

## M22759 wire

**M22759 (SAE AS22759)** wires are high-performance, medium and high-temperature hookup wires with extruded PTFE or ETFE, or PTFE/polyimide tape insulators, and stranded conductors.

These wires are designed for severe-environment aerospace applications, such as engine controls and SWAMP areas. Some types are available with highly abrasion-resistant insulation and / or high-strength conductors for maximum performance under mechanical stresses.

Wire types with PTFE tape insulation are available with our unique **Seamless Wrap** PTFE tape insulation (see page 54 for details and part numbers).

### Construction characteristics—M22759 wires

| M22759 Slant Sheet | Insulation Material                                     | Conductor Plating | Temperature Rating | Voltage Rating | Page |
|--------------------|---|-------------------|--------------------|----------------|------|
| MIL-W-22759/5      | Extruded mineral-filled PTFE*                           | Silver            | 200                | 600            | 37   |
| MIL-W-22759/6      | Extruded mineral-filled PTFE*                           | Nickel            | 260                | 600            | 37   |
| MIL-W-22759/7      | Extruded mineral-filled PTFE (light weight)*            | Silver            | 200                | 600            | 38   |
| MIL-W-22759/8      | Extruded mineral-filled PTFE (light weight)*            | Nickel            | 260                | 600            | 38   |
| MIL-W-22759/9      | Extruded PTFE   | Silver            | 200                | 1000           | 39   |
| MIL-W-22759/10     | Extruded PTFE   | Nickel            | 260                | 1000           | 39   |
| MIL-W-22759/11     | Extruded PTFE (medium weight)                           | Silver            | 200                | 600            | 40   |
| MIL-W-22759/12     | Extruded PTFE (medium weight)                           | Nickel            | 260                | 600            | 40   |
| MIL-W-22759/16     | Extruded ETFE   | Tin               | 150                | 600            | 41   |
| MIL-W-22759/17     | Extruded ETFE   | Silver            | 150                | 600            | 41   |
| MIL-W-22759/18     | Extruded ETFE (light weight)                            | Tin               | 150                | 600            | 42   |
| MIL-W-22759/19     | Extruded ETFE (light weight)                            | Silver            | 150                | 600            | 42   |
| MIL-W-22759/20     | Extruded PTFE   | Silver***         | 200                | 1000           | 43   |
| MIL-W-22759/21     | Extruded PTFE   | Nickel***         | 260                | 1000           | 43   |
| MIL-W-22759/22     | Extruded PTFE (light weight)                            | Silver***         | 200                | 600            | 44   |
| MIL-W-22759/23     | Extruded PTFE (light weight)                            | Nickel***         | 260                | 600            | 44   |
| MIL-W-22759/28     | Extruded PTFE with polyimide hardcoat*                  | Silver            | 200                | 600            | 45   |
| MIL-W-22759/29     | Extruded PTFE with polyimide hardcoat*                  | Nickel            | 260                | 600            | 45   |
| MIL-W-22759/30     | Extruded PTFE with polyimide hardcoat*                  | Silver***         | 200                | 600            | 46   |
| MIL-W-22759/31     | Extruded PTFE with polyimide hardcoat*                  | Nickel***         | 260                | 600            | 46   |
| MIL-DTL-22759/80   | PTFE/polyimide/PTFE tape and PTFE tape (light weight)** | Tin               | 150                | 600            | 47   |
| MIL-DTL-22759/81   | PTFE/polyimide/PTFE tape and PTFE tape (light weight)** | Silver***         | 200                | 600            | 47   |
| MIL-DTL-22759/82   | PTFE/polyimide/PTFE tape and PTFE tape (light weight)** | Nickel***         | 260                | 600            | 47   |
| MIL-DTL-22759/83   | PTFE/polyimide/PTFE tape and PTFE tape**                | Silver            | 200                | 600            | 48   |
| MIL-DTL-22759/84   | PTFE/polyimide/PTFE tape and PTFE tape**                | Nickel            | 260                | 600            | 48   |
| MIL-DTL-22759/85   | PTFE/polyimide/PTFE tape and PTFE tape**                | Tin               | 150                | 600            | 48   |
| MIL-DTL-22759/86   | PTFE/polyimide/PTFE tape and PTFE tape**                | Silver            | 200                | 600            | 49   |
| MIL-DTL-22759/87   | PTFE/polyimide/PTFE tape and PTFE tape**                | Nickel            | 260                | 600            | 50   |
| MIL-DTL-22759/88   | PTFE/polyimide/PTFE tape and PTFE tape**                | Tin               | 150                | 600            | 51   |
| MIL-DTL-22759/89   | PTFE/polyimide/PTFE tape and PTFE tape**                | Silver***         | 200                | 600            | 52   |
| MIL-DTL-22759/90   | PTFE/polyimide/PTFE tape and PTFE tape**                | Nickel***         | 260                | 600            | 52   |
| MIL-DTL-22759/91   | PTFE/polyimide/PTFE tape and PTFE tape (light weight)** | Silver            | 200                | 600            | 53   |
| MIL-DTL-22759/92   | PTFE/polyimide/PTFE tape and PTFE tape (light weight)** | Nickel            | 260                | 600            | 53   |

Temperature in °C. • \*High abrasion resistance. • \*\* Available with **Seamless Wrap** PTFE tape outer insulation.

\*\*\* High-strength and ultra-high-strength copper alloy conductors.

### M22759 color coding

Color coding for M22759 wires consists of up to four numbers added to designate wire color and up to three spiral stripe colors.

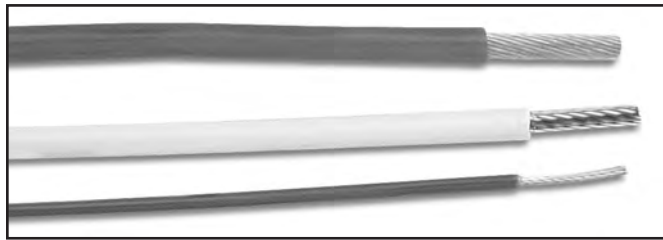
| Number | 0     | 1     | 2   | 3      | 4      | 5     | 6    | 7      | 8    | 9     |
|--------|-------|-------|-----|--------|--------|-------|------|--------|------|-------|
| Color  | Black | Brown | Red | Orange | Yellow | Green | Blue | Violet | Gray | White |

Example: M22759/8-**9045** is a white wire with black, yellow, and green stripes.

### MIL-DTL-22759 identification

M22759 wires are surface printed with the MIL part number and manufacturer's CAGE code (FSCM number).

## MIL-W-22759/5, /6 wire—mineral-filled PTFE insulation



### Construction Details

**Insulation:** Extruded PTFE with abrasion-resistant mineral fillers.

**Conductor:** /5: Silver-plated copper;  
/6: Nickel-plated copper.

**Colors:** Color coded to MIL-STD-104.

**Identification:** to M22759.

**MIL-W-22759/5 and /6** wires have mineral-filled PTFE insulation for high-temperature applications such as aircraft engines, SWAMP zones, and others where increased abrasion resistance is required.

For reduced-weight versions of these wires, see M22759/7 and /8 (following page).

### Performance:

**Voltage rating:** 600V.

**Temperature rating:** /5: -55 to 200° C  
/6: -55 to 260° C

### Dimensions, Resistance, and Weights—M22759/5 (silver-plated conductor)

| M22759 P/N    | AWG Size | Stranding | Conductor Diameter | Insulation Diameter |             | Weight      | Maximum Resistance | Thermax P/N   |
|---------------|----------|-----------|--------------------|---------------------|-------------|-------------|--------------------|---------------|
|               |          |           |                    | Minimum             | Maximum     |             |                    |               |
| M22759/5-8-*  | 8        | 133/29    | .162 (4.11)        | .241 (6.12)         | .255 (6.48) | 77.0 (115)  | .658 (2.16)        | 8-AF3XT-13329 |
| M22759/5-10-* | 10       | 37/26     | .108 (2.74)        | .172 (4.37)         | .186 (4.73) | 42.5 (63.3) | 1.19 (3.90)        | 10-AF3XT-3726 |
| M22759/5-12-* | 12       | 19/25     | .086 (2.18)        | .153 (3.89)         | .167 (4.24) | 30.9 (46.0) | 1.81 (5.94)        | 12-AF3XT-1925 |
| M22759/5-14-* | 14       | 19/27     | .067 (1.70)        | .136 (3.45)         | .150 (3.81) | 22.5 (33.5) | 2.88 (9.45)        | 14-AF3XT-1927 |
| M22759/5-16-* | 16       | 19/29     | .053 (1.35)        | .120 (3.05)         | .130 (3.30) | 16.6 (24.7) | 4.52 (14.8)        | 16-AF3XT-1929 |
| M22759/5-18-* | 18       | 19/30     | .047 (1.19)        | .105 (2.67)         | .115 (2.92) | 12.9 (19.2) | 5.79 (19.0)        | 18-AF3XT-1930 |
| M22759/5-20-* | 20       | 19/32     | .038 (.97)         | .090 (2.29)         | .100 (2.54) | 9.07 (13.6) | 9.19 (30.1)        | 20-AF3XT-1932 |
| M22759/5-22-* | 22       | 19/34     | .030 (.76)         | .080 (2.03)         | .090 (2.29) | 6.83 (10.1) | 15.1 (49.5)        | 22-AF3XT-1934 |
| M22759/5-24-* | 24       | 19/36     | .024 (.61)         | .070 (1.78)         | .080 (2.03) | 5.08 (7.60) | 24.3 (79.7)        | 24-AF3XT-1936 |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

All values are nominal unless otherwise indicated.

\* Add color coding per MIL-STD-104 (see page 36).

### Dimensions, Resistance, and Weights—M22759/6 (nickel-plated conductor)

| M22759 P/N    | AWG Size | Stranding | Conductor Diameter | Insulation Diameter |             | Weight      | Maximum Resistance | Thermax P/N    |
|---------------|----------|-----------|--------------------|---------------------|-------------|-------------|--------------------|----------------|
|               |          |           |                    | Minimum             | Maximum     |             |                    |                |
| M22759/6-8-*  | 8        | 133/29    | .163 (4.14)        | .241 (6.12)         | .255 (6.48) | 79.0 (118)  | .694 (2.28)        | 8-AF3XTN-13329 |
| M22759/6-10-* | 10       | 37/26     | .109 (2.77)        | .172 (4.37)         | .186 (4.73) | 43.5 (64.8) | 1.24 (4.07)        | 10-AF3XTN-3726 |
| M22759/6-12-* | 12       | 19/25     | .086 (2.18)        | .153 (3.89)         | .167 (4.24) | 31.9 (47.5) | 1.89 (6.20)        | 12-AF3XTN-1925 |
| M22759/6-14-* | 14       | 19/27     | .067 (1.70)        | .136 (3.45)         | .150 (3.81) | 23.3 (34.7) | 3.00 (9.84)        | 14-AF3XTN-1927 |
| M22759/6-16-* | 16       | 19/29     | .053 (1.35)        | .120 (3.05)         | .130 (3.30) | 16.9 (25.2) | 4.76 (15.6)        | 16-AF3XTN-1929 |
| M22759/6-18-* | 18       | 19/30     | .047 (1.19)        | .105 (2.67)         | .115 (2.92) | 13.1 (19.5) | 6.10 (20.0)        | 18-AF3XTN-1930 |
| M22759/6-20-* | 20       | 19/32     | .038 (.97)         | .090 (2.29)         | .100 (2.54) | 9.27 (13.9) | 9.77 (32.1)        | 20-AF3XTN-1932 |
| M22759/6-22-* | 22       | 19/34     | .030 (.76)         | .080 (2.03)         | .090 (2.29) | 6.98 (10.4) | 16.0 (52.5)        | 22-AF3XTN-1934 |
| M22759/6-24-* | 24       | 19/36     | .024 (.61)         | .070 (1.78)         | .080 (2.03) | 5.18 (7.70) | 25.9 (85.0)        | 24-AF3XTN-1936 |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

All values are nominal unless otherwise indicated.

\* Add color coding per MIL-STD-104 (see page 36).

## MIL-W-22759/7, /8 wire—mineral-filled PTFE insulation—medium wall

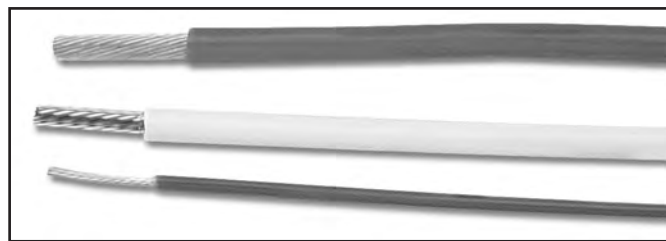
**MIL-W-22759/7 and /8** wires have reduced weight, mineral-filled PTFE insulation for high-temperature applications such as aircraft engines, SWAMP zones, and others where increased abrasion resistance is required. These wires are reduced-weight versions of MIL-W-22759/5 and /6.

See page 68 for a selection of M27500 shielded and jacketed cables incorporating these wires.

