

# American Wire Gauge (AWG) Tubing

PTFE, FEP, PFA, and ETFE Tubing

## Overview-

As the world's leader in polymer extrusions, Zeus provides advanced extruded tubing for various industries, including medical, aerospace, electrical, fiber optics, oil and gas, and more. From lubricity and flexibility to mechanical strength, chemical resistance, and more, our tubing products are an ideal choice for a wide variety of applications.

Zeus offers standard American Wire Gauge (AWG) sizing in various high-performance resins, including PTFE, FEP, PFA, and ETFE. Our AWG tubing products are available in an extensive range of sizes and wall thicknesses to meet the needs of multiple industry applications.

Our AWG tubing is supplied in natural color unless otherwise specified. Custom colors are available on request.



*Request a sample of our AWG tubing by contacting a sales representative today.*

## APPLICATIONS

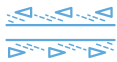
- Aerospace
- Energy
- Oil & Gas
- Fiber Optics
- Fluid Management
- Medical

## CAPABILITIES AND SIZING

- Available resins include PTFE, FEP, PFA, and ETFE
- AWG sizes 0 - 32
- Standard, Thin, and Lightweight walls
- Tolerances low as  $\pm 0.002"$  ( $\pm 0.05$  mm)

## KEY PROPERTIES

- Resin-dependent temperatures up to 500 °F / 260 °C
- Chemical resistance
- Lubricity, optical clarity, and flexibility vary, depending on resin



