



ZEUS INDUSTRIAL PRODUCTS, INC.
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FEP TUBING BULLETINS

204 • 205 • 206 • 207

Electrical specification tubing, fractional inch sizes

temperature extremes. For the significant differences between ZEUS FEP tubing and other fluoropolymer resins listed in this catalog, see the "SUMMARY OF PROPERTIES" table.

Frac. Sizes (Inches)	INSIDE DIAMETER			WALL THICKNESS						INDUSTRIAL SPECIFICATION TUBING			
	Min.	Nom.	Max.	STANDARD WALL Bulletin 204		THIN WALL Bulletin 205		LIGHTWEIGHT WALL Bulletin 206		Fractional Inch Sizes Bulletin 207			
				Nom.	Tol.	Nom.	Tol.	Nom.	Tol.	Frac. Sizes (Inches)	I.D. (Inches)	Tolerance + or - (Inches)	Wall Thickness (Inches)
1/8	.120	.125	.130	.020	± .004	.015	± .003	—	—	1/32	.031	.004	.015 ± .003
1/8	.125	.130	.135	—	—	—	—	.008	± .002	1/16	.063	.005	.030 ± .005
3/16	.188	.192	.198	.020	± .004	.015	± .003	.010	± .003	3/32	.094	.005	.030 ± .005
										1/8	.125	.010	.030 ± .005
1/4	.250	.255	.260	.020	± .004	.015	± .003	.010	± .003	3/16	.188	.010	.030 ± .005
5/16	.313	.321	.332	.020	± .004	.015	± .003	.012	± .003	1/4	.250	.010	.030 ± .005
3/8	.375	.387	.394	.025	± .005	.015	± .003	.015	± .005	5/16	.312	.010	.030 ± .005
7/16	.438	.451	.458	.025	± .005	.018	± .004	.018	± .005	3/8	.375	.010	.030 ± .005
1/2	.500	.515	.520	.025	± .005	.018	± .004	.018	± .005	7/16	.438	.010	.030 ± .005
5/8	.625	.643	.650	.025	± .005	.020	± .004	.020	± .005	1/2	.500	.010	.030 ± .005
3/4	.750	.772	.775	.030	± .006	.025	± .005	.020	± .005	9/16	.562	.020	.030 ± .007
7/8	.875	.902	.927	.035	± .007	—	—	—	—	5/8	.625	.020	.030 ± .007
										11/16	.687	.020	.030 ± .007
										3/4	.750	.020	.040 ± .007
										7/8	.875	.020	.045 ± .007

***PACKAGING** COILS OF RANDOM PRODUCTION LENGTHS FRACTIONAL AND INDUSTRIAL TUBING SIZES 7/8" AND LARGER ARE CUT LENGTHS 8 TO 9 FEET. CUSTOM PACKAGING ON REQUEST.

Supplied in natural unless otherwise specified. Mil. Std. 104 colors on request.
 Special colors available, subject to minimum run or set-up charges
 CUSTOM SPECIFICATIONS AND TOLERANCES QUOTED UPON REQUEST

ZEUS' FEP TUBING (thru 1/2" size) complies with UL-224, has been assigned UL File No. E-64007, and is listed under the UL "Recognized Component Program."

SUMMARY OF PROPERTIES

Extruded Fluoropolymers

The table below lists the generally accepted summary of electrical, mechanical and thermal properties of the four fluoropolymer resins from which ZEUS fabricates its line of tubing, beading, shapes and unique wire insulations.

PROPERTIES	RESINS			
	TFE	FEP	PFA	TEFZEL®
ULTIMATE TENSILE STRENGTH, psi (ASTM D 638)	2,500 — 4,000 (73°F) 1,500 (482°F)	3,000 — 4,000 (73°F)	4,000 (73°F) 2,000 (482°F)	6,500 — 7,500
ULTIMATE ELONGATION, % (ASTM D 638)	225 — 450 (73°F) 350 (482°F)	300 (73°F)	300 (73°F) 510 (482°F)	100 — 300 (73°F)
COEFFICIENT OF FRICTION (DYNAMIC)	0.10	0.25	0.20	0.40
FLEXURAL MODULUS, psi x 10 ³ (ASTM D 798)	50 to 90 (73°F) 4 (482°F)	95 — 105 (73°F)	100 (73°F) 10 (482°F)	200
IMPACT STRENGTH NOTCHED IZOD, FT. LB/IN., (ASTM D 256)	3 (73°F) >6 (170°F) 1.5 (—110°F)	No Break (73°F) 2.9 (—65°F)	No Break (73°F)	No Break (73°F) >20 (—65°F)
CONTINUOUS USE TEMPERATURE, °F	500	400	over 500	302
HEAT DEFLECTION TEMP. 66 psi, °F (ASTM D 648)	252	158		220
SPECIFIC GRAVITY (ASTM D 792)	2.11 — 2.19	2.12 — 2.17	2.12 — 2.17	1.70
DIELECTRIC STRENGTH (ASTM D 149) SHORT TERM VOLTS/MIL 10 MILS	1400	1400	1400	1600
DIELECTRIC CONSTANT (ASTM D 150)	2.05 ± 0.05 from 10 ² to 10 ¹⁰ Hz	2.10 from 10 ² to 10 ⁸ Hz	2.1 from 10 ² to 10 ⁶ Hz	2.6 from 10 ² to 10 ⁶ Hz
MELTING POINT, °F	620 ± 20	487 — 540	575 — 590	520