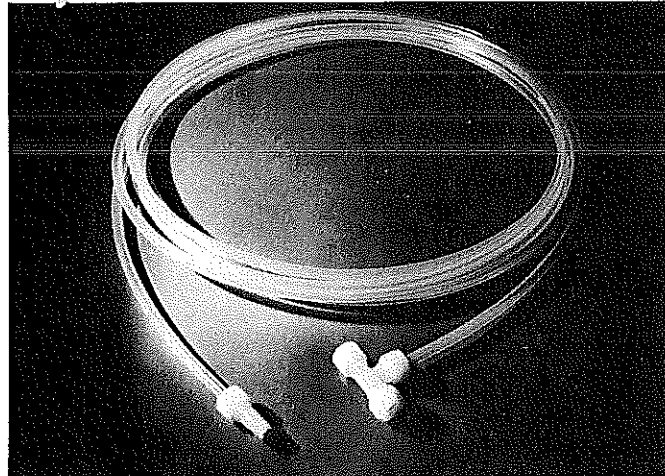




ZEUS INDUSTRIAL PRODUCTS, INC.
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TFE, FEP, PFA, & ETFE HEAVY CONSTRUCTION TUBING



Zeus has formulated, developed, and produced this special line of heavy construction tubing for use where very high levels of strength, reliability, durability, and easy handling are required. Integral with this tubing are all of the well-known characteristics of "Teflon" . . . low coefficient of friction, high heat resistance, abrasion resistance, chemical inertness and stability, and many other advantageous features.

Zeus Heavy Construction tubing is ideal for automotive, chemical, electrical, and mechanical applica-

tions. It is also highly acceptable for use as laboratory ware or in conjunction with medical instruments, equipment and appliances.

In addition to its strength, it is non-toxic, non-allergenic, easily sterilized, and features low water absorption.

The range of dimensions and tolerances shown here is representative of but a few of the constructions available. Zeus can provide many other sizes on a custom basis to meet your special requirements.

DIMENSIONS AND TOLERANCES (Inches)						
Outside Diameter			Nominal Inside Diameter		Wall Thickness	
Fractional	Decimal	Tolerance + or -	Fractional	Decimal	Nominal	Tolerance + or -
1/4	.250	.004	1/8	.125	.063	.008
5/16	.312	.005	3/16	.188	.063	.008
3/8	.375	.005	1/4	.250	.063	.008
7/16	.437	.006	5/16	.312	.063	.008
1/2	.500	.006	3/8	.375	.063	.008
9/16	.562	.007	7/16	.437	.063	.008
5/8	.625	.007	1/2	.500	.063	.008
11/16	.687	.008	9/16	.562	.063	.008
3/4	.750	.008	5/8	.625	.063	.008
13/16	.812	.009	11/16	.687	.063	.008
7/8	.875	.009	3/4	.750	.063	.008
15/16	.937	.010	13/16	.812	.063	.008
1	1.000	.010	7/8	.875	.063	.008

***PACKAGING** RANDOM LENGTHS IN COILS

"DuPont's registered trademark for its fluoropolymer resins."

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 ⁶ 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