

Convolute Tubing

High Performance Flexible Tubing – PTFE, FEP, and ETFE

Overview-

Zeus Convolute tubing is Chemical resistance, flexible, and maintains its useful properties when exposed to extreme temperatures. Zeus Convolute Tubing is manufactured to the tolerances and dimensions of AS81914 specifications.

Zeus is capable of producing high volumes of convolute tubing in both standard and extra flex forms. Convolute tubing is used as protective and flexible conduit for wires and optical fibers in critical areas of aerospace and automotive applications that demand highly flexible performance tubing. Zeus can produce convolute tubing for other applications as well and in a wide variety of resins beyond PTFE, FEP, and ETFE, including PEEK, PFA and PVDF. Other resins may also be a possibility; contact Zeus for more details.



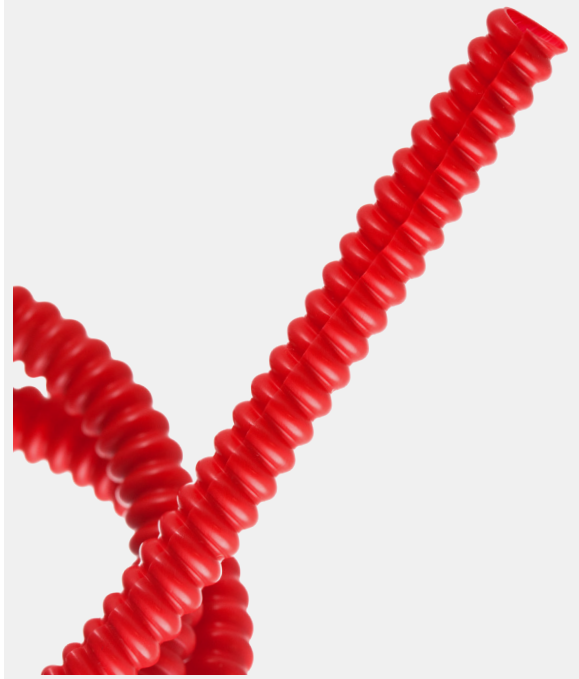
CHEMICAL RESISTANCE



ABRASION RESISTANCE



FLAME RESISTANCE



Convolute tubing has excellent flexibility and abrasion resistance.

APPLICATIONS

- Flexible conduit for wires and cabling
- Electrical component protection
- Protective conduit for fiber optics

CAPABILITIES AND SIZING

- Longitudinal slitting
- Custom sizes available
- Range of colors available
- Cut to length
- Long lengths
- Drilled holes
- Cuffing (PTFE)
- Meets dimensional requirements of military specifications AS81914 (1,2,3,4,5,and 6)
- Available in multiple resins

KEY PROPERTIES

- Chemical resistance
- High continuous service temperature
- Flame resistance
- Abrasion resistance
- Durable
- Flexible



Convolutated: PTFE

The tables below detail Zeus and AS81914 numbers, materials, and dimensions for our standard and extra flex PTFE convolutated tubing. Custom sizes and configurations, lot-to-lot testing, and free samples available upon request.

