

SECTION #1



v4.0.6

11/24/2021

Southwire Company

Conductor: 556.5 kcmil 19 Strand AAC "Dahlia"

Area = 0.4369 in², Diameter = 0.856 in, Weight = 0.521 lb/ft, RBS = 9750 lb

Notes =

Stress-strain data from Chart No. 1-945

Chart Notes: 19 Strand AAC/1350-H19. Contact your conductor manufacturer to verify stress-strain coefficients.

Limits and Outputs in Average Tensions

Span = 295.00 ft

RUS 1724E-200 Table 9-3 Medium Load Zone

Creep governs the final sag

| Loading Limits | | | | | | Usage |
|------------------|------------|-----------|----------------------------|------------|---------|---------|
| Cond. Temp °F | Temp °C | Ice in | Wind lb/ft ² | K lb/ft | Limit | |
| 15.0 | -9.4 | 0.25G | 4.00 | 0.20 | 50.0 % | Initial |
| 15.0 | -9.4 | 0.00 | 0.00 | 0.00 | 33.3 %* | Initial |
| 15.0 | -9.4 | 0.00 | 0.00 | 0.00 | 25.0 % | Final |
| 60.0 | 15.6 | 0.00 | 0.00 | 0.00 | | Creep |

| Design Points | | | | | | Final | | | Initial | | |
|------------------|------------|-----------|----------------------------|------------|-----------------|-----------|---------------|-----------|-----------|---------------|-----------|
| Cond. Temp °F | Temp °C | Ice in | Wind lb/ft ² | K lb/ft | Weight lb/ft | Sag ft | Tension lb | H/W ft | Sag ft | Tension lb | H/W ft |
| 15.0 | -9.4 | 0.25G | 4.00 | 0.20 | 1.176 | 3.94 | 3252 | 2765 | 3.30 | 3882 | 3301 |
| 32.0 | 0.0 | 0.25G | 0.00 | 0.00 | 0.865 | 3.93 | 2398 | 2771 | 2.99 | 3146 | 3636 |
| 0.0 | -17.8 | 0.00 | 0.00 | 0.00 | 0.521 | 2.11 | 2685 | 5153 | 1.53 | 3703 | 7107 |
| 15.0 | -9.4 | 0.00 | 0.00 | 0.00 | 0.521 | 2.58 | 2199 | 4220 | 1.75 | 3247* | 6231 |
| 30.0 | -1.1 | 0.00 | 0.00 | 0.00 | 0.521 | 3.12 | 1819 | 3490 | 2.02 | 2801 | 5375 |
| 60.0 | 15.6 | 0.00 | 0.00 | 0.00 | 0.521 | 4.26 | 1331 | 2553 | 2.81 | 2020 | 3875 |
| 90.0 | 32.2 | 0.00 | 0.00 | 0.00 | 0.521 | 5.34 | 1064 | 2040 | 3.82 | 1483 | 2845 |
| 120.0 | 48.9 | 0.00 | 0.00 | 0.00 | 0.521 | 6.30 | 902 | 1729 | 4.88 | 1163 | 2231 |
| 167.0 | 75.0 | 0.00 | 0.00 | 0.00 | 0.521 | 7.62 | 746 | 1429 | 6.37 | 891 | 1708 |
| 212.0 | 100.0 | 0.00 | 0.00 | 0.00 | 0.521 | 8.72 | 652 | 1249 | 7.61 | 747 | 1430 |

* Design Condition

G Glazed Ice Density of 57.0 lb/ft³

Certain information such as the data, opinions or recommendations set forth herein or given by Southwire representatives, is intended as a general guide only. Each installation of overhead electrical conductor and/or conductor accessories involves special conditions creating problems that require individual solutions and, therefore, the recipient of this information has the sole responsibility in connection with the use of the information. Southwire does not assume any liability in connection with such information.

SECTION #2



v4.0.6

11/24/2021

Southwire Company

Conductor: 556.5 kcmil 19 Strand AAC "Dahlia"

Area = 0.4369 in², Diameter = 0.856 in, Weight = 0.521 lb/ft, RBS = 9750 lb

Notes =

Stress-strain data from Chart No. 1-945

Chart Notes: 19 Strand AAC/1350-H19. Contact your conductor manufacturer to verify stress-strain coefficients.