### Performance:

**Voltage rating:** 600V.

**Temperature rating:** /7: -55 to 200° C  
/8: -55 to 260° C



### Construction Details

**Insulation:** Extruded PTFE with abrasion-resistant mineral fillers.

**Conductor:** /7: Silver-plated copper;  
/8: Nickel-plated copper.

**Colors:** Color coded to MIL-STD-104.

**Identification:** to M22759.

### Dimensions, Resistance, and Weights—M22759/7 (silver-plated conductor)

| M22759<br>P/N | AWG<br>Size | Stranding | Conductor<br>Diameter | Insulation Diameter |             | Weight      | Maximum<br>Resistance | Thermax<br>P/N |
|---------------|-------------|-----------|-----------------------|---------------------|-------------|-------------|-----------------------|----------------|
|               |             |           |                       | Minimum             | Maximum     |             |                       |                |
| M22759/7-8-*  | 8           | 133/29    | .162 (4.11)           | .215 (5.46)         | .225 (5.72) | 67.6 (101)  | .658 (2.16)           | 8-AF2XT-13329  |
| M22759/7-10-* | 10          | 37/26     | .108 (2.74)           | .154 (3.91)         | .162 (4.11) | 37.4 (55.7) | 1.19 (3.90)           | 10-AF2XT-3726  |
| M22759/7-12-* | 12          | 19/25     | .086 (2.18)           | .131 (3.33)         | .137 (3.48) | 25.7 (38.3) | 1.81 (5.94)           | 12-AF2XT-1925  |
| M22759/7-14-* | 14          | 19/27     | .067 (1.70)           | .112 (2.84)         | .118 (3.00) | 17.3 (25.8) | 2.88 (9.45)           | 14-AF2XT-1927  |
| M22759/7-16-* | 16          | 19/29     | .053 (1.35)           | .099 (2.51)         | .105 (2.67) | 12.7 (18.9) | 4.52 (14.8)           | 16-AF2XT-1929  |
| M22759/7-18-* | 18          | 19/30     | .047 (1.19)           | .090 (2.29)         | .094 (2.39) | 10.2 (15.2) | 5.79 (19.0)           | 18-AF2XT-1930  |
| M22759/7-20-* | 20          | 19/32     | .038 (.97)            | .080 (2.03)         | .084 (2.13) | 7.30 (10.9) | 9.19 (30.1)           | 20-AF2XT-1932  |
| M22759/7-22-* | 22          | 19/34     | .030 (.76)            | .071 (1.80)         | .075 (1.91) | 5.00 (7.44) | 15.1 (49.5)           | 22-AF2XT-1934  |
| M22759/7-24-* | 24          | 19/36     | .024 (.61)            | .060 (1.52)         | .064 (1.63) | 3.70 (5.51) | 24.3 (79.7)           | 24-AF2XT-1936  |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

All values are nominal unless otherwise indicated.

\* Add color coding per MIL-STD-104 (see page 36).

### Dimensions, Resistance, and Weights—M22759/8 (nickel-plated conductor)

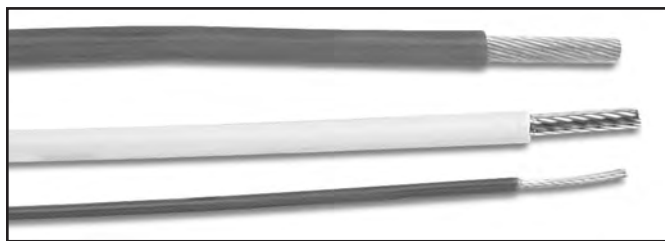
| M22759<br>P/N | AWG<br>Size | Stranding | Conductor<br>Diameter | Insulation Diameter |             | Weight      | Maximum<br>Resistance | Thermax<br>P/N |
|---------------|-------------|-----------|-----------------------|---------------------|-------------|-------------|-----------------------|----------------|
|               |             |           |                       | Minimum             | Maximum     |             |                       |                |
| M22759/8-8-*  | 8           | 133/29    | .163 (4.14)           | .215 (5.46)         | .225 (5.72) | 69.6 (104)  | .694 (2.28)           | 8-AF2XTN-13329 |
| M22759/8-10-* | 10          | 37/26     | .109 (2.77)           | .154 (3.91)         | .162 (4.11) | 38.4 (57.2) | 1.24 (4.07)           | 10-AF2XTN-3726 |
| M22759/8-12-* | 12          | 19/25     | .086 (2.18)           | .131 (3.33)         | .137 (3.48) | 28.7 (42.8) | 1.89 (6.20)           | 12-AF2XTN-1925 |
| M22759/8-14-* | 14          | 19/27     | .067 (1.70)           | .112 (2.84)         | .118 (3.00) | 18.1 (27.0) | 3.00 (9.84)           | 14-AF2XTN-1927 |
| M22759/8-16-* | 16          | 19/29     | .053 (1.35)           | .099 (2.51)         | .105 (2.67) | 13.0 (19.4) | 4.76 (15.6)           | 16-AF2XTN-1929 |
| M22759/8-18-* | 18          | 19/30     | .047 (1.19)           | .090 (2.29)         | .094 (2.39) | 10.4 (15.5) | 6.10 (20.0)           | 18-AF2XTN-1930 |
| M22759/8-20-* | 20          | 19/32     | .038 (.97)            | .080 (2.03)         | .084 (2.13) | 7.50 (11.2) | 9.77 (32.1)           | 20-AF2XTN-1932 |
| M22759/8-22-* | 22          | 19/34     | .030 (.76)            | .071 (1.80)         | .075 (1.91) | 5.15 (7.66) | 16.0 (52.5)           | 22-AF2XTN-1934 |
| M22759/8-24-* | 24          | 19/36     | .024 (.61)            | .060 (1.52)         | .064 (1.63) | 3.80 (5.66) | 25.9 (85.0)           | 24-AF2XTN-1936 |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

All values are nominal unless otherwise indicated.

\* Add color coding per MIL-STD-104 (see page 36).

## MIL-W-22759/9, /10 wire—extruded PTFE insulation



### Construction Details

**Insulation:** Extruded PTFE.

**Conductor:** /9: Silver-plated copper;  
/10: Nickel-plated copper.

**Colors:** Color coded to MIL-STD-104.

**Identification:** to M22759.

**MIL-W-22759/9 and /10** wires have extruded PTFE insulation for high-temperature applications where the additional abrasion resistance of mineral-filled PTFE insulation is not required. These wires are especially well-suited in applications where smoke emission, overload stability, and flammability are major concerns.

For versions of these wires with thinner-wall insulation and 600V voltage rating, see M22759/11 and /12 (following page).

### Performance:

**Voltage rating:** 1,000V.

**Temperature rating:** /9: -55 to 200° C  
/10: -55 to 260° C

### Dimensions, Resistance, and Weights—M22759/9 (silver-plated conductor)

| M22759 P/N    | AWG Size | Stranding | Conductor Diameter | Insulation Diameter |             | Weight      | Maximum Resistance | Thermax P/N |
|---------------|----------|-----------|--------------------|---------------------|-------------|-------------|--------------------|-------------|
|               |          |           |                    | Minimum             | Maximum     |             |                    |             |
| M22759/9-8-*  | 8        | 133/29    | .162 (4.11)        | .202 (5.13)         | .212 (5.38) | 65.4 (97.3) | .658 (2.16)        | 8-AXT-13329 |
| M22759/9-10-* | 10       | 37/26     | .108 (2.74)        | .137 (3.48)         | .145 (3.68) | 35.3 (52.5) | 1.19 (3.90)        | 10-AXT-3726 |
| M22759/9-12-* | 12       | 19/25     | .086 (2.18)        | .116 (2.95)         | .124 (3.15) | 23.3 (34.7) | 1.81 (5.94)        | 12-AXT-1925 |
| M22759/9-14-* | 14       | 19/27     | .067 (1.70)        | .097 (2.46)         | .103 (2.62) | 16.1 (24.0) | 2.88 (9.45)        | 14-AXT-1927 |
| M22759/9-16-* | 16       | 19/29     | .053 (1.35)        | .083 (2.11)         | .087 (2.21) | 10.6 (15.8) | 4.52 (14.8)        | 16-AXT-1929 |
| M22759/9-18-* | 18       | 19/30     | .047 (1.19)        | .076 (1.93)         | .080 (2.03) | 8.68 (12.9) | 5.79 (19.0)        | 18-AXT-1930 |
| M22759/9-20-* | 20       | 19/32     | .038 (.97)         | .066 (1.68)         | .070 (1.78) | 6.09 (9.06) | 9.19 (30.1)        | 20-AXT-1932 |
| M22759/9-22-* | 22       | 19/34     | .030 (.76)         | .058 (1.47)         | .062 (1.57) | 4.30 (6.40) | 15.1 (49.5)        | 22-AXT-1934 |
| M22759/9-24-* | 24       | 19/36     | .024 (.61)         | .051 (1.30)         | .055 (1.40) | 3.13 (4.66) | 24.3 (79.7)        | 24-AXT-1936 |
| M22759/9-26-* | 26       | 19/38     | .019 (.48)         | .046 (1.17)         | .050 (1.27) | 2.38 (3.54) | 38.4 (126)         | 26-AXT-1938 |
| M22759/9-28-* | 28       | 7/36      | .015 (.38)         | .041 (1.04)         | .045 (1.14) | 1.78 (2.65) | 63.8 (209)         | 28-AXT-736  |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

All values are nominal unless otherwise indicated.

\* Add color coding per MIL-STD-104 (see page 36).

### Dimensions, Resistance, and Weights—M22759/10 (nickel-plated conductor)

| M22759 P/N     | AWG Size | Stranding | Conductor Diameter | Insulation Diameter |             | Weight      | Maximum Resistance | Thermax P/N  |
|----------------|----------|-----------|--------------------|---------------------|-------------|-------------|--------------------|--------------|
|                |          |           |                    | Minimum             | Maximum     |             |                    |              |
| M22759/10-8-*  | 8        | 133/29    | .163 (4.14)        | .202 (5.13)         | .212 (5.38) | 66.4 (98.8) | .694 (2.28)        | 8-AXTN-13329 |
| M22759/10-10-* | 10       | 37/26     | .109 (2.77)        | .137 (3.48)         | .145 (3.68) | 35.9 (53.4) | 1.24 (4.07)        | 10-AXTN-3726 |
| M22759/10-12-* | 12       | 19/25     | .086 (2.18)        | .116 (2.95)         | .124 (3.15) | 23.4 (34.8) | 1.89 (6.20)        | 12-AXTN-1925 |
| M22759/10-14-* | 14       | 19/27     | .067 (1.70)        | .097 (2.46)         | .103 (2.62) | 16.2 (24.1) | 3.00 (9.84)        | 14-AXTN-1927 |
| M22759/10-16-* | 16       | 19/29     | .053 (1.35)        | .083 (2.11)         | .087 (2.21) | 10.8 (16.1) | 4.76 (15.6)        | 16-AXTN-1929 |
| M22759/10-18-* | 18       | 19/30     | .047 (1.19)        | .076 (1.93)         | .080 (2.03) | 8.78 (12.9) | 6.10 (20.0)        | 18-AXTN-1930 |
| M22759/10-20-* | 20       | 19/32     | .038 (.97)         | .066 (1.68)         | .070 (1.78) | 6.09 (9.06) | 9.77 (32.0)        | 20-AXTN-1932 |
| M22759/10-22-* | 22       | 19/34     | .030 (.76)         | .058 (1.47)         | .062 (1.57) | 4.30 (6.40) | 16.0 (52.5)        | 22-AXTN-1934 |
| M22759/10-24-* | 24       | 19/36     | .024 (.61)         | .051 (1.30)         | .055 (1.40) | 3.13 (4.66) | 25.9 (85.0)        | 24-AXTN-1936 |
| M22759/10-26-* | 26       | 19/38     | .019 (.48)         | .046 (1.17)         | .050 (1.27) | 2.38 (3.54) | 42.2 (138)         | 26-AXTN-1938 |
| M22759/10-28-* | 28       | 7/36      | .015 (.38)         | .041 (1.04)         | .045 (1.14) | 1.78 (2.65) | 67.9 (223)         | 28-AXTN-736  |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

All values are nominal unless otherwise indicated.

\* Add color coding per MIL-STD-104 (see page 36).

## MIL-W-22759/11, /12 wire—extruded PTFE insulation

**MIL-W-22759/11 and /12** wires have extruded PTFE insulation for high-temperature applications where the additional abrasion resistance of mineral-filled PTFE insulation is not required. These wires are especially well-suited in applications where smoke emission, overload stability, and flammability are major concerns.

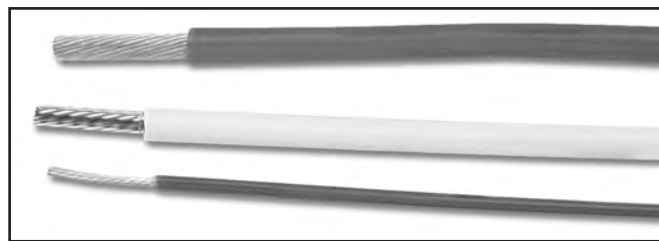
These wires are similar to MIL-W-22759/9 and /10 wires, but have a thinner-wall insulation and 600V voltage rating.

See page 69 for a selection of M27500 shielded and jacketed cables incorporating these wires.

### Performance:

**Voltage rating:** 600V.

**Temperature rating:** /11: -55 to 200° C  
/12: -55 to 260° C



### Construction Details

**Insulation:** Thin-wall extruded PTFE.

**Conductor:** /11: Silver-plated copper;  
/12: Nickel-plated copper.

**Colors:** Color coded to MIL-STD-104.

**Identification:** to M22759.

### Dimensions, Resistance, and Weights—M22759/11 (silver-plated conductor)

| M22759 P/N     | AWG Size | Stranding | Conductor Diameter | Insulation Diameter |             | Weight      | Maximum Resistance | Thermax P/N |
|----------------|----------|-----------|--------------------|---------------------|-------------|-------------|--------------------|-------------|
|                |          |           |                    | Minimum             | Maximum     |             |                    |             |
| M22759/11-8-*  | 8        | 133/29    | .162 (4.11)        | .198 (5.03)         | .206 (5.23) | 57.8 (86.1) | .658 (2.16)        | 8-ATE-13329 |
| M22759/11-10-* | 10       | 37/26     | .108 (2.74)        | .135 (3.43)         | .143 (3.63) | 34.9 (52.0) | 1.19 (3.90)        | 10-ATE-3726 |
| M22759/11-12-* | 12       | 19/25     | .086 (2.18)        | .108 (2.74)         | .114 (2.90) | 23.5 (35.0) | 1.81 (5.94)        | 12-ATE-1925 |
| M22759/11-14-* | 14       | 19/27     | .067 (1.70)        | .088 (2.24)         | .092 (2.34) | 14.7 (21.9) | 2.88 (9.45)        | 14-ATE-1927 |
| M22759/11-16-* | 16       | 19/29     | .053 (1.35)        | .073 (1.85)         | .077 (1.96) | 9.64 (14.3) | 4.52 (14.8)        | 16-ATE-1929 |
| M22759/11-18-* | 18       | 19/30     | .047 (1.19)        | .066 (1.68)         | .070 (1.78) | 7.58 (11.3) | 5.79 (19.0)        | 18-ATE-1930 |
| M22759/11-20-* | 20       | 19/32     | .038 (.97)         | .056 (1.42)         | .060 (1.52) | 5.15 (7.66) | 9.19 (30.1)        | 20-ATE-1932 |
| M22759/11-22-* | 22       | 19/34     | .030 (.76)         | .047 (1.19)         | .051 (1.30) | 3.44 (5.12) | 15.1 (49.5)        | 22-ATE-1934 |
| M22759/11-24-* | 24       | 19/36     | .024 (.61)         | .041 (1.04)         | .045 (1.14) | 2.44 (3.59) | 24.3 (79.7)        | 24-ATE-1936 |
| M22759/11-26-* | 26       | 19/38     | .019 (.48)         | .036 (.91)          | .040 (1.02) | 1.74 (2.59) | 38.4 (126)         | 26-ATE-1938 |
| M22759/11-28-* | 28       | 7/36      | .015 (.38)         | .031 (.79)          | .035 (.89)  | 1.22 (1.82) | 63.8 (209)         | 28-ATE-736  |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

All values are nominal unless otherwise indicated. \* Add color coding per MIL-STD-104 (see page 36).