PTFE STANDARD FLEX CONVOLUTATED												
PART CALLOUT	#ID	MAX. ID		MIN. ID		MAX. OD		MAX. WALL THICKNESS		CONV. PER INCH	WEIGHT (LBS) PER FT ³ MAX.	MIN. BEND RADIUS
		in.	mm	in.	mm	in.	mm	in.	mm			
ZCT-TS-012	01	0.188	4.775	0.181	4.597	0.320	8.128	0.023	0.584	8.0	2.0	0.500
ZCT-TS-018	02	0.281	7.137	0.273	6.934	0.414	10.516	0.027	0.686	7.5	2.9	0.750
ZCT-TS-020	03	0.312	7.925	0.303	7.696	0.450	11.430	0.027	0.686	7.5	3.6	0.875
ZCT-TS-024	04	0.375	9.525	0.364	9.246	0.530	13.462	0.029	0.737	7.0	4.2	1.000
ZCT-TS-028	05	0.437	11.100	0.425	10.795	0.590	14.986	0.029	0.737	7.0	4.9	1.250
ZCT-TS-032	06	0.500	12.700	0.485	12.319	0.660	16.764	0.029	0.737	7.0	5.2	1.500
ZCT-TS-040	07	0.625	15.875	0.608	15.443	0.780	19.812	0.035	0.889	7.0	6.9	1.750
ZCT-TS-048	08	0.750	19.050	0.730	18.542	0.975	24.765	0.035	0.889	6.0	10.4	1.875
ZCT-TS-056	09	0.875	22.225	0.850	21.590	1.100	27.940	0.035	0.889	6.0	11.3	2.250
ZCT-TS-064	10	1.000	25.400	0.975	24.765	1.260	32.004	0.035	0.889	4.5	12.6	2.500
ZCT-TS-072	11	1.125	28.575	1.105	28.067	1.390	35.306	0.035	0.889	4.5	13.8	2.750
ZCT-TS-080	12	1.250	31.750	1.210	30.734	1.539	39.091	0.035	0.889	4.0	15.5	3.000
ZCT-TS-096	13	1.500	38.100	1.440	36.576	1.850	46.990	0.040	1.016	4.0	21.7	3.750

PTFE EXTRA FLEX CONVOLUTATED												
PART CALLOUT	#ID	MAX. ID		MIN. ID		MAX. OD		MAX. WALL THICKNESS		CONV. PER INCH	WEIGHT (LBS) PER FT ³ MAX.	MIN. BEND RADIUS
		in.	mm	in.	mm	in.	mm	in.	mm			
ZCT-TE-012	01	0.188	4.775	0.181	4.597	0.320	8.128	0.023	0.584	10	2.2	0.313
ZCT-TE-018	02	0.281	7.137	0.273	6.934	0.414	10.516	0.026	0.686	9	3.8	0.438
ZCT-TE-020	03	0.312	7.925	0.306	7.696	0.450	11.430	0.027	0.686	9	4.8	0.438
ZCT-TE-024	04	0.375	9.525	0.364	9.246	0.530	13.462	0.029	0.737	9	5.6	0.500
ZCT-TE-028	05	0.437	11.100	0.425	10.795	0.590	14.986	0.029	0.737	9	6.5	0.500
ZCT-TE-032	06	0.500	12.700	0.487	12.319	0.660	16.764	0.029	0.737	9	6.9	0.750
ZCT-TE-040	07	0.625	15.875	0.608	15.443	0.780	19.812	0.035	0.889	9	9.2	0.750
ZCT-TE-048	08	0.750	19.050	0.730	18.542	0.975	24.765	0.035	0.889	8	13.8	0.938
ZCT-TE-056	09	0.875	22.225	0.860	21.590	1.100	27.940	0.035	0.889	8	15.0	0.938
ZCT-TE-064	10	1.000	25.400	0.975	24.765	1.260	32.004	0.035	0.889	7	16.8	1.125
ZCT-TE-072	11	1.125	28.575	1.105	28.067	1.390	35.306	0.035	0.889	6	17.5	1.125
ZCT-TE-080	12	1.250	31.750	1.210	30.734	1.539	39.091	0.035	0.889	6	19.6	1.250
ZCT-TE-096	13	1.500	38.100	1.450	36.576	1.810	45.974	0.038	0.965	6	26	2.000



Convolutated: FEP

The tables below detail Zeus and AS81914 numbers, materials, and dimensions for our standard and extra flex FEP convolutated tubing. Custom sizes and configurations, lot-to-lot testing, and free samples available upon request.