Limits and Outputs in Average Tensions

Span = 313.00 ft

RUS 1724E-200 Table 9-3 Medium Load Zone

Creep governs the final sag

Loading Limits

| Cond. °F | Temp °C | Ice in | Wind lb/ft ² | K lb/ft | Limit % | Usage |
|----------|---------|--------|-------------------------|---------|---------|---------|
| 15.0 | -9.4 | 0.25G | 4.00 | 0.20 | 50.0 % | Initial |
| 15.0 | -9.4 | 0.00 | 0.00 | 0.00 | 33.3 %* | Initial |
| 15.0 | -9.4 | 0.00 | 0.00 | 0.00 | 25.0 % | Final |
| 60.0 | 15.6 | 0.00 | 0.00 | 0.00 | | Creep |

Design Points

| Cond. °F | Temp °C | Ice in | Wind lb/ft ² | K lb/ft | Weight lb/ft | Final | | Initial | |
|----------|---------|--------|-------------------------|---------|--------------|--------|------------|---------|------------|
| | | | | | | Sag ft | Tension lb | Sag ft | Tension lb |
| 15.0 | -9.4 | 0.25G | 4.00 | 0.20 | 1.176 | 4.36 | 3305 | 3.66 | 3934 |
| 32.0 | 0.0 | 0.25G | 0.00 | 0.00 | 0.865 | 4.34 | 2441 | 3.33 | 3187 |
| 0.0 | -17.8 | 0.00 | 0.00 | 0.00 | 0.521 | 2.41 | 2653 | 1.73 | 3697 |
| 15.0 | -9.4 | 0.00 | 0.00 | 0.00 | 0.521 | 2.91 | 2191 | 1.97 | 3247* |
| 30.0 | -1.1 | 0.00 | 0.00 | 0.00 | 0.521 | 3.48 | 1832 | 2.27 | 2810 |
| 60.0 | 15.6 | 0.00 | 0.00 | 0.00 | 0.521 | 4.67 | 1366 | 3.11 | 2051 |
| 90.0 | 32.2 | 0.00 | 0.00 | 0.00 | 0.521 | 5.79 | 1104 | 4.18 | 1528 |
| 120.0 | 48.9 | 0.00 | 0.00 | 0.00 | 0.521 | 6.79 | 942 | 5.27 | 1212 |
| 167.0 | 75.0 | 0.00 | 0.00 | 0.00 | 0.521 | 8.17 | 783 | 6.83 | 936 |
| 212.0 | 100.0 | 0.00 | 0.00 | 0.00 | 0.521 | 9.33 | 686 | 8.13 | 787 |

* Design Condition

G Glazed Ice Density of 57.0 lb/ft³

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SECTION #3



v4.0.6

11/24/2021

Southwire Company

Conductor: 556.5 kcmil 19 Strand AAC "Dahlia"

Area = 0.4369 in², Diameter = 0.856 in, Weight = 0.521 lb/ft, RBS = 9750 lb

Notes =

Stress-strain data from Chart No. 1-945

Chart Notes: 19 Strand AAC/1350-H19. Contact your conductor manufacturer to verify stress-strain coefficients.

Limits and Outputs in Average Tensions

Span = 282.00 ft

RUS 1724E-200 Table 9-3 Medium Load Zone

Creep governs the final sag

| Loading Limits | | | | | | Usage |
|------------------|-----------|------------|-------------------------|----------------|---------|---------|
| Cond. Temp °F | Ice °C | Wind in | K lb/ft ² | Limit lb/ft | Limit | |
| 15.0 | -9.4 | 0.25G | 4.00 | 0.20 | 50.0 % | Initial |
| 15.0 | -9.4 | 0.00 | 0.00 | 0.00 | 33.3 %* | Initial |
| 15.0 | -9.4 | 0.00 | 0.00 | 0.00 | 25.0 % | Final |
| 60.0 | 15.6 | 0.00 | 0.00 | 0.00 | | Creep |