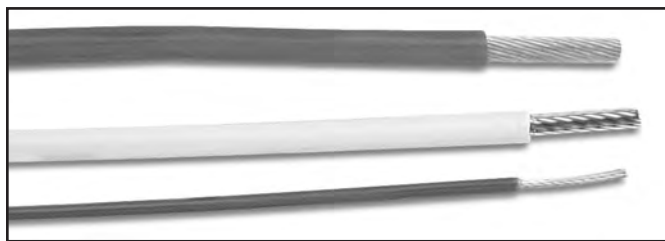
### Dimensions, Resistance, and Weights—M22759/12 (nickel-plated conductor)

| M22759 P/N     | AWG Size | Stranding | Conductor Diameter | Insulation Diameter |             | Weight      | Maximum Resistance | Thermax P/N  |
|----------------|----------|-----------|--------------------|---------------------|-------------|-------------|--------------------|--------------|
|                |          |           |                    | Minimum             | Maximum     |             |                    |              |
| M22759/12-8-*  | 8        | 133/29    | .163 (4.14)        | .200 (5.08)         | .208 (5.28) | 58.8 (87.5) | .694 (2.28)        | 8-ATEN-13329 |
| M22759/12-10-* | 10       | 37/26     | .109 (2.77)        | .135 (3.43)         | .143 (3.63) | 35.5 (52.8) | 1.24 (4.07)        | 10-ATEN-3726 |
| M22759/12-12-* | 12       | 19/25     | .086 (2.18)        | .108 (2.74)         | .114 (2.90) | 24.0 (35.7) | 1.89 (6.20)        | 12-ATEN-1925 |
| M22759/12-14-* | 14       | 19/27     | .067 (1.70)        | .088 (2.24)         | .092 (2.34) | 14.8 (22.0) | 3.00 (9.84)        | 14-ATEN-1927 |
| M22759/12-16-* | 16       | 19/29     | .053 (1.35)        | .073 (1.85)         | .077 (1.96) | 9.74 (14.5) | 4.76 (15.6)        | 16-ATEN-1929 |
| M22759/12-18-* | 18       | 19/30     | .047 (1.19)        | .066 (1.68)         | .070 (1.78) | 7.64 (11.4) | 6.10 (20.0)        | 18-ATEN-1930 |
| M22759/12-20-* | 20       | 19/32     | .038 (.97)         | .056 (1.42)         | .060 (1.52) | 5.19 (7.72) | 9.77 (32.0)        | 20-ATEN-1932 |
| M22759/12-22-* | 22       | 19/34     | .030 (.76)         | .047 (1.19)         | .051 (1.30) | 3.46 (5.15) | 16.0 (52.5)        | 22-ATEN-1934 |
| M22759/12-24-* | 24       | 19/36     | .024 (.61)         | .041 (1.04)         | .045 (1.14) | 2.42 (3.60) | 25.9 (85.0)        | 24-ATEN-1936 |
| M22759/12-26-* | 26       | 19/38     | .019 (.48)         | .036 (.914)         | .040 (1.02) | 1.75 (2.60) | 42.2 (138)         | 26-ATEN-1938 |
| M22759/12-28-* | 28       | 7/36      | .015 (.38)         | .031 (.79)          | .035 (.89)  | 1.23 (1.83) | 67.9 (223)         | 28-ATEN-736  |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

All values are nominal unless otherwise indicated. \* Add color coding per MIL-STD-104 (see page 36).

## MIL-W-22759/16, /17 wire—extruded ETFE insulation



### Construction Details

**Insulation:** Extruded ETFE.

**Conductor:** /16: Tin-plated copper;  
/17: Silver-plated, high strength copper alloy.

**Colors:** Color coded to MIL-STD-104.

**Identification:** to M22759.

**MIL-W-22759/16 and /17** wires have extruded ETFE insulation for aerospace and other applications requiring light weight, tight diameter tolerances, and enhanced mechanical toughness.

ETFE insulation also provides exceptional resistance to radiation and chemicals.

For versions of these wires with thinner-wall insulation for light weight, see M22759/18 and /19 (following page).

See page 70 for a selection of M27500 shielded and jacketed cables incorporating these wires.

### Performance:

**Voltage rating:** 600V.

**Temperature rating:** /16, /17: -55 to 150° C

### Dimensions, Resistance, and Weights—M22759/16 (tin-plated copper conductor)

| M22759 P/N     | AWG Size | Stranding | Conductor Diameter | Insulation Diameter |             | Weight      | Maximum Resistance | Thermax P/N      |
|----------------|----------|-----------|--------------------|---------------------|-------------|-------------|--------------------|------------------|
|                |          |           |                    | Minimum             | Maximum     |             |                    |                  |
| M22759/16-02-* | 2/0      | 1330/30   | .460 (11.7)        | .539 (13.7)         | .553 (14.0) | 485 (722)   | .091 (.299)        | 2/0-ACFZ-1330/30 |
| M22759/16-01-* | 1/0      | 1045/30   | .412 (10.5)        | .473 (12.0)         | .485 (12.3) | 380 (566)   | .126 (.380)        | 1/0-ACFZ-1045/30 |
| M22759/16-1-*  | 1        | 817/30    | .370 (9.40)        | .426 (10.8)         | .436 (11.1) | 293 (437)   | .149 (.489)        | 1-ACFZ-81730     |
| M22759/16-2-*  | 2        | 665/30    | .330 (8.38)        | .384 (9.75)         | .392 (9.96) | 231 (344)   | .183 (.600)        | 2-ACFZ-66530     |
| M22759/16-4-*  | 4        | 133/25    | .260 (6.60)        | .308 (7.82)         | .316 (8.03) | 152 (227)   | .280 (.916)        | 4-ACFZ-13325     |
| M22759/16-6-*  | 6        | 133/27    | .202 (5.13)        | .247 (6.27)         | .253 (6.43) | 96.9 (144)  | .445 (1.46)        | 6-ACFZ-13327     |
| M22759/16-8-*  | 8        | 133/29    | .162 (4.11)        | .196 (4.98)         | .202 (5.13) | 61.5 (91.5) | .701 (2.30)        | 8-ACFZ-13329     |
| M22759/16-10-* | 10       | 37/26     | .110 (2.79)        | .136 (3.45)         | .142 (3.61) | 34.0 (50.6) | 1.26 (4.13)        | 10-ACFZ-3726     |
| M22759/16-12-* | 12       | 37/28     | .086 (2.18)        | .111 (2.82)         | .117 (2.97) | 21.8 (32.4) | 2.02 (6.63)        | 12-ACFZ-3728     |
| M22759/16-14-* | 14       | 19/27     | .067 (1.70)        | .091 (2.31)         | .095 (2.41) | 14.5 (21.6) | 3.06 (10.0)        | 14-ACFZ-1927     |
| M22759/16-16-* | 16       | 19/29     | .053 (1.35)        | .077 (1.96)         | .081 (2.06) | 9.68 (14.4) | 4.81 (15.8)        | 16-ACFZ-1929     |
| M22759/16-18-* | 18       | 19/30     | .048 (1.22)        | .069 (1.75)         | .073 (1.85) | 7.65 (11.4) | 6.23 (20.4)        | 18-ACFZ-1930     |
| M22759/16-20-* | 20       | 19/32     | .038 (.97)         | .058 (1.47)         | .062 (1.57) | 5.18 (7.71) | 9.88 (32.4)        | 20-ACFZ-1932     |
| M22759/16-22-* | 22       | 19/34     | .030 (.76)         | .050 (1.27)         | .054 (1.37) | 3.52 (5.24) | 16.2 (53.1)        | 22-ACFZ-1934     |
| M22759/16-24-* | 24       | 19/36     | .024 (.61)         | .043 (1.09)         | .047 (1.19) | 2.45 (3.65) | 26.2 (85.9)        | 24-ACFZ-1936     |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

All values are nominal unless otherwise indicated.

\* Add color coding per MIL-STD-104 (see page 36).

### Dimensions, Resistance, and Weights—M22759/17 (silver-plated copper alloy conductor)

| M22759 P/N     | AWG Size | Stranding | Conductor Diameter | Insulation Diameter |             | Weight      | Maximum Resistance | Break Strength | Thermax P/N   |
|----------------|----------|-----------|--------------------|---------------------|-------------|-------------|--------------------|----------------|---------------|
|                |          |           |                    | Minimum             | Maximum     |             |                    |                |               |
| M22759/17-20-* | 20       | 19/32     | .038 (.97)         | .058 (1.47)         | .062 (1.57) | 4.96 (7.38) | 10.7 (35.1)        | 58.1 (26.4)    | 20-ACFTF-1932 |
| M22759/17-22-* | 22       | 19/34     | .030 (.76)         | .050 (1.27)         | .054 (1.37) | 3.40 (5.06) | 17.5 (57.4)        | 35.8 (16.2)    | 22-ACFTF-1934 |
| M22759/17-24-* | 24       | 19/36     | .024 (.61)         | .043 (1.09)         | .047 (1.19) | 2.32 (3.45) | 28.4 (93.2)        | 22.4 (10.2)    | 24-ACFTF-1936 |
| M22759/17-26-* | 26       | 19/38     | .019 (.48)         | .038 (.97)          | .042 (1.07) | 1.67 (2.49) | 44.8 (147)         | 14.2 (6.44)    | 26-ACFTF-1938 |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

Break strength in pounds (Kg) minimum.

All values are nominal unless otherwise indicated.

\* Add color coding per MIL-STD-104 (see page 36).

## MIL-W-22759/18, /19 wire—extruded thin-wall ETFE insulation

**MIL-W-22759/18 and /19** wires have thin-wall extruded ETFE insulation for aerospace and other applications requiring light weight, tight diameter tolerances, and enhanced mechanical toughness.

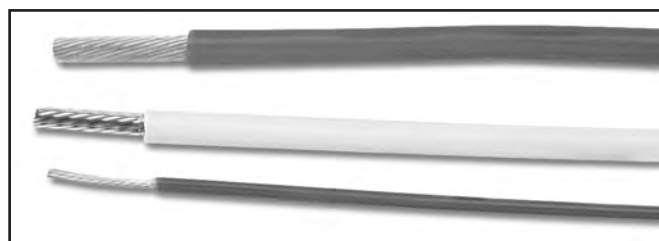
ETFE insulation also provides exceptional resistance to radiation and chemicals.

See page 71 for a selection of M27500 shielded and jacketed cables incorporating these wires.

### Performance:

**Voltage rating:** 600V.

**Temperature rating:** /18, /19: -55 to 150° C



### Construction Details

**Insulation:** thin-wall extruded ETFE.

**Conductor:** /18: Tin-plated copper;  
/19: Silver-plated, high strength copper alloy.

**Colors:** Color coded to MIL-STD-104.

**Identification:** to M22759.

### Dimensions, Resistance, and Weights—M22759/18 (tin-plated copper conductor)

| M22759 P/N     | AWG Size | Stranding | Conductor Diameter | Insulation Diameter |             | Weight      | Maximum Resistance | Thermax P/N   |
|----------------|----------|-----------|--------------------|---------------------|-------------|-------------|--------------------|---------------|
|                |          |           |                    | Minimum             | Maximum     |             |                    |               |
| M22759/18-10-* | 10       | 37/26     | .110 (2.79)        | .131 (3.33)         | .137 (3.48) | 33.1 (49.3) | 1.26 (4.13)        | 10-AMCFZ-3726 |
| M22759/18-12-* | 12       | 37/28     | .086 (2.18)        | .104 (2.64)         | .110 (2.80) | 21.0 (31.3) | 2.02 (6.63)        | 12-AMCFZ-3728 |
| M22759/18-14-* | 14       | 19/27     | .067 (1.70)        | .083 (2.11)         | .087 (2.21) | 13.7 (20.4) | 3.06 (10.0)        | 14-AMCFZ-1927 |
| M22759/18-16-* | 16       | 19/29     | .053 (1.35)        | .068 (1.73)         | .072 (1.83) | 8.93 (13.3) | 4.81 (15.8)        | 16-AMCFZ-1929 |
| M22759/18-18-* | 18       | 19/30     | .047 (1.19)        | .059 (1.50)         | .063 (1.60) | 6.89 (10.3) | 6.23 (20.4)        | 18-AMCFZ-1930 |
| M22759/18-20-* | 20       | 19/32     | .038 (.97)         | .049 (1.24)         | .053 (1.35) | 4.60 (6.85) | 9.88 (32.4)        | 20-AMCFZ-1932 |
| M22759/18-22-* | 22       | 19/34     | .030 (.76)         | .041 (1.04)         | .045 (1.14) | 3.04 (4.52) | 16.2 (53.1)        | 22-AMCFZ-1934 |
| M22759/18-24-* | 24       | 19/36     | .024 (.61)         | .034 (.86)          | .038 (.97)  | 2.02 (3.01) | 26.2 (85.9)        | 24-AMCFZ-1936 |
| M22759/18-26-* | 26       | 19/38     | .019 (.48)         | .030 (.76)          | .034 (.86)  | 1.45 (2.26) | 41.3 (135)         | 26-AMCFZ-1938 |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

All values are nominal unless otherwise indicated.