COEFFICIENT OF FRICTION



CHEMICAL RESISTANCE



CONTINUOUS SERVICE TEMP



# American Wire Gauge (AWG) Tubing

| DIMENSIONS (INCHES) |             |             |             |                 |             |             |             |                  |             |
|---------------------|-------------|-------------|-------------|-----------------|-------------|-------------|-------------|------------------|-------------|
| INSIDE DIAMETER     |             |             |             | WALL DIMENSIONS |             |             |             |                  |             |
| AWG SIZE            |             |             |             | STANDARD WALL   |             | THIN WALL   |             | LIGHTWEIGHT WALL |             |
|                     | MIN.<br>in. | NOM.<br>in. | MAX.<br>in. | NOM.<br>in.     | TOL.<br>in. | NOM.<br>in. | TOL.<br>in. | NOM.<br>in.      | TOL.<br>in. |
| 32                  | 0.008       | 0.010       | 0.012       | 0.005           | ±0.002      | 0.005       | ±0.002      | -                | -           |
| 30                  | 0.010       | 0.012       | 0.015       | 0.009           | ±0.002      | 0.009       | ±0.002      | 0.006            | ±0.002      |
| 28                  | 0.013       | 0.015       | 0.018       | 0.009           | ±0.002      | 0.009       | ±0.002      | 0.006            | ±0.002      |
| 26                  | 0.016       | 0.018       | 0.021       | 0.009           | ±0.002      | 0.009       | ±0.002      | 0.006            | ±0.002      |
| 24                  | 0.020       | 0.022       | 0.026       | 0.012           | ±0.002      | 0.010       | ±0.003      | 0.006            | ±0.002      |
| 23                  | 0.023       | 0.026       | 0.029       | 0.012           | ±0.002      | 0.010       | ±0.003      | 0.006            | ±0.002      |
| 22                  | 0.025       | 0.028       | 0.032       | 0.012           | ±0.002      | 0.010       | ±0.003      | 0.006            | ±0.002      |
| 21                  | 0.029       | 0.032       | 0.035       | 0.012           | ±0.002      | 0.010       | ±0.003      | 0.006            | ±0.002      |
| 20                  | 0.032       | 0.034       | 0.038       | 0.016           | ±0.003      | 0.012       | ±0.003      | 0.006            | ±0.002      |
| 19                  | 0.036       | 0.038       | 0.042       | 0.016           | ±0.003      | 0.012       | ±0.003      | 0.006            | ±0.002      |
| 18                  | 0.040       | 0.042       | 0.046       | 0.016           | ±0.003      | 0.012       | ±0.003      | 0.006            | ±0.002      |
| 17                  | 0.045       | 0.047       | 0.052       | 0.016           | ±0.003      | 0.012       | ±0.003      | 0.006            | ±0.002      |
| 16                  | 0.051       | 0.053       | 0.058       | 0.016           | ±0.003      | 0.012       | ±0.003      | 0.006            | ±0.002      |
| 15                  | 0.057       | 0.059       | 0.065       | 0.016           | ±0.003      | 0.012       | ±0.003      | 0.006            | ±0.002      |
| 14                  | 0.064       | 0.066       | 0.072       | 0.016           | ±0.003      | 0.012       | ±0.003      | 0.008            | ±0.002      |
| 13                  | 0.072       | 0.076       | 0.081       | 0.016           | ±0.003      | 0.012       | ±0.003      | 0.008            | ±0.002      |
| 12                  | 0.081       | 0.085       | 0.091       | 0.016           | ±0.003      | 0.012       | ±0.003      | 0.008            | ±0.002      |
| 11                  | 0.091       | 0.095       | 0.101       | 0.016           | ±0.003      | 0.012       | ±0.003      | 0.008            | ±0.002      |
| 10                  | 0.102       | 0.106       | 0.112       | 0.016           | ±0.003      | 0.012       | ±0.003      | 0.008            | ±0.002      |
| 9                   | 0.114       | 0.118       | 0.124       | 0.020           | ±0.004      | 0.015       | ±0.003      | 0.008            | ±0.002      |
| 8                   | 0.129       | 0.133       | 0.139       | 0.020           | ±0.004      | 0.015       | ±0.003      | 0.008            | ±0.002      |
| 7                   | 0.144       | 0.148       | 0.155       | 0.020           | ±0.004      | 0.015       | ±0.003      | 0.008            | ±0.002      |
| 6                   | 0.162       | 0.166       | 0.174       | 0.020           | ±0.004      | 0.015       | ±0.003      | 0.010            | ±0.003      |
| 5                   | 0.182       | 0.186       | 0.195       | 0.020           | ±0.004      | 0.015       | ±0.003      | 0.010            | ±0.003      |
| 4                   | 0.204       | 0.208       | 0.218       | 0.020           | ±0.004      | 0.015       | ±0.003      | 0.010            | ±0.003      |
| 3                   | 0.229       | 0.234       | 0.244       | 0.020           | ±0.004      | 0.015       | ±0.003      | 0.010            | ±0.003      |
| 2                   | 0.258       | 0.263       | 0.273       | 0.020           | ±0.004      | 0.015       | ±0.003      | 0.010            | ±0.003      |
| 1                   | 0.289       | 0.294       | 0.305       | 0.020           | ±0.004      | 0.015       | ±0.003      | 0.010            | ±0.003      |
| 0                   | 0.325       | 0.330       | 0.342       | 0.020           | ±0.004      | 0.015       | ±0.003      | 0.012            | ±0.003      |



