38	5	1.49
49	29	10	2.70
49	42	3.5	1.10
49	44	2.5	0.80
50	20	15	3.63
50	23	13.5	3.41
50	36	7	2.08
50	40	5	1.56
50	43	3.5	1.12
50	44	3	0.97
50	45	2.5	0.82
50	46	2	0.66
51	38	6.5	2.00
51	43	4	1.30
51	45	3	1.00
51	46	2.5	0.84
51	47	2	0.68
52	36	8	2.43
52	40	6	1.91
52	44	4	1.33
52	46	3	1.02
52	47	2.5	0.86
52	48	2	0.69
52.5	30	11.25	3.21
53	32	10.5	3.08
53	35	9	2.74
53	39	7	2.23
53	45	4	1.35
53	47	3	1.04

RODS

Dia.(mm)	Weight of meter in KG
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TUBES

OD(mm)	ID(mm)	Wall thick (mm)	Weight of meter in KG
53	48	2.5	0.87
54	38	8	2.54
54	39	7.5	2.41
54	44	5	1.69
54	48	3	1.06
54	49	2.5	0.89
55	38	8.5	2.73
56	44	6	2.07
56	50	3	1.10
56.5	48.5	4	1.45
57	42	7.5	2.57
57	49	4	1.47
57	51	3	1.12
57	52	2.5	0.94
58	50	4	1.49
58	52	3	1.14
59	43	8	2.82
59	54	2.5	0.98
60	50	5	1.90
61.5	56.5	2.5	1.02
62	54	4	1.60
63	38	12.5	4.36
64	58	3	1.26
64	59	2.5	1.06
65	49	8	3.15
65	54	5.5	2.26
65	55	5	2.07
65	57	4	1.69
65	59	3	1.29
66	32	17	5.76
68	58	5	2.18
68	60	4	1.77
68	62	3	1.35
68	63	2.5	1.13
70	46	12	4.81
70	50	10	4.15
70	64	3	1.39
71.5	63.5	4	1.87
72	64	4	1.88
75	63	6	2.86
75	65	5	2.42
75	69	3	1.49

RODS

Dia.(mm)	Weight of meter in KG
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TUBES

OD(mm)	ID(mm)	Wall thick (mm)	Weight of meter in KG
76	52	12	5.31
80	70	5	2.59
80	72	4	2.10
80	74	3	1.60
80	75	2.5	1.34
82	66	8	4.09
82	70	6	3.15
82	74	4	2.16
82	76	3	1.64
82	77	2.5	1.37
85	65	10	5.18
85	70	7.5	4.02
85	71	7	3.77
85	77	4	2.24
87	73	7	3.87
87	80	3.5	2.02
90	70	10	5.53
90	74	8	4.53
90	78	6	3.48
90	80	5	2.94
90	84	3	1.80
92	82	5	3.01
95	89	3	1.91
96	90	3	1.93
97	83	7	4.35
98	74	12	7.13
98	90	4	2.60
98	92	3	1.97
99	92	3.5	2.31
100	80	10	6.22
100	90	5	3.28
101	93	4	2.68
102	76	13	8.00
102	92	5	3.35
102	94	4	2.71
102	96	3	2.05
103	93	5	3.39
104	94	5	3.42
104	97	3.5	2.43
105	95	5	3.46
106	94	6	4.15
106	97	4.5	3.16

RODS

Dia.(mm)	Weight of meter in KG
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TUBES

OD(mm)	ID(mm)	Wall thick (mm)	Weight of meter in KG
106	99	3.5	2.48
108	101	3.5	2.53
110	104	3	2.22
115	107	4	3.07
118	104	7	5.37
118	108	5	3.91
118	110	4	3.15
120	96	12	8.96
121	114	3.5	2.84
123	111	6	4.85
124	115	4.5	3.72
124	118	3	2.51
126	116	5	4.18
126	118	4	3.37
126	119	3.5	2.96
127	103	12	9.54
129	122	3.5	3.04
130	121	4.5	3.90
133	125	4	3.57
135	127	4	3.62
140	124	8	7.30
142	134	4	3.82
147	140	3.5	3.47
150	143.6	3.2	3.25
151	139	6	6.01
151	141	5	5.05
151	147	2	2.06
152	145	3.5	3.59
155	146	4.5	4.68
158	148	5	5.29
158	149	4.5	4.77
158	150	4	4.26
168	152	8	8.85
168	160	4	4.53
174	166	4	4.70
204	194	5	6.88
204	196	4	5.53
206	194	6	8.29
207	192	7.5	10.34
207	198	4.5	6.30
208	198	5	7.02
226	216	5	7.64

RODS

Dia.(mm)	Weight of meter in KG
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TUBES

OD(mm)	ID(mm)	Wall thick (mm)	Weight of meter in KG
250	220	15	24.36
255	245	5	8.64
260	250	5	8.81
262	252	5	8.88
274	264	5	9.30
305	295	5	10.37
310	300	5	10.54
312	301	5.5	11.65
325	315	5	11.06
340	330	5	11.58
350	340	5	11.92
360	350	5	12.27
407	396	5.5	15.26

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