\* Add color coding per MIL-STD-104 (see page 36).

### Dimensions, Resistance, and Weights—M22759/19 (silver-plated copper alloy conductor)

| M22759 P/N     | AWG Size | Stranding | Conductor Diameter | Insulation Diameter |             | Weight      | Maximum Resistance | Break Strength | Thermax P/N    |
|----------------|----------|-----------|--------------------|---------------------|-------------|-------------|--------------------|----------------|----------------|
|                |          |           |                    | Minimum             | Maximum     |             |                    |                |                |
| M22759/19-20-* | 20       | 19/32     | .038 (.97)         | .049 (1.24)         | .053 (1.35) | 4.45 (6.62) | 10.7 (35.1)        | 58.1 (26.4)    | 20-AMCFTF-1932 |
| M22759/19-22-* | 22       | 19/34     | .030 (.76)         | .041 (1.04)         | .045 (1.14) | 2.87 (4.27) | 17.5 (57.4)        | 35.8 (16.2)    | 22-AMCFTF-1934 |
| M22759/19-24-* | 24       | 19/36     | .024 (.61)         | .034 (.86)          | .038 (.97)  | 1.92 (2.86) | 28.4 (93.2)        | 22.4 (10.2)    | 24-AMCFTF-1936 |
| M22759/19-26-* | 26       | 19/38     | .019 (.48)         | .030 (.76)          | .034 (.86)  | 1.36 (2.02) | 44.8 (147)         | 14.2 (6.44)    | 26-AMCFTF-1938 |

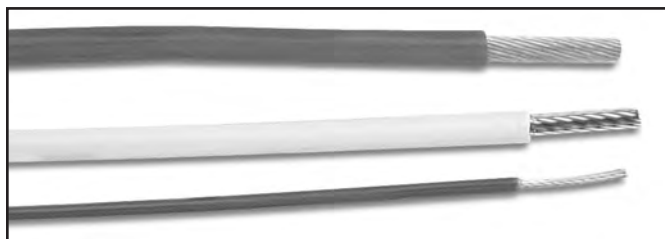
Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

Break strength in pounds (Kg) minimum.

All values are nominal unless otherwise indicated.

\* Add color coding per MIL-STD-104 (see page 36).

## MIL-W-22759/20, /21 wire—high-strength conductor



### Construction Details

**Insulation:** Extruded PTFE.

**Conductor:** /20: Silver-plated, high strength copper alloy;  
/21: Nickel-plated, high strength copper alloy.

**Colors:** Color coded to MIL-STD-104.

**Identification:** to M22759.

**MIL-W-22759/20 and /21** wires have extruded PTFE insulation and a high-strength copper alloy conductor for greater break strength. They are ideal for aerospace and other applications requiring high reliability and break strength, enhanced flex life, and resistance to high temperatures.

These wires are especially well-suited in applications where smoke emission, overload stability, and flammability are major concerns.

For versions of these wires with thinner-wall insulation and 600V voltage rating, see M22759/22 and /23 (following page).

### Performance:

**Voltage rating:** 1,000V.

**Temperature rating:** /20: -55 to 200° C  
/21: -55 to 260° C

### Dimensions, Resistance, and Weights—M22759/20 (silver-plated copper alloy conductor)

| M22759<br>P/N  | AWG<br>Size | Stranding | Conductor<br>Diameter | Insulation Diameter |             | Weight      | Maximum<br>Resistance | Break<br>Strength | Thermax<br>P/N |
|----------------|-------------|-----------|-----------------------|---------------------|-------------|-------------|-----------------------|-------------------|----------------|
|                |             |           |                       | Minimum             | Maximum     |             |                       |                   |                |
| M22759/20-20-* | 20          | 19/32     | .038 (.97)            | .066 (1.68)         | .070 (1.78) | 6.09 (9.06) | 10.7 (35.1)           | 58.1 (26.4)       | 20-AXTTF-1932  |
| M22759/20-22-* | 22          | 19/34     | .030 (.76)            | .058 (1.47)         | .062 (1.57) | 4.30 (6.40) | 17.5 (57.4)           | 35.8 (16.2)       | 22-AXTTF-1934  |
| M22759/20-24-* | 24          | 19/36     | .024 (.61)            | .051 (1.30)         | .055 (1.40) | 3.13 (4.66) | 28.4 (93.2)           | 22.4 (10.2)       | 24-AXTTF-1936  |
| M22759/20-26-* | 26          | 19/38     | .019 (.48)            | .046 (1.17)         | .050 (1.27) | 2.38 (3.54) | 44.8 (147)            | 14.2 (6.44)       | 26-AXTTF-1938  |
| M22759/20-28-* | 28          | 7/36      | .015 (.38)            | .041 (1.04)         | .045 (1.14) | 1.78 (2.65) | 74.4 (244)            | 8.16 (3.70)       | 28-AXTTF-736   |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

Break strength in pounds (Kg) minimum.

All values are nominal unless otherwise indicated.

\* Add color coding per MIL-STD-104 (see page 36).

### Dimensions, Resistance, and Weights—M22759/21 (nickel-plated copper alloy conductor)

| M22759<br>P/N  | AWG<br>Size | Stranding | Conductor<br>Diameter | Insulation Diameter |             | Weight      | Maximum<br>Resistance | Break<br>Strength | Thermax<br>P/N |
|----------------|-------------|-----------|-----------------------|---------------------|-------------|-------------|-----------------------|-------------------|----------------|
|                |             |           |                       | Minimum             | Maximum     |             |                       |                   |                |
| M22759/21-20-* | 20          | 19/32     | .038 (.97)            | .066 (1.68)         | .070 (1.78) | 6.09 (9.06) | 11.4 (37.4)           | 58.1 (26.4)       | 20-AXTTFN-1932 |
| M22759/21-22-* | 22          | 19/34     | .030 (.76)            | .058 (1.47)         | .062 (1.57) | 4.30 (6.40) | 18.6 (61.0)           | 35.8 (16.2)       | 22-AXTTFN-1934 |
| M22759/21-24-* | 24          | 19/36     | .024 (.61)            | .051 (1.30)         | .055 (1.40) | 3.13 (4.66) | 30.1 (98.7)           | 22.4 (10.2)       | 24-AXTTFN-1936 |
| M22759/21-26-* | 26          | 19/38     | .019 (.48)            | .046 (1.17)         | .050 (1.27) | 2.38 (3.54) | 49.4 (162)            | 14.2 (6.44)       | 26-AXTTFN-1938 |
| M22759/21-28-* | 28          | 7/36      | .015 (.38)            | .041 (1.04)         | .045 (1.14) | 1.78 (2.65) | 79.0 (259)            | 8.16 (3.70)       | 28-AXTTFN-736  |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

Break strength in pounds (Kg) minimum.

All values are nominal unless otherwise indicated.

\* Add color coding per MIL-STD-104 (see page 36).



## MIL-W-22759/22, /23 wire—high-strength conductor

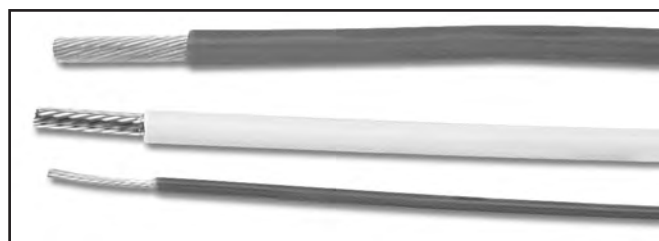
**MIL-W-22759/22 and /23** wires have thin-wall extruded PTFE insulation and a high-strength copper alloy conductor for greater break strength. They are ideal for aerospace and other applications requiring high reliability and break strength, enhanced flex life, and resistance to high temperatures.

These wires are especially well-suited in applications where smoke emission, overload stability, and flammability are major concerns.

### Performance:

**Voltage rating:** 600V.

**Temperature rating:** /22: -55 to 200° C  
/23: -55 to 260° C



### Construction Details

**Insulation:** Thin-wall extruded PTFE.

**Conductor:** /22: Silver-plated, high strength copper alloy;  
/23: Nickel-plated, high strength copper alloy.

**Colors:** Color coded to MIL-STD-104.

**Identification:** to M22759.

### Dimensions, Resistance, and Weights—M22759/22 (silver-plated copper alloy conductor)

| M22759 P/N    | AWG Size | Stranding | Conductor Diameter | Insulation Diameter |             | Weight      | Maximum Resistance | Break Strength | Thermax P/N   |
|---------------|----------|-----------|--------------------|---------------------|-------------|-------------|--------------------|----------------|---------------|
|               |          |           |                    | Minimum             | Maximum     |             |                    |                |               |
| M22759/22-20* | 20       | 19/32     | .038 (.97)         | .056 (1.42)         | .060 (1.52) | 5.19 (7.72) | 10.7 (35.1)        | 58.1 (26.4)    | 20-ATETF-1932 |
| M22759/22-22* | 22       | 19/34     | .030 (.76)         | .047 (1.19)         | .051 (1.30) | 3.55 (5.28) | 17.5 (57.4)        | 35.8 (16.2)    | 22-ATETF-1934 |
| M22759/22-24* | 24       | 19/36     | .024 (.61)         | .041 (1.04)         | .045 (1.14) | 2.51 (3.74) | 28.4 (93.2)        | 22.4 (10.2)    | 24-ATETF-1936 |
| M22759/22-26* | 26       | 19/38     | .019 (.48)         | .036 (.91)          | .040 (1.02) | 1.84 (2.74) | 44.8 (147)         | 14.2 (6.44)    | 26-ATETF-1938 |
| M22759/22-28* | 28       | 7/36      | .015 (.38)         | .031 (.79)          | .035 (.89)  | 1.27 (1.89) | 74.4 (244)         | 8.16 (3.70)    | 28-ATETF-736  |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

Break strength in pounds (Kg) minimum.

All values are nominal unless otherwise indicated.

\* Add color coding per MIL-STD-104 (see page 36).

### Dimensions, Resistance, and Weights—M22759/23 (nickel-plated copper alloy conductor)

| M22759 P/N    | AWG Size | Stranding | Conductor Diameter | Insulation Diameter |             | Weight      | Maximum Resistance | Break Strength | Thermax P/N    |
|---------------|----------|-----------|--------------------|---------------------|-------------|-------------|--------------------|----------------|----------------|
|               |          |           |                    | Minimum             | Maximum     |             |                    |                |                |
| M22759/23-20* | 20       | 19/32     | .038 (.97)         | .056 (1.42)         | .060 (1.52) | 5.27 (7.84) | 11.4 (37.4)        | 58.1 (26.4)    | 20-ATETFN-1932 |
| M22759/23-22* | 22       | 19/34     | .030 (.76)         | .047 (1.19)         | .051 (1.30) | 3.62 (5.39) | 18.6 (61.0)        | 35.8 (16.2)    | 22-ATETFN-1934 |
| M22759/23-24* | 24       | 19/36     | .024 (.61)         | .041 (1.04)         | .045 (1.14) | 2.55 (3.79) | 30.1 (98.7)        | 22.4 (10.2)    | 24-ATETFN-1936 |
| M22759/23-26* | 26       | 19/38     | .019 (.48)         | .036 (.91)          | .040 (1.02) | 1.86 (2.77) | 49.4 (162)         | 14.2 (6.44)    | 26-ATETFN-1938 |
| M22759/23-28* | 28       | 7/36      | .015 (.38)         | .031 (.79)          | .035 (.89)  | 1.29 (1.92) | 79.0 (259)         | 8.16 (3.70)    | 28-ATETFN-736  |

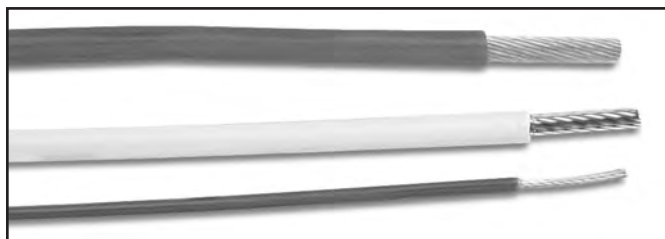
Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

Break strength in pounds (Kg) minimum.

All values are nominal unless otherwise indicated.

\* Add color coding per MIL-STD-104 (see page 36).

## MIL-W-22759/28, /29 wire—PTFE/polyimide insulation



### Construction Details

**Insulation:** Extruded PTFE with polyimide hard coat.

**Conductor:** /28: Silver-plated copper;  
/29: Nickel-plated copper.

**Colors:** Color coded to MIL-STD-104 (before hard coat).

**Identification:** to M22759.

**MIL-W-22759/28 and /29** wires have extruded PTFE insulation with a polyimide hard coat for increased cut-through and abrasion resistance.

These wires are designed for aerospace and other applications requiring excellent thermal stability, tight dimensional tolerances, and high reliability.

These wires are especially well-suited in applications where smoke emission, overload stability, and flammability are major concerns.

For versions of these wires with high-strength copper alloy conductor, see M22759/30 and /31 (following page).