FEP STANDARD FLEX CONVOLUTATED												
PART CALLOUT	#ID	MAX. ID		MIN. ID		MAX. OD		MAX. WALL THICKNESS		CONV. PER INCH ± 1	WEIGHT (LBS) PER FT ³ MAX.	MIN. BEND RADIUS in.
		in.	mm	in.	mm	in.	mm	in.	mm			
ZCT-FS-012	01	0.188	4.775	0.181	4.597	0.320	8.128	0.018	0.457	8	1.5	0.500
ZCT-FS-018	02	0.281	7.137	0.273	6.934	0.414	10.516	0.018	0.457	8	1.7	0.750
ZCT-FS-020	03	0.312	7.925	0.306	7.772	0.450	11.430	0.018	0.457	8	1.9	0.750
ZCT-FS-024	04	0.375	9.525	0.364	9.246	0.510	12.954	0.018	0.457	8	2.2	0.875
ZCT-FS-028	05	0.437	11.100	0.427	10.846	0.571	14.503	0.018	0.457	8	3.1	0.875
ZCT-FS-032	06	0.500	12.700	0.485	12.319	0.650	16.510	0.023	0.584	7	4.0	1.250
ZCT-FS-040	07	0.625	15.875	0.608	15.443	0.770	19.558	0.023	0.584	7	4.8	1.500
ZCT-FS-048	08	0.750	19.050	0.730	18.542	0.930	23.622	0.023	0.584	6	6.1	1.750
ZCT-FS-056	09	0.875	22.225	0.860	21.844	1.073	27.254	0.023	0.584	5	7.0	2.000
ZCT-FS-064	10	1.000	25.400	0.975	24.765	1.226	31.140	0.023	0.584	5	8.5	2.370
ZCT-FS-072	11	1.125	28.575	1.105	28.067	1.390	35.306	0.023	0.584	5	9.3	2.370
ZCT-FS-080	12	1.250	31.750	1.210	30.734	1.539	39.091	0.023	0.584	4	10.9	2.750
ZCT-FS-096	13	1.500	38.100	1.437	36.500	1.832	36.500	0.023	0.584	4	12.6	3.375

FEP EXTRA FLEX CONVOLUTATED												
PART CALLOUT	#ID	MAX. ID		MIN. ID		MAX. OD		MAX. WALL THICKNESS		CONV. PER INCH ± 1	WEIGHT (LBS) PER FT ³ MAX.	MIN. BEND RADIUS in.
		in.	mm	in.	mm	in.	mm	in.	mm			
ZCT-FE-012	01	0.188	4.775	0.181	4.597	0.320	8.128	0.018	0.457	10.0	1.7	0.310
ZCT-FE-018	02	0.281	7.137	0.273	6.934	0.414	10.516	0.018	0.457	10.0	2.0	0.410
ZCT-FE-020	03	0.312	7.925	0.306	7.772	0.450	11.430	0.018	0.457	10.0	2.1	0.410
ZCT-FE-024	04	0.375	9.525	0.359	9.119	0.510	12.954	0.018	0.457	10.0	2.5	0.500
ZCT-FE-028	05	0.437	11.100	0.427	10.846	0.571	14.503	0.018	0.457	10.0	3.9	0.500
ZCT-FE-032	06	0.500	12.700	0.480	12.192	0.650	16.510	0.023	0.584	9.0	4.6	0.750
ZCT-FE-040	07	0.625	15.875	0.603	15.316	0.770	19.558	0.023	0.584	9.0	5.5	0.750
ZCT-FE-048	08	0.750	19.050	0.725	18.415	0.930	23.622	0.023	0.584	8.0	6.9	0.930
ZCT-FE-056	09	0.875	22.225	0.860	21.844	1.073	27.254	0.023	0.584	7.0	8.9	1.250
ZCT-FE-064	10	1.000	25.400	0.970	24.638	1.226	31.140	0.023	0.584	7.0	9.5	1.250
ZCT-FE-072	11	1.125	28.575	1.105	28.067	1.390	35.306	0.023	0.584	7.0	10.5	1.430
ZCT-FE-080	12	1.250	31.750	1.205	30.607	1.539	39.091	0.023	0.584	6.5	11.2	1.430
ZCT-FE-096	13	1.500	38.100	1.437	36.500	1.832	36.500	0.023	0.584	5.5	12.0	1.750



ConvolutEd: ETFE

The tables below detail Zeus and AS81914 numbers, materials, and dimensions for our standard and extra flex ETFE convoluted tubing. Custom sizes and configurations, lot-to-lot testing, and free samples available upon request.

