Southwire

SAG10®

v4.0.4

4/30/2024

Southwire Company

4/0ACSR 60-69degF

Conductor: #4/0 AWG 6/1 ACSR "Penguin"

Area = 0.1939 in², Diameter = 0.563 in, Weight = 0.291 lb/ft, RBS = 8350 lb
Notes =
Stress-strain data from Chart No. 1-938
Limits and Outputs in Average Tensions