| Design Points | | | | | | Final | | Initial | |
|------------------|-----------|------------|-------------------------|-----------------|-----------|---------------|-----------|---------------|--|
| Cond. Temp °F | Ice °C | Wind in | K lb/ft ² | Weight lb/ft | Sag ft | Tension lb | Sag ft | Tension lb | |
| 15.0 | -9.4 | 0.25G | 4.00 | 0.20 | 1.176 | 3214 | 3.04 | 3845 | |
| 32.0 | 0.0 | 0.25G | 0.00 | 0.00 | 0.865 | 2366 | 2.76 | 3116 | |
| 0.0 | -17.8 | 0.00 | 0.00 | 0.00 | 0.521 | 2711 | 1.40 | 3708 | |
| 15.0 | -9.4 | 0.00 | 0.00 | 0.00 | 0.521 | 2207 | 1.60 | 3247* | |
| 30.0 | -1.1 | 0.00 | 0.00 | 0.00 | 0.521 | 1810 | 1.85 | 2795 | |
| 60.0 | 15.6 | 0.00 | 0.00 | 0.00 | 0.521 | 1305 | 2.59 | 1997 | |
| 90.0 | 32.2 | 0.00 | 0.00 | 0.00 | 0.521 | 1034 | 3.58 | 1449 | |
| 120.0 | 48.9 | 0.00 | 0.00 | 0.00 | 0.521 | 872 | 4.60 | 1127 | |
| 167.0 | 75.0 | 0.00 | 0.00 | 0.00 | 0.521 | 719 | 6.05 | 858 | |
| 212.0 | 100.0 | 0.00 | 0.00 | 0.00 | 0.521 | 627 | 7.24 | 717 | |

* Design Condition

G Glazed Ice Density of 57.0 lb/ft³

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SECTION #4



v4.0.6

11/24/2021

Southwire Company

Conductor: 795.0 kcmil 37 Strand AAC "Arbutus"

Area = 0.6245 in², Diameter = 1.026 in, Weight = 0.745 lb/ft, RBS = 13900 lb

Notes =

Stress-strain data from Chart No. 1-1049

Chart Notes: 37 Strand AAC/1350-H19. Contact your conductor manufacturer to verify stress-strain coefficients.

Limits and Outputs in Average Tensions

Span = 296.00 ft

RUS 1724E-200 Table 9-3 Medium Load Zone

Creep governs the final sag

| Loading Limits | | | | | | Usage |
|------------------|-----------|------------|-------------------------|----------------|---------|---------|
| Cond. Temp °F | Ice °C | Wind in | K lb/ft ² | Limit lb/ft | Limit | |
| 15.0 | -9.4 | 0.25G | 4.00 | 0.20 | 50.0 % | Initial |
| 15.0 | -9.4 | 0.00 | 0.00 | 0.00 | 33.3 %* | Initial |
| 15.0 | -9.4 | 0.00 | 0.00 | 0.00 | 25.0 % | Final |
| 60.0 | 15.6 | 0.00 | 0.00 | 0.00 | | Creep |

| Design Points | | | | | | Final | | Initial | |
|------------------|-----------|------------|-------------------------|-----------------|-----------|---------------|-----------|---------------|-------|
| Cond. Temp °F | Ice °C | Wind in | K lb/ft ² | Weight lb/ft | Sag ft | Tension lb | Sag ft | Tension lb | |
| 15.0 | -9.4 | 0.25G | 4.00 | 0.20 | 1.450 | 3.50 | 4533 | 3.02 | 5267 |
| 32.0 | 0.0 | 0.25G | 0.00 | 0.00 | 1.142 | 3.59 | 3486 | 2.85 | 4392 |
| 0.0 | -17.8 | 0.00 | 0.00 | 0.00 | 0.745 | 1.95 | 4186 | 1.56 | 5230 |
| 15.0 | -9.4 | 0.00 | 0.00 | 0.00 | 0.745 | 2.36 | 3460 | 1.76 | 4629* |
| 30.0 | -1.1 | 0.00 | 0.00 | 0.00 | 0.745 | 2.85 | 2863 | 2.02 | 4034 |
| 60.0 | 15.6 | 0.00 | 0.00 | 0.00 | 0.745 | 3.96 | 2059 | 2.76 | 2958 |
| 90.0 | 32.2 | 0.00 | 0.00 | 0.00 | 0.745 | 5.06 | 1616 | 3.75 | 2178 |
| 120.0 | 48.9 | 0.00 | 0.00 | 0.00 | 0.745 | 6.05 | 1352 | 4.80 | 1702 |
| 167.0 | 75.0 | 0.00 | 0.00 | 0.00 | 0.745 | 7.40 | 1105 | 6.31 | 1295 |
| 212.0 | 100.0 | 0.00 | 0.00 | 0.00 | 0.745 | 8.54 | 959 | 7.56 | 1082 |

* Design Condition

G Glazed Ice Density of 57.0 lb/ft³

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