# American Wire Gauge (AWG) Tubing

| DIMENSIONS (mm) |            |            |            |                 |            |            |            |                  |            |
|-----------------|------------|------------|------------|-----------------|------------|------------|------------|------------------|------------|
| INSIDE DIAMETER |            |            |            | WALL DIMENSIONS |            |            |            |                  |            |
| AWG SIZE        |            |            |            | STANDARD WALL   |            | THIN WALL  |            | LIGHTWEIGHT WALL |            |
|                 | MIN.<br>mm | NOM.<br>mm | MAX.<br>mm | NOM.<br>mm      | TOL.<br>mm | NOM.<br>mm | TOL.<br>mm | NOM.<br>mm       | TOL.<br>mm |
| 32              | 0.20       | 0.25       | 0.30       | 0.13            | ±0.05      | 0.13       | ±0.05      | -                | -          |
| 30              | 0.25       | 0.30       | 0.38       | 0.23            | ±0.05      | 0.23       | ±0.05      | 0.15             | ±0.05      |
| 28              | 0.33       | 0.38       | 0.46       | 0.23            | ±0.05      | 0.23       | ±0.05      | 0.15             | ±0.05      |
| 26              | 0.41       | 0.46       | 0.53       | 0.23            | ±0.05      | 0.23       | ±0.05      | 0.15             | ±0.05      |
| 24              | 0.51       | 0.56       | 0.66       | 0.30            | ±0.05      | 0.25       | ±0.08      | 0.15             | ±0.05      |
| 23              | 0.58       | 0.66       | 0.74       | 0.30            | ±0.05      | 0.25       | ±0.08      | 0.15             | ±0.05      |
| 22              | 0.64       | 0.71       | 0.81       | 0.30            | ±0.05      | 0.25       | ±0.08      | 0.15             | ±0.05      |
| 21              | 0.74       | 0.81       | 0.89       | 0.30            | ±0.05      | 0.25       | ±0.08      | 0.15             | ±0.05      |
| 20              | 0.81       | 0.86       | 0.97       | 0.41            | ±0.08      | 0.30       | ±0.08      | 0.15             | ±0.05      |
| 19              | 0.91       | 0.97       | 1.07       | 0.41            | ±0.08      | 0.30       | ±0.08      | 0.15             | ±0.05      |
| 18              | 1.02       | 1.07       | 1.17       | 0.41            | ±0.08      | 0.30       | ±0.08      | 0.15             | ±0.05      |
| 17              | 1.14       | 1.19       | 1.32       | 0.41            | ±0.08      | 0.30       | ±0.08      | 0.15             | ±0.05      |
| 16              | 1.30       | 1.35       | 1.47       | 0.41            | ±0.08      | 0.30       | ±0.08      | 0.15             | ±0.05      |
| 15              | 1.45       | 1.50       | 1.65       | 0.41            | ±0.08      | 0.30       | ±0.08      | 0.15             | ±0.05      |
| 14              | 1.63       | 1.68       | 1.83       | 0.41            | ±0.08      | 0.30       | ±0.08      | 0.20             | ±0.05      |
| 13              | 1.83       | 1.93       | 2.06       | 0.41            | ±0.08      | 0.30       | ±0.08      | 0.20             | ±0.05      |
| 12              | 2.06       | 2.16       | 2.31       | 0.41            | ±0.08      | 0.30       | ±0.08      | 0.20             | ±0.05      |
| 11              | 2.31       | 2.41       | 2.57       | 0.41            | ±0.08      | 0.30       | ±0.08      | 0.20             | ±0.05      |
| 10              | 2.59       | 2.69       | 2.84       | 0.41            | ±0.08      | 0.30       | ±0.08      | 0.20             | ±0.05      |
| 9               | 2.90       | 3.00       | 3.15       | 0.51            | ±0.10      | 0.38       | ±0.08      | 0.20             | ±0.05      |
| 8               | 3.28       | 3.38       | 3.53       | 0.51            | ±0.10      | 0.38       | ±0.08      | 0.20             | ±0.05      |
| 7               | 3.66       | 3.76       | 3.94       | 0.51            | ±0.10      | 0.38       | ±0.08      | 0.20             | ±0.05      |
| 6               | 4.11       | 4.22       | 4.42       | 0.51            | ±0.10      | 0.38       | ±0.08      | 0.25             | ±0.08      |
| 5               | 4.62       | 4.72       | 4.95       | 0.51            | ±0.10      | 0.38       | ±0.08      | 0.25             | ±0.08      |
| 4               | 5.18       | 5.28       | 5.54       | 0.51            | ±0.10      | 0.38       | ±0.08      | 0.25             | ±0.08      |
| 3               | 5.82       | 5.94       | 6.20       | 0.51            | ±0.10      | 0.38       | ±0.08      | 0.25             | ±0.08      |
| 2               | 6.55       | 6.68       | 6.93       | 0.51            | ±0.10      | 0.38       | ±0.08      | 0.25             | ±0.08      |
| 1               | 7.34       | 7.47       | 7.75       | 0.51            | ±0.10      | 0.38       | ±0.08      | 0.25             | ±0.08      |
| 0               | 8.26       | 8.38       | 8.69       | 0.51            | ±0.10      | 0.38       | ±0.08      | 0.30             | ±0.08      |