### Performance:

**Voltage rating:** 600V.

**Temperature rating:** /28: -55 to 200° C  
/29: -55 to 260° C

### Dimensions, Resistance, and Weights—M22759/28 (silver-plated conductor)

| M22759<br>P/N  | AWG<br>Size | Stranding | Conductor<br>Diameter | Insulation Diameter |             | Weight      | Maximum<br>Resistance | Thermax<br>P/N |
|----------------|-------------|-----------|-----------------------|---------------------|-------------|-------------|-----------------------|----------------|
|                |             |           |                       | Minimum             | Maximum     |             |                       |                |
| M22759/28-14-* | 14          | 19/27     | .067 (1.70)           | .088 (2.24)         | .094 (2.39) | 14.8 (22.0) | 2.88 (9.45)           | 14-ATEH-1927   |
| M22759/28-16-* | 16          | 19/29     | .053 (1.35)           | .073 (1.85)         | .079 (2.01) | 9.75 (14.5) | 4.52 (14.8)           | 16-ATEH-1929   |
| M22759/28-18-* | 18          | 19/30     | .047 (1.19)           | .067 (1.70)         | .071 (1.80) | 7.68 (11.4) | 5.79 (19.0)           | 18-ATEH-1930   |
| M22759/28-20-* | 20          | 19/32     | .038 (.97)            | .057 (1.45)         | .061 (1.55) | 5.24 (7.80) | 9.19 (30.1)           | 20-ATEH-1932   |
| M22759/28-22-* | 22          | 19/34     | .030 (.76)            | .048 (1.22)         | .052 (1.32) | 3.51 (5.22) | 15.1 (49.5)           | 22-ATEH-1934   |
| M22759/28-24-* | 24          | 19/36     | .024 (.61)            | .042 (1.07)         | .046 (1.17) | 2.47 (3.68) | 24.3 (79.7)           | 24-ATEH-1936   |
| M22759/28-26-* | 26          | 19/38     | .019 (.48)            | .037 (.94)          | .041 (1.04) | 1.80 (2.68) | 38.4 (126)            | 26-ATEH-1938   |
| M22759/28-28-* | 28          | 7/36      | .015 (.38)            | .032 (.81)          | .036 (.91)  | 1.27 (1.89) | 63.8 (209)            | 28-ATEH-736    |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

All values are nominal unless otherwise indicated.

\* Add color coding (applicable to inner PTFE insulation only) per MIL-STD-104 (see page 36).

### Dimensions, Resistance, and Weights—M22759/29 (nickel-plated conductor)

| M22759<br>P/N  | AWG<br>Size | Stranding | Conductor<br>Diameter | Insulation Diameter |             | Weight      | Maximum<br>Resistance | Thermax<br>P/N |
|----------------|-------------|-----------|-----------------------|---------------------|-------------|-------------|-----------------------|----------------|
|                |             |           |                       | Minimum             | Maximum     |             |                       |                |
| M22759/29-14-* | 14          | 19/27     | .067 (1.70)           | .088 (2.24)         | .094 (2.39) | 14.8 (22.0) | 3.00 (9.84)           | 14-ATENH-1927  |
| M22759/29-16-* | 16          | 19/29     | .053 (1.35)           | .073 (1.85)         | .079 (2.01) | 9.75 (14.5) | 4.76 (15.6)           | 16-ATENH-1929  |
| M22759/29-18-* | 18          | 19/30     | .047 (1.19)           | .067 (1.70)         | .071 (1.80) | 7.68 (11.4) | 6.10 (20.0)           | 18-ATENH-1930  |
| M22759/29-20-* | 20          | 19/32     | .038 (.97)            | .057 (1.45)         | .061 (1.55) | 5.24 (7.80) | 9.77 (32.0)           | 20-ATENH-1932  |
| M22759/29-22-* | 22          | 19/34     | .030 (.76)            | .048 (1.22)         | .052 (1.32) | 3.51 (5.22) | 16.0 (52.5)           | 22-ATENH-1934  |
| M22759/29-24-* | 24          | 19/36     | .024 (.61)            | .042 (1.07)         | .046 (1.17) | 2.47 (3.68) | 25.9 (85.0)           | 24-ATENH-1936  |
| M22759/29-26-* | 26          | 19/38     | .019 (.48)            | .037 (.94)          | .041 (1.04) | 1.80 (2.68) | 42.2 (138)            | 26-ATENH-1938  |
| M22759/29-28-* | 28          | 7/36      | .015 (.38)            | .032 (.81)          | .036 (.91)  | 1.27 (1.89) | 67.9 (223)            | 28-ATENH-736   |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

All values are nominal unless otherwise indicated.

\* Add color coding (applicable to inner PTFE insulation only) per MIL-STD-104 (see page 36).

## MIL-W-22759/30, /31 wire—high-strength conductor

**MIL-DTL-22759/30 and /31** wires have extruded PTFE insulation with a polyimide polyimide hard coat for increased cut-through and abrasion resistance, and a high-strength copper alloy conductor for greater break strength.

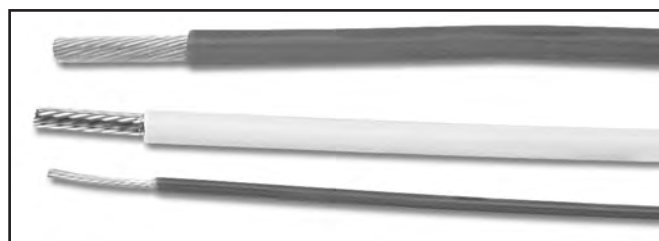
These wires are designed for aerospace and other applications requiring excellent thermal stability, tight dimensional tolerances, and high reliability.

These wires are especially well-suited in applications where smoke emission, overload stability, and flammability are major concerns.

### Performance:

**Voltage rating:** 600V.

**Temperature rating:** /30: -55 to 200° C  
/31: -55 to 260° C



### Construction Details

**Insulation:** Extruded PTFE with polyimide hard coat.

**Conductor:** /30: Silver-plated, high strength copper alloy;  
/31: Nickel-plated, high strength copper alloy.

**Colors:** Color coded to MIL-STD-104 (before hard coat).

**Identification:** to M22759.

### Dimensions, Resistance, and Weights—M22759/30 (silver-plated copper alloy conductor)

| M22759 P/N    | AWG Size | Stranding | Conductor Diameter | Insulation Diameter |             | Weight      | Maximum Resistance | Break Strength | Thermax P/N    |
|---------------|----------|-----------|--------------------|---------------------|-------------|-------------|--------------------|----------------|----------------|
|               |          |           |                    | Minimum             | Maximum     |             |                    |                |                |
| M22759/30-20* | 20       | 19/32     | .038 (.97)         | .057 (1.45)         | .061 (1.55) | 5.24 (7.80) | 10.7 (35.1)        | 58.1 (26.4)    | 20-ATETFH-1932 |
| M22759/30-22* | 22       | 19/34     | .030 (.76)         | .048 (1.22)         | .052 (1.32) | 3.51 (5.22) | 17.5 (57.4)        | 35.8 (16.2)    | 22-ATETFH-1934 |
| M22759/30-24* | 24       | 19/36     | .024 (.61)         | .042 (1.07)         | .046 (1.17) | 2.47 (3.68) | 28.4 (93.2)        | 22.4 (10.2)    | 24-ATETFH-1936 |
| M22759/30-26* | 26       | 19/38     | .019 (.48)         | .037 (.94)          | .041 (1.04) | 1.80 (2.68) | 44.8 (147)         | 14.2 (6.44)    | 26-ATETFH-1938 |
| M22759/30-28* | 28       | 7/36      | .015 (.38)         | .032 (.81)          | .036 (.91)  | 1.27 (1.89) | 74.4 (244)         | 8.16 (3.70)    | 28-ATETFH-736  |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

Break strength in pounds (Kg) minimum.

All values are nominal unless otherwise indicated.

\* Add color coding (applicable to inner PTFE insulation only) per MIL-STD-104 (see page 36).

### Dimensions, Resistance, and Weights—M22759/31 (nickel-plated copper alloy conductor)

| M22759 P/N    | AWG Size | Stranding | Conductor Diameter | Insulation Diameter |             | Weight      | Maximum Resistance | Break Strength | Thermax P/N     |
|---------------|----------|-----------|--------------------|---------------------|-------------|-------------|--------------------|----------------|-----------------|
|               |          |           |                    | Minimum             | Maximum     |             |                    |                |                 |
| M22759/31-20* | 20       | 19/32     | .038 (.97)         | .057 (1.45)         | .061 (1.55) | 5.28 (7.86) | 11.4 (37.4)        | 58.1 (26.4)    | 20-ATETFNH-1932 |
| M22759/31-22* | 22       | 19/34     | .030 (.76)         | .048 (1.22)         | .052 (1.32) | 3.52 (5.24) | 18.6 (61.0)        | 35.8 (16.2)    | 22-ATETFNH-1934 |
| M22759/31-24* | 24       | 19/36     | .024 (.61)         | .042 (1.07)         | .046 (1.17) | 2.48 (3.69) | 30.1 (98.7)        | 22.4 (10.2)    | 24-ATETFNH-1936 |
| M22759/31-26* | 26       | 19/38     | .019 (.48)         | .037 (.94)          | .041 (1.04) | 1.81 (2.69) | 49.4 (162)         | 14.2 (6.44)    | 26-ATETFNH-1938 |
| M22759/31-28* | 28       | 7/36      | .015 (.38)         | .032 (.81)          | .036 (.91)  | 1.28 (1.90) | 79.0 (259)         | 8.16 (3.70)    | 28-ATETFNH-736  |

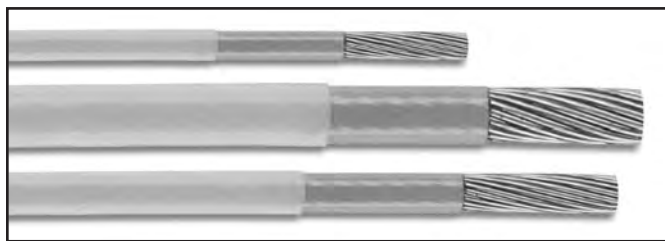
Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

Break strength in pounds (Kg) minimum.

All values are nominal unless otherwise indicated.

\* Add color coding (applicable to inner PTFE insulation only) per MIL-STD-104 (see page 36).

## MIL-DTL-22759/80, /81, /82 wire—light weight, composite insulation



### Construction Details

**Insulation:** PTFE/polyimide/PTFE tape (inner layer);  
PTFE tape (outer layer).

**Conductor:** /80: Tin-plated copper;  
/81: Silver-plated high-strength (AWG 20-24)  
or ultra-high-strength copper alloy (AWG 26).  
/82: Nickel-plated high-strength (AWG 20-24)  
or ultra-high-strength copper alloy (AWG 26).

**Colors:** Color coded to MIL-STD-681.

**Identification:** Per MIL-DTL-22759/80, /81, and /82.

MIL-DTL-22759/80, /81, and /82 wires are light-weight, high-performance aerospace hookup wires with a dual-layer insulation of PTFE/polyimide/PTFE tape, covered with PTFE tape.

These wires are designed for aerospace and other applications requiring excellent thermal stability, light weight, and high break strength.

These wires are available with our unique **Seamless Wrap** PTFE tape insulation (see page 54 for details and part numbers).

### Performance:

**Voltage rating:** 600V.

**Temperature rating:** /80: -55 to 150° C  
/81: -55 to 200° C  
/82: -55 to 260° C

### Dimensions, Resistance, and Weights—M22759/80 (tin-plated copper conductor)

| M22759<br>P/N  | AWG<br>Size | Stranding | Conductor Diameter |              | Insulation Diameter |             | Weight      | Maximum<br>Resistance |
|----------------|-------------|-----------|--------------------|--------------|---------------------|-------------|-------------|-----------------------|
|                |             |           | Minimum            | Maximum      | Minimum             | Maximum     |             |                       |
| M22759/80-10-* | 10          | 37/26     | .1060 (2.69)       | .1120 (2.84) | .119 (3.02)         | .123 (3.12) | 30.4 (45.2) | 1.26 (4.13)           |
| M22759/80-12-* | 12          | 37/28     | .0835 (2.12)       | .0894 (2.27) | .096 (2.44)         | .100 (2.54) | 19.4 (28.9) | 2.02 (6.63)           |
| M22759/80-14-* | 14          | 19/27     | .0645 (1.64)       | .0694 (1.76) | .076 (1.93)         | .080 (2.03) | 12.4 (18.4) | 3.06 (10.0)           |
| M22759/80-16-* | 16          | 19/29     | .0515 (1.31)       | .0554 (1.41) | .063 (1.60)         | .067 (1.70) | 7.97 (11.9) | 4.81 (15.8)           |
| M22759/80-18-* | 18          | 19/30     | .0455 (1.16)       | .0494 (1.25) | .056 (1.42)         | .060 (1.52) | 6.41 (9.5)  | 6.23 (20.4)           |
| M22759/80-20-* | 20          | 19/32     | .0365 (.93)        | .0394 (1.00) | .048 (1.22)         | .051 (1.30) | 4.29 (6.4)  | 9.88 (32.4)           |
| M22759/80-22-* | 22          | 19/34     | .0285 (.72)        | .0314 (.80)  | .040 (1.02)         | .043 (1.09) | 2.78 (4.1)  | 16.2 (53.1)           |
| M22759/80-24-* | 24          | 19/36     | .0225 (.57)        | .0244 (.62)  | .034 (.86)          | .038 (.97)  | 1.87 (2.8)  | 26.2 (85.9)           |
| M22759/80-26-* | 26          | 19/38     | .0175 (.44)        | .0204 (.52)  | .030 (.76)          | .034 (.86)  | 1.30 (1.9)  | 41.3 (135)            |

### Dimensions, Weights, and Resistance—M22759/81 (silver-plated high-strength conductor)

| M22759<br>P/N  | AWG<br>Size | Stranding | Conductor Diameter |              | Insulation Diameter |             | Weight     | Maximum<br>Resistance |
|----------------|-------------|-----------|--------------------|--------------|---------------------|-------------|------------|-----------------------|
|                |             |           | Minimum            | Maximum      | Minimum             | Maximum     |            |                       |
| M22759/81-20-* | 20          | 19/32     | .0365 (.93)        | .0395 (1.00) | .048 (1.22)         | .051 (1.30) | 4.36 (6.5) | 10.7 (35.1)           |
| M22759/81-22-* | 22          | 19/34     | .0285 (.72)        | .0314 (.80)  | .040 (1.02)         | .043 (1.09) | 2.80 (4.2) | 17.5 (57.4)           |
| M22759/81-24-* | 24          | 19/36     | .0225 (.57)        | .0244 (.62)  | .034 (.86)          | .038 (.97)  | 1.87 (2.8) | 28.4 (93.2)           |
| M22759/81-26-* | †26         | 19/38     | .0175 (.44)        | .0204 (.52)  | .030 (.76)          | .034 (.86)  | 1.40 (2.1) | 56.4 (185)            |

### Dimensions, Weights, and Resistance—M22759/82 (nickel-plated high-strength conductor)

| M22759<br>P/N  | AWG<br>Size | Stranding | Conductor Diameter |              | Insulation Diameter |             | Weight     | Maximum<br>Resistance |
|----------------|-------------|-----------|--------------------|--------------|---------------------|-------------|------------|-----------------------|
|                |             |           | Minimum            | Maximum      | Minimum             | Maximum     |            |                       |
| M22759/82-20-* | 20          | 19/32     | .0365 (.93)        | .0404 (1.03) | .048 (1.22)         | .051 (1.30) | 4.32 (6.4) | 11.4 (37.4)           |
| M22759/82-22-* | 22          | 19/34     | .0285 (.72)        | .0314 (.80)  | .040 (1.02)         | .043 (1.09) | 2.83 (4.2) | 18.6 (61.0)           |
| M22759/82-24-* | 24          | 19/36     | .0225 (.57)        | .0254 (.65)  | .034 (.86)          | .038 (.97)  | 1.87 (2.8) | 30.1 (98.3)           |
| M22759/82-26-* | †26         | 19/38     | .0175 (.44)        | .0204 (.52)  | .030 (.72)          | .034 (.86)  | 1.38 (2.1) | 58.4 (191)            |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

\* Add color coding per MIL-STD-681 (see page 36). †Indicates ultra-high-strength copper alloy conductor.