ETFE STANDARD FLEX CONVOLUTED

PART CALLOUT	#ID	MAX. ID		MIN. ID		MAX. OD		MAX. WALL THICKNESS		CONV. PER INCH	WEIGHT (LBS) PER FT ³ MAX.	MIN. BEND RADIUS
		in.	mm	in.	mm	in.	mm	in.	mm			
ZCT-ES-012	01	0.188	4.775	0.181	4.597	0.320	8.128	0.018	0.457	± 1	1.2	0.500
ZCT-ES-018	02	0.281	7.137	0.273	6.934	0.414	10.516	0.018	0.457	8	1.4	0.750
ZCT-ES-020	03	0.312	7.925	0.306	7.772	0.450	11.430	0.018	0.457	8	1.5	0.750
ZCT-ES-024	04	0.375	9.525	0.364	9.246	0.510	12.954	0.018	0.457	8	1.8	0.880
ZCT-ES-028	05	0.437	11.100	0.427	10.846	0.571	14.503	0.018	0.457	8	2.5	0.880
ZCT-ES-032	06	0.500	12.700	0.485	12.319	0.650	16.510	0.023	0.584	7	3.2	1.250
ZCT-ES-040	07	0.625	15.875	0.608	15.443	0.770	19.558	0.023	0.584	7	3.9	1.500
ZCT-ES-048	08	0.750	19.050	0.730	18.542	0.930	23.622	0.023	0.584	6	4.9	1.750
ZCT-ES-056	09	0.875	22.225	0.860	21.844	1.073	27.254	0.023	0.584	5	5.6	2.000
ZCT-ES-064	10	1.000	25.400	0.975	24.765	1.226	31.140	0.023	0.584	5	6.8	2.370
ZCT-ES-072	11	1.125	28.575	1.105	28.067	1.390	35.306	0.023	0.584	5	7.5	2.370
ZCT-ES-080	12	1.250	31.750	1.210	30.734	1.539	39.091	0.023	0.584	4	8.8	2.750
ZCT-ES-096	13	1.500	38.100	1.437	36.500	1.832	46.533	0.023	0.584	4	10.2	3.380

ETFE EXTRA FLEX CONVOLUTED

PART CALLOUT	#ID	MAX. ID		MIN. ID		MAX. OD		MAX. WALL THICKNESS		CONV. PER INCH	WEIGHT (LBS) PER FT ³ MAX.	MIN. BEND RADIUS
		in.	mm	in.	mm	in.	mm	in.	mm			
ZCT-EE-012	01	0.188	4.775	0.181	4.597	0.320	8.128	0.018	0.457	± 1	1.4	0.310
ZCT-EE-018	02	0.281	7.137	0.273	6.934	0.414	10.516	0.018	0.457	10	1.6	0.410
ZCT-EE-020	03	0.312	7.925	0.306	7.772	0.450	11.430	0.018	0.457	10	1.7	0.410
ZCT-EE-024	04	0.375	9.525	0.359	9.119	0.510	12.954	0.018	0.457	10	2.0	0.500
ZCT-EE-028	05	0.437	11.100	0.427	10.846	0.571	14.503	0.018	0.457	10	3.1	0.500
ZCT-EE-032	06	0.500	12.700	0.480	12.192	0.650	16.510	0.023	0.584	9	3.7	0.750
ZCT-EE-040	07	0.625	15.875	0.603	15.316	0.770	19.558	0.023	0.584	9	4.4	0.750
ZCT-EE-048	08	0.750	19.050	0.725	18.415	0.930	23.622	0.023	0.584	8	5.6	0.930
ZCT-EE-056	09	0.875	22.225	0.860	21.844	1.073	27.254	0.023	0.584	7	7.1	1.250
ZCT-EE-064	10	1.000	25.400	0.970	24.638	1.226	31.140	0.023	0.584	7	7.6	1.250
ZCT-EE-072	11	1.125	28.575	1.105	28.067	1.390	35.306	0.023	0.584	7	8.4	1.430
ZCT-EE-080	12	1.250	31.750	1.205	30.607	1.539	39.091	0.023	0.584	6	9.0	1.430
ZCT-EE-096	13	1.500	38.100	1.437	36.500	1.832	46.533	0.023	0.584	5	9.6	1.750