All values are nominal unless otherwise indicated.

## MIL-DTL-22759/83, /84, /85 wire—normal weight

MIL-DTL-22759/83, /84, and /85 wires are large size, high-performance aerospace hookup wires with a four-layer insulation of PTFE tape and PTFE/polyimide/PTFE tape, with an outer layer of polyamide braid for superior abrasion resistance.

These wires are designed for aerospace and other applications requiring excellent thermal stability and abrasion resistance.

These wires are available with our unique **Seamless Wrap** PTFE tape insulation (see page 54 for details and part numbers).

### Performance:

**Voltage rating:** 600V.

**Temperature rating:** /83: -55 to 200° C  
/84: -55 to 260° C  
/85: -55 to 150° C



### Construction Details

**Insulation:** First layer: PTFE tape;  
Second layer: PTFE/polyimide/PTFE tape;  
Third and fourth layers: PTFE tape;  
Fifth (outer) layer: 200 Denier polyamide braid with clear lacquer to prevent fraying.

**Conductor:** /83: Silver-plated copper;  
/84: Nickel-plated copper.  
/85: Tin-plated copper.

**Colors:** See below.

**Identification:** Per MIL-DTL-22759/83, /84, and /85.

### Dimensions, Weight, and Resistance—M22759/83 (silver-plated copper conductor)

| M22759 P/N     | AWG Size | Stranding | Conductor Diameter |              | Insulation Diameter |              | Weight        | Maximum Resistance |
|----------------|----------|-----------|--------------------|--------------|---------------------|--------------|---------------|--------------------|
|                |          |           | Minimum            | Maximum      | Minimum             | Maximum      |               |                    |
| M22759/83-04-* | 4/0      | 2109/30   | .565 (14.35)       | .605 (15.37) | .615 (15.62)        | .655 (16.64) | 661.4 (984.0) | .054 (.177)        |
| M22759/83-03-* | 3/0      | 1665/30   | .500 (12.70)       | .540 (13.72) | .554 (14.07)        | .584 (14.83) | 520.3 (774.1) | .068 (.223)        |
| M22759/83-02-* | 2/0      | 1330/30   | .440 (11.18)       | .475 (12.07) | .498 (12.65)        | .528 (13.41) | 414.7 (617.0) | .085 (.279)        |
| M22759/83-01-* | 0        | 1045/30   | .395 (10.03)       | .425 (10.80) | .442 (11.23)        | .462 (11.73) | 337.0 (501.4) | .108 (.354)        |
| M22759/83-1-*  | 1        | 817/30    | .366 (9.30)        | .380 (9.65)  | .400 (10.16)        | .420 (10.67) | 282.0 (419.6) | .139 (.456)        |
| M22759/83-2-*  | 2        | 665/30    | .320 (8.13)        | .340 (8.64)  | .360 (9.14)         | .380 (9.65)  | 217.9 (324.2) | .170 (.558)        |

### Dimensions, Weight, and Resistance—M22759/84 (nickel-plated copper conductor)

| M22759 P/N     | AWG Size | Stranding | Conductor Diameter |              | Insulation Diameter |              | Weight        | Maximum Resistance |
|----------------|----------|-----------|--------------------|--------------|---------------------|--------------|---------------|--------------------|
|                |          |           | Minimum            | Maximum      | Minimum             | Maximum      |               |                    |
| M22759/84-04-* | 4/0      | 2109/30   | .565 (14.35)       | .605 (15.37) | .615 (15.62)        | .655 (16.64) | 661.4 (984.0) | .056 (.184)        |
| M22759/84-03-* | 3/0      | 1665/30   | .500 (12.70)       | .540 (13.72) | .554 (14.07)        | .584 (14.83) | 520.3 (774.1) | .071 (.233)        |
| M22759/84-02-* | 2/0      | 1330/30   | .440 (11.18)       | .475 (12.07) | .498 (12.65)        | .528 (13.41) | 414.7 (617.0) | .089 (.292)        |
| M22759/84-01-* | 0        | 1045/30   | .395 (10.03)       | .425 (10.80) | .442 (11.23)        | .462 (11.73) | 337.0 (501.4) | .113 (.371)        |
| M22759/84-1-*  | 1        | 817/30    | .366 (9.30)        | .380 (9.65)  | .400 (10.16)        | .420 (10.67) | 282.0 (419.6) | .144 (.472)        |
| M22759/84-2-*  | 2        | 665/30    | .320 (8.13)        | .340 (8.64)  | .360 (9.14)         | .380 (9.65)  | 217.9 (324.2) | .177 (.581)        |

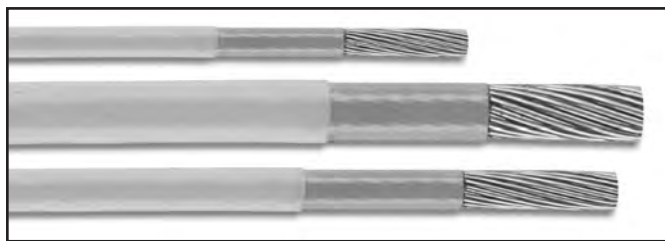
### Dimensions, Weight, and Resistance—M22759/85 (tin-plated copper conductor)

| M22759 P/N     | AWG Size | Stranding | Conductor Diameter |              | Insulation Diameter |              | Weight        | Maximum Resistance |
|----------------|----------|-----------|--------------------|--------------|---------------------|--------------|---------------|--------------------|
|                |          |           | Minimum            | Maximum      | Minimum             | Maximum      |               |                    |
| M22759/85-04-* | 4/0      | 2109/30   | .565 (14.35)       | .605 (15.37) | .615 (15.62)        | .655 (16.64) | 661.4 (984.0) | .056 (.184)        |
| M22759/85-03-* | 3/0      | 1665/30   | .500 (12.70)       | .540 (13.72) | .554 (14.07)        | .584 (14.83) | 520.3 (774.1) | .071 (.233)        |
| M22759/85-02-* | 2/0      | 1330/30   | .440 (11.18)       | .475 (12.07) | .498 (12.65)        | .528 (13.41) | 414.7 (617.0) | .091 (.298)        |
| M22759/85-01-* | 0        | 1045/30   | .395 (10.03)       | .425 (10.80) | .442 (11.23)        | .462 (11.73) | 337.0 (501.4) | .116 (.380)        |
| M22759/85-1-*  | 1        | 817/30    | .366 (9.30)        | .380 (9.65)  | .400 (10.16)        | .420 (10.67) | 282.0 (419.6) | .149 (.489)        |
| M22759/85-2-*  | 2        | 665/30    | .320 (8.13)        | .340 (8.64)  | .360 (9.14)         | .380 (9.65)  | 217.9 (324.2) | .183 (.600)        |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

\* Add color coding—dark green (5D) preferred, white (9) acceptable alternate. All values are nominal unless otherwise indicated.

## MIL-DTL-22759/86 wire—silver-plated conductor



### Construction Details

**Insulation:** See chart below.

**Conductor:** Silver-plated copper.

**Colors:** Color coded to MIL-STD-681.

**Identification:** Per MIL-DTL-22759/86.

**MIL-DTL-22759/86** wires are normal-weight, high-performance aerospace hookup wires with insulation composed of PTFE/polyimide/PTFE tape and PTFE tape in several configurations.

These wires are designed for aerospace and other applications requiring excellent thermal stability and good abrasion resistance.

For versions of these wires with nickel-plated conductors, see MIL-DTL-22759/87 (following page). For versions with tin-plated conductors, see MIL-DTL-22759/88 (page 51).

These wires are available with our unique **Seamless Wrap** PTFE tape insulation (see page 54 for details and part numbers).

### Performance:

**Voltage rating:** 600V.

**Temperature rating:** -55 to 200° C

### Insulation—M22759/86

| AWG Size      | Inner Layer              | Second Layer             | Third Layer | Fourth Layer |
|---------------|--------------------------|--------------------------|-------------|--------------|
| 4/0 through 4 | PTFE tape                | PTFE/polyimide/PTFE tape | PTFE tape   | PTFE tape    |
| 8 and 6       | PTFE tape                | PTFE/polyimide/PTFE tape | PTFE tape   | None         |
| 10 through 26 | PTFE/polyimide/PTFE tape | PTFE tape                | None        | None         |

### Dimensions, Resistance, and Weights—M22759/86 (silver-plated copper conductor)

| M22759 P/N     | AWG Size | Stranding | Conductor Diameter |              | Insulation Diameter |             | Weight         | Maximum Resistance |
|----------------|----------|-----------|--------------------|--------------|---------------------|-------------|----------------|--------------------|
|                |          |           | Minimum            | Maximum      | Minimum             | Maximum     |                |                    |
| M22759/86-04-* | 4/0      | 2109/30   | .565 (14.35)       | .605 (15.37) | .590 (14.99)        | .630 (16.0) | 680.8 (1012.9) | .054 (.177)        |
| M22759/86-03-* | 3/0      | 1665/30   | .500 (12.70)       | .540 (13.72) | .530 (13.46)        | .560 (14.2) | 541.8 (806.1)  | .068 (.223)        |
| M22759/86-02-* | 2/0      | 1330/30   | .440 (11.18)       | .475 (12.07) | .475 (12.07)        | .505 (12.8) | 431.6 (642.1)  | .085 (.279)        |
| M22759/86-01-* | 0        | 1045/30   | .395 (10.03)       | .425 (10.80) | .420 (10.67)        | .450 (11.4) | 343.8 (511.5)  | .108 (.354)        |
| M22759/86-1-*  | 1        | 817/30    | .366 (9.30)        | .380 (9.65)  | .388 (9.86)         | .408 (10.4) | 272.5 (405.4)  | .139 (.456)        |
| M22759/86-2-*  | 2        | 665/30    | .320 (8.13)        | .340 (8.64)  | .344 (8.74)         | .364 (9.25) | 222.8 (331.5)  | .170 (.558)        |
| M22759/86-4-*  | 4        | 133/25    | .250 (6.35)        | .263 (6.68)  | .276 (7.01)         | .288 (7.32) | 141.1 (209.9)  | .264 (.866)        |
| M22759/86-6-*  | 6        | 133/27    | .198 (5.03)        | .208 (5.28)  | .219 (5.56)         | .229 (5.82) | 88.1 (131.1)   | .418 (1.37)        |
| M22759/86-8-*  | 8        | 133/29    | .158 (4.01)        | .166 (4.22)  | .180 (4.57)         | .188 (4.78) | 57.5 (85.5)    | .658 (2.16)        |
| M22759/86-10-* | 10       | 37/26     | .106 (2.69)        | .110 (2.79)  | .122 (3.10)         | .127 (3.23) | 31.2 (46.4)    | 1.19 (3.90)        |
| M22759/86-12-* | 12       | 37/28     | .0835 (2.12)       | .0874 (2.22) | .100 (2.54)         | .105 (2.67) | 19.6 (29.2)    | 1.90 (6.23)        |
| M22759/86-14-* | 14       | 19/27     | .0645 (1.64)       | .0684 (1.74) | .081 (2.06)         | .086 (2.18) | 12.5 (18.6)    | 2.88 (9.45)        |
| M22759/86-16-* | 16       | 19/29     | .0515 (1.31)       | .0544 (1.38) | .068 (1.73)         | .073 (1.85) | 8.55 (12.7)    | 4.52 (14.8)        |
| M22759/86-18-* | 18       | 19/30     | .0455 (1.16)       | .0484 (1.23) | .061 (1.55)         | .065 (1.65) | 6.65 (9.9)     | 5.79 (19.0)        |
| M22759/86-20-* | 20       | 19/32     | .0365 (.93)        | .0384 (.98)  | .051 (1.30)         | .055 (1.40) | 4.50 (6.7)     | 9.19 (30.1)        |
| M22759/86-22-* | 22       | 19/34     | .0285 (.72)        | .0304 (.77)  | .043 (1.09)         | .047 (1.19) | 2.97 (4.4)     | 15.1 (49.5)        |
| M22759/86-24-* | 24       | 19/36     | .0225 (.57)        | .0244 (.62)  | .038 (.97)          | .042 (1.07) | 2.04 (3.0)     | 24.3 (79.7)        |
| M22759/86-26-* | 26       | 19/38     | .0175 (.44)        | .0194 (.49)  | .033 (.84)          | .037 (.94)  | 1.44 (2.1)     | 38.4 (126)         |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

\* Add color coding per MIL-STD-681 (see page 36). All values are nominal unless otherwise indicated.

## MIL-DTL-22759/87 wire—normal weight

**MIL-DTL-22759/87** wires are normal-weight, high-performance aerospace hookup wires with insulation composed of PTFE/polyimide/PTFE tape and PTFE tape in several configurations.

These wires are designed for aerospace and other applications requiring excellent thermal stability and good abrasion resistance.

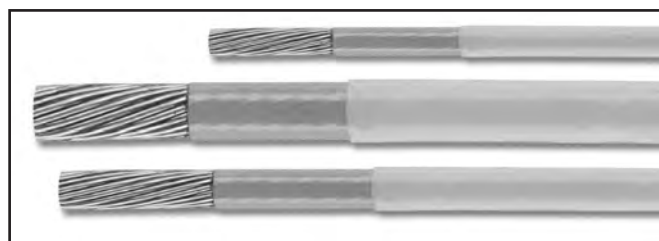
For versions of these wires with silver-plated conductors, see MIL-DTL-22759/86 (previous page). For versions with tin-plated conductors, see MIL-DTL-22759/88 (following page).

These wires are available with our unique **Seamless Wrap** PTFE tape insulation (see page 54 for details).

### Performance:

**Voltage rating:** 600V.

**Temperature rating:** -55 to 260° C



### Construction Details

**Insulation:** See chart below.

**Conductor:** Nickel-plated copper.

**Colors:** Color coded to MIL-STD-681.

**Identification:** Per MIL-DTL-22759/87.

### Insulation—M22759/87

| AWG Size      | Inner Layer              | Second Layer             | Third Layer | Fourth Layer |
|---------------|--------------------------|--------------------------|-------------|--------------|
| 4/0 through 4 | PTFE tape                | PTFE/polyimide/PTFE tape | PTFE tape   | PTFE tape    |
| 8 and 6       | PTFE tape                | PTFE/polyimide/PTFE tape | PTFE tape   | None         |
| 10 through 26 | PTFE/polyimide/PTFE tape | PTFE tape                | None        | None         |

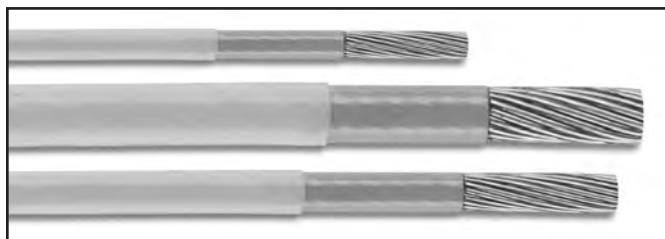
### Dimensions, Resistance, and Weights—M22759/87 (nickel-plated copper conductor)

| M22759 P/N     | AWG Size | Stranding | Conductor Diameter |              | Insulation Diameter |              | Weight         | Maximum Resistance |
|----------------|----------|-----------|--------------------|--------------|---------------------|--------------|----------------|--------------------|
|                |          |           | Minimum            | Maximum      | Minimum             | Maximum      |                |                    |
| M22759/87-04-* | 4/0      | 2109/30   | .565 (14.35)       | .605 (15.37) | .590 (14.99)        | .630 (16.00) | 680.8 (1012.9) | .056 (.177)        |
| M22759/87-03-* | 3/0      | 1665/30   | .500 (12.70)       | .540 (13.72) | .530 (13.46)        | .560 (14.22) | 541.8 (806.1)  | .071 (.233)        |
| M22759/87-02-* | 2/0      | 1330/30   | .440 (11.18)       | .476 (12.09) | .475 (12.07)        | .505 (12.83) | 431.6 (642.1)  | .089 (.292)        |
| M22759/87-01-* | 0        | 1045/30   | .395 (10.03)       | .425 (10.80) | .420 (10.67)        | .450 (11.43) | 343.8 (511.5)  | .113 (.371)        |
| M22759/87-1-*  | 1        | 817/30    | .366 (9.30)        | .380 (9.65)  | .388 (9.86)         | .408 (10.36) | 272.5 (405.4)  | .144 (.472)        |
| M22759/87-2-*  | 2        | 665/30    | .320 (8.13)        | .340 (8.64)  | .344 (8.74)         | .364 (9.25)  | 222.8 (331.5)  | .177 (.581)        |
| M22759/87-4-*  | 4        | 133/25    | .250 (6.35)        | .268 (6.81)  | .276 (7.01)         | .288 (7.32)  | 141.1 (209.9)  | .275 (.902)        |
| M22759/87-6-*  | 6        | 133/27    | .198 (5.03)        | .212 (5.38)  | .219 (5.56)         | .229 (5.82)  | 88.1 (131.1)   | .436 (1.43)        |
| M22759/87-8-*  | 8        | 133/29    | .158 (4.01)        | .169 (4.29)  | .180 (4.57)         | .188 (4.78)  | 57.5 (85.5)    | .694 (2.28)        |
| M22759/87-10-* | 10       | 37/26     | .106 (2.69)        | .112 (2.84)  | .122 (3.10)         | .127 (3.23)  | 31.3 (46.6)    | 1.24 (4.07)        |
| M22759/87-12-* | 12       | 37/28     | .0835 (2.12)       | .0894 (2.27) | .100 (2.54)         | .105 (2.67)  | 20.0 (29.8)    | 1.98 (6.49)        |
| M22759/87-14-* | 14       | 19/27     | .0645 (1.64)       | .0694 (1.76) | .081 (2.06)         | .086 (2.18)  | 12.5 (18.6)    | 3.00 (9.84)        |
| M22759/87-16-* | 16       | 19/29     | .0515 (1.31)       | .0554 (1.41) | .068 (1.73)         | .073 (1.85)  | 8.55 (12.7)    | 4.76 (15.6)        |
| M22759/87-18-* | 18       | 19/30     | .0455 (1.16)       | .0494 (1.25) | .061 (1.55)         | .065 (1.65)  | 6.65 (9.9)     | 6.10 (20.0)        |
| M22759/87-20-* | 20       | 19/32     | .0365 (.93)        | .0394 (1.00) | .051 (1.30)         | .055 (1.40)  | 4.54 (6.8)     | 9.77 (32.0)        |
| M22759/87-22-* | 22       | 19/34     | .0285 (.72)        | .0314 (.80)  | .043 (1.09)         | .047 (1.19)  | 2.97 (4.4)     | 16.0 (52.5)        |
| M22759/87-24-* | 24       | 19/36     | .0225 (.57)        | .0244 (.62)  | .038 (.97)          | .042 (1.07)  | 2.04 (3.0)     | 25.9 (85.0)        |
| M22759/87-26-* | 26       | 19/38     | .0175 (.44)        | .0204 (.52)  | .033 (.84)          | .037 (.94)   | 1.48 (2.2)     | 42.2 (138)         |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

\* Add color coding per MIL-STD-681 (see page 36). All values are nominal unless otherwise indicated.

## MIL-DTL-22759/88 wire—tin-plated conductor



### Construction Details

**Insulation:** See chart below.

**Conductor:** Tin-plated copper.

**Colors:** Color coded to MIL-STD-681.

**Identification:** Per MIL-DTL-22759/88.

**MIL-DTL-22759/88** wires are normal-weight, high-performance aerospace hookup wires with insulation composed of PTFE/polyimide/PTFE tape and PTFE tape in several configurations.

These wires are designed for aerospace and other applications requiring excellent thermal stability and good abrasion resistance.

For versions of these wires with silver-plated conductors, see MIL-DTL-22759/86 (page 49).

For versions with nickel-plated conductors, see MIL-DTL-22759/87 (previous page).

These wires are available with our unique **Seamless Wrap** PTFE tape insulation (see page 54 for details).

### Performance:

**Voltage rating:** 600V.

**Temperature rating:** -55 to 150° C

### Insulation—M22759/88

| AWG Size      | Inner Layer              | Second Layer             | Third Layer | Fourth Layer |
|---------------|--------------------------|--------------------------|-------------|--------------|
| 4/0 through 4 | PTFE tape                | PTFE/polyimide/PTFE tape | PTFE tape   | PTFE tape    |
| 8 and 6       | PTFE tape                | PTFE/polyimide/PTFE tape | PTFE tape   | None         |
| 10 through 26 | PTFE/polyimide/PTFE tape | PTFE tape                | None        | None         |

### Dimensions, Resistance, and Weights—M22759/88 (tin-plated copper conductor)

| M22759 P/N     | AWG Size | Stranding | Conductor Diameter |              | Insulation Diameter |              | Weight         | Maximum Resistance |
|----------------|----------|-----------|--------------------|--------------|---------------------|--------------|----------------|--------------------|
|                |          |           | Minimum            | Maximum      | Minimum             | Maximum      |                |                    |
| M22759/88-04-* | 4/0      | 2109/30   | .565 (14.35)       | .605 (15.37) | .590 (14.99)        | .630 (16.00) | 680.8 (1012.9) | .056 (.177)        |
| M22759/88-03-* | 3/0      | 1665/30   | .500 (12.70)       | .540 (13.72) | .530 (13.46)        | .560 (14.22) | 541.8 (806.1)  | .071 (.233)        |
| M22759/88-02-* | 2/0      | 1330/30   | .440 (11.18)       | .475 (12.07) | .475 (12.07)        | .505 (12.83) | 431.6 (642.1)  | .091 (.298)        |
| M22759/88-01-* | 0        | 1045/30   | .395 (10.03)       | .425 (10.80) | .420 (10.67)        | .450 (11.43) | 343.8 (511.5)  | .116 (.380)        |
| M22759/88-1-*  | 1        | 817/30    | .366 (9.30)        | .380 (9.65)  | .388 (9.86)         | .408 (10.36) | 274.5 (408.4)  | .149 (.489)        |
| M22759/88-2-*  | 2        | 665/30    | .320 (8.13)        | .340 (8.64)  | .344 (8.74)         | .364 (9.25)  | 222.8 (331.5)  | .183 (.600)        |
| M22759/88-4-*  | 4        | 133/25    | .250 (6.35)        | .268 (6.81)  | .276 (7.01)         | .288 (7.32)  | 141.1 (209.9)  | .280 (.918)        |
| M22759/88-6-*  | 6        | 133/27    | .198 (5.03)        | .212 (5.38)  | .219 (5.56)         | .229 (5.82)  | 88.1 (131.1)   | .445 (1.46)        |
| M22759/88-8-*  | 8        | 133/29    | .158 (4.01)        | .169 (4.29)  | .180 (4.57)         | .188 (4.78)  | 57.5 (85.5)    | .701 (2.30)        |
| M22759/88-10-* | 10       | 37/26     | .106 (2.69)        | .112 (2.84)  | .122 (3.10)         | .127 (3.23)  | 31.3 (46.6)    | 1.26 (4.13)        |
| M22759/88-12-* | 12       | 37/28     | .0835 (2.12)       | .0894 (2.27) | .100 (2.54)         | .105 (2.67)  | 20.0 (29.8)    | 2.02 (6.63)        |
| M22759/88-14-* | 14       | 19/27     | .0645 (1.64)       | .0694 (1.76) | .081 (2.06)         | .086 (2.18)  | 12.9 (19.2)    | 3.06 (10.0)        |
| M22759/88-16-* | 16       | 19/29     | .0515 (1.31)       | .0554 (1.41) | .068 (1.73)         | .073 (1.85)  | 8.44 (12.6)    | 4.81 (15.8)        |
| M22759/88-18-* | 18       | 19/30     | .0455 (1.16)       | .0494 (1.25) | .061 (1.55)         | .065 (1.65)  | 6.67 (9.9)     | 6.23 (20.4)        |
| M22759/88-20-* | 20       | 19/32     | .0365 (.93)        | .0394 (1.00) | .051 (1.30)         | .055 (1.40)  | 4.51 (6.7)     | 9.88 (32.4)        |
| M22759/88-22-* | 22       | 19/34     | .0285 (.73)        | .0314 (.80)  | .043 (1.09)         | .047 (1.19)  | 2.97 (4.4)     | 16.2 (53.1)        |
| M22759/88-24-* | 24       | 19/36     | .0225 (.57)        | .0244 (.62)  | .038 (.97)          | .042 (1.07)  | 2.04 (3.0)     | 26.2 (85.9)        |
| M22759/88-26-* | 26       | 19/38     | .0175 (.44)        | .0204 (.52)  | .033 (.84)          | .037 (.94)   | 1.44 (2.1)     | 41.3 (135)         |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

\* Add color coding per MIL-STD-681 (see page 36). All values are nominal unless otherwise indicated.



## MIL-DTL-22759/89, /90 wire—normal weight

**MIL-DTL-22759/89 and /90** wires are light-weight, high-performance aerospace hookup wires with a dual-layer insulation of PTFE/polyimide/PTFE tape, covered with PTFE tape. They are similar to MIL-DTL-22759/81 and /82 wires, but have thicker-wall insulation.

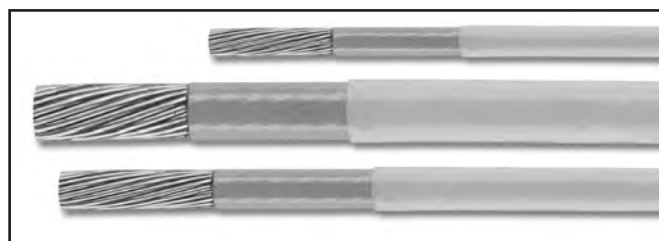
These wires are designed for aerospace and other applications requiring excellent thermal stability and high break strength.

These wires are available with our unique **Seamless Wrap** PTFE tape insulation (see page 54 for details).

### Performance:

**Voltage rating:** 600V.

**Temperature rating:** /89: -55 to 200° C  
/90: -55 to 260° C



### Construction Details

**Insulation:** PTFE/polyimide/PTFE tape (inner layer);  
PTFE tape (outer layer).

**Conductor:** /89: Silver-plated high-strength (AWG 20-24)  
or ultra-high-strength copper alloy (AWG 26).  
/90: Nickel-plated high-strength (AWG 20-24)  
or ultra-high-strength copper alloy (AWG 26).

**Colors:** Color coded to MIL-STD-681.

**Identification:** Per MIL-DTL-22759/89 and /90.

### Dimensions, Weights, and Resistance—M22759/89 (silver-plated high-strength conductor)

| M22759<br>P/N  | AWG<br>Size | Stranding | Conductor Diameter |              | Insulation Diameter |             | Weight     | Maximum<br>Resistance |
|----------------|-------------|-----------|--------------------|--------------|---------------------|-------------|------------|-----------------------|
|                |             |           | Minimum            | Maximum      | Minimum             | Maximum     |            |                       |
| M22759/89-20-* | 20          | 19/32     | .0365 (.93)        | .0395 (1.00) | .051 (1.30)         | .055 (1.40) | 4.54 (6.8) | 10.7 (35.1)           |
| M22759/89-22-* | 22          | 19/34     | .0285 (.72)        | .0314 (.80)  | .043 (1.09)         | .047 (1.19) | 2.99 (4.4) | 17.5 (57.4)           |
| M22759/89-24-* | 24          | 19/36     | .0225 (.57)        | .0244 (.62)  | .038 (.965)         | .042 (1.07) | 2.04 (3.0) | 28.4 (93.2)           |
| M22759/89-26-* | †26         | 19/38     | .0175 (.44)        | .0204 (.52)  | .033 (.84)          | .037 (.94)  | 1.52 (2.3) | 56.4 (185)            |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

All values are nominal unless otherwise indicated.

\* Add color coding per MIL-STD-681 (see page 36). †Indicates ultra-high-strength copper alloy conductor.

### Dimensions, Weights, and Resistance—M22759/90 (nickel-plated high-strength conductor)

| M22759<br>P/N  | AWG<br>Size | Stranding | Conductor Diameter |              | Insulation Diameter |             | Weight     | Maximum<br>Resistance |
|----------------|-------------|-----------|--------------------|--------------|---------------------|-------------|------------|-----------------------|
|                |             |           | Minimum            | Maximum      | Minimum             | Maximum     |            |                       |
| M22759/90-20-* | 20          | 19/32     | .0365 (.93)        | .0404 (1.03) | .051 (1.30)         | .055 (1.40) | 4.54 (6.8) | 11.4 (37.4)           |
| M22759/90-22-* | 22          | 19/34     | .0285 (.72)        | .0314 (.80)  | .043 (1.09)         | .047 (1.19) | 2.99 (4.4) | 18.6 (61.0)           |
| M22759/90-24-* | 24          | 19/36     | .0225 (.57)        | .0254 (.65)  | .038 (.965)         | .042 (1.07) | 2.04 (3.0) | 30.1 (98.7)           |
| M22759/90-26-* | †26         | 19/38     | .0175 (.44)        | .0204 (.52)  | .033 (.84)          | .037 (.94)  | 1.52 (2.3) | 58.4 (191)            |

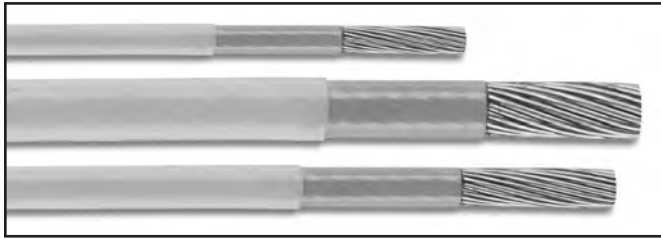
Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

\* Add color coding per MIL-STD-681 (see page 36).

†Indicates ultra-high-strength copper alloy conductor.

All values are nominal unless otherwise indicated.

## MIL-DTL-22759/91, /92 wire—light weight



### Construction Details

**Insulation:** PTFE/polyimide/PTFE tape (inner layer);  
PTFE tape (outer layer).

**Conductor:** /91: Silver-plated copper.  
/92: Nickel-plated copper.

**Colors:** Color coded to MIL-STD-681.

**Identification:** Per MIL-DTL-22759/91 and /92.

**MIL-DTL-22759/91 and /92** wires are light-weight, high-performance aerospace hookup wires with a dual-layer insulation of PTFE/polyimide/PTFE tape, covered with PTFE tape.

These wires are designed for aerospace and other applications requiring excellent thermal stability and light weight.

For versions with high-strength conductors, see MIL-DTL-22759/81 and /82 (page 47)

These wires are available with our unique **Seamless Wrap** PTFE tape insulation (see page 54 for details).

### Performance:

**Voltage rating:** 600V.

**Temperature rating:** /91: -55 to 200° C  
/92: -55 to 260° C

### Dimensions, Resistance, and Weights—M22759/91 (silver-plated copper conductor)

| M22759 P/N     | AWG Size | Stranding | Conductor Diameter |              | Insulation Diameter |             | Weight      | Maximum Resistance |
|----------------|----------|-----------|--------------------|--------------|---------------------|-------------|-------------|--------------------|
|                |          |           | Minimum            | Maximum      | Minimum             | Maximum     |             |                    |
| M22759/91-10-* | 10       | 37/26     | .1060 (2.69)       | .1100 (2.79) | .119 (3.02)         | .123 (3.12) | 30.5 (45.4) | 1.19 (3.90)        |
| M22759/91-12-* | 12       | 37/28     | .0835 (2.12)       | .0874 (2.22) | .096 (2.44)         | .100 (2.54) | 19.5 (29.0) | 1.90 (6.23)        |
| M22759/91-14-* | 14       | 19/27     | .0645 (1.64)       | .0684 (1.74) | .076 (1.93)         | .080 (2.03) | 12.6 (18.7) | 2.88 (9.45)        |
| M22759/91-16-* | 16       | 19/29     | .0515 (1.31)       | .0544 (1.38) | .063 (1.60)         | .067 (1.70) | 8.21 (12.2) | 4.52 (14.8)        |
| M22759/91-18-* | 18       | 19/30     | .0455 (1.16)       | .0484 (1.23) | .056 (1.42)         | .060 (1.52) | 6.57 (9.8)  | 5.79 (19.0)        |
| M22759/91-20-* | 20       | 19/32     | .0365 (.93)        | .0384 (.98)  | .048 (1.22)         | .051 (1.30) | 4.36 (6.5)  | 9.19 (30.1)        |
| M22759/91-22-* | 22       | 19/34     | .0285 (.72)        | .0304 (.77)  | .040 (1.02)         | .043 (1.09) | 2.83 (4.2)  | 15.1 (49.5)        |
| M22759/91-24-* | 24       | 19/36     | .0225 (.57)        | .0244 (.62)  | .034 (.86)          | .038 (.97)  | 1.87 (2.8)  | 24.3 (79.7)        |
| M22759/91-26-* | 26       | 19/38     | .0175 (.44)        | .0194 (.49)  | .030 (.76)          | .034 (.86)  | 1.33 (2.0)  | 38.4 (126)         |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

\* Add color coding per MIL-STD-681 (see page 36).

All values are nominal unless otherwise indicated.

### Dimensions, Resistance, and Weights—M22759/92 (nickel-plated copper conductor)

| M22759 P/N     | AWG Size | Stranding | Conductor Diameter |              | Insulation Diameter |             | Weight      | Maximum Resistance |
|----------------|----------|-----------|--------------------|--------------|---------------------|-------------|-------------|--------------------|
|                |          |           | Minimum            | Maximum      | Minimum             | Maximum     |             |                    |
| M22759/92-10-* | 10       | 37/26     | .1060 (2.69)       | .1120 (2.84) | .119 (3.02)         | .123 (3.12) | 30.5 (45.4) | 1.24 (4.07)        |
| M22759/92-12-* | 12       | 37/28     | .0835 (2.12)       | .0894 (2.27) | .096 (2.44)         | .100 (2.54) | 19.5 (29.0) | 1.98 (6.49)        |
| M22759/92-14-* | 14       | 19/27     | .0645 (1.64)       | .0694 (1.76) | .076 (1.93)         | .080 (2.03) | 12.6 (18.7) | 3.00 (9.84)        |
| M22759/92-16-* | 16       | 19/29     | .0515 (1.31)       | .0554 (1.41) | .063 (1.60)         | .067 (1.70) | 8.21 (12.2) | 4.76 (15.6)        |
| M22759/92-18-* | 18       | 19/30     | .0455 (1.16)       | .0494 (1.25) | .056 (1.42)         | .060 (1.52) | 6.57 (9.8)  | 6.10 (20.0)        |
| M22759/92-20-* | 20       | 19/32     | .0365 (.93)        | .0394 (1.00) | .048 (1.22)         | .051 (1.30) | 4.36 (6.5)  | 9.77 (32.0)        |
| M22759/92-22-* | 22       | 19/34     | .0285 (.72)        | .0314 (.80)  | .040 (1.02)         | .043 (1.09) | 2.83 (4.2)  | 16.0 (52.5)        |
| M22759/92-24-* | 24       | 19/36     | .0225 (.57)        | .0244 (.62)  | .034 (.86)          | .038 (.97)  | 1.87 (2.8)  | 25.9 (85.0)        |
| M22759/92-26-* | 26       | 19/38     | .0175 (.44)        | .0204 (.52)  | .030 (.76)          | .034 (.86)  | 1.33 (2.0)  | 42.2 (138)         |

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M). Resistance in  $\Omega$ /1,000 feet ( $\Omega$ /Km), @20° C.

\* Add color coding per MIL-STD-681 (see page 36).

All values are nominal unless otherwise indicated.

# MIL-DTL-22759 wire with *Seamless Wrap* insulation

Thermax *Seamless Wrap* PTFE wire insulation and cable jacket offers all the advantages of a tape wrap with the smooth appearance and installation characteristics of an extrusion.

*Seamless Wrap* features an outer surface that:

- Looks and feels like an extruded jacket;
- Reduces the possibility of damage during installation or re-routing (no seams to snag);
- Yields a more consistent final O.D. for cleaner stripping, marking, and stripping;
- Accepts clear, permanent laser marking.

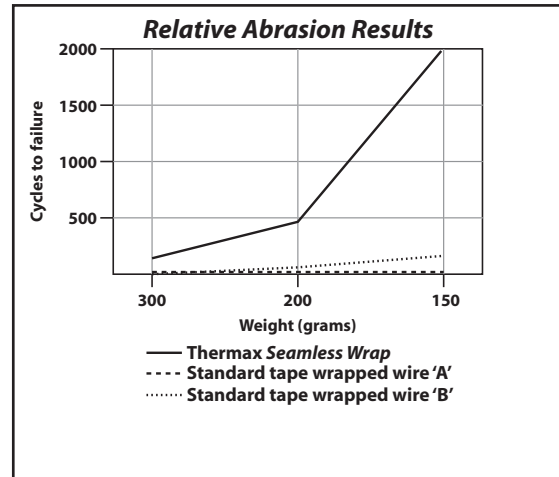
Because of its uniform cross section, *Seamless Wrap* is superior to conventional wrapped tape in:

- Consistent wall thickness;
- Increased dielectric strength;
- Enhanced wet and dry arc propagation resistance.

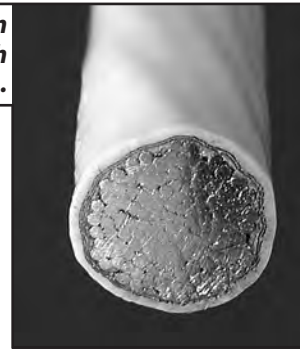
By eliminating the mechanical “weak points” of seams in conventional wrapped tapes, *Seamless Wrap*:

- Significantly improves abrasion resistance, particularly wire-to-wire;
- Eliminates delaminating of sintered tape layers;
- Has enhanced crack resistance for use in SWAMP and fire zone applications.

To order appropriate MIL DTL-22759 wires with *Seamless Wrap* insulation, see the chart below.

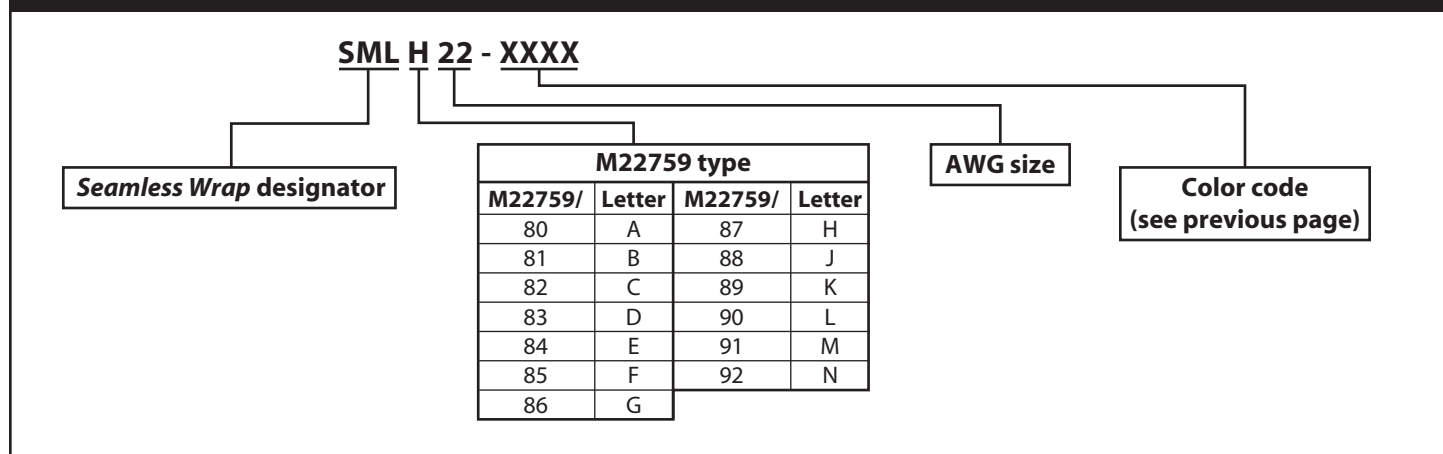


*Seamless Wrap* insulation cuts clean and smooth with no unraveling.



Clear, crisp laser marking enhanced by smooth outer surface.

## MIL-DTL-22759 Wires With *Seamless Wrap* Insulation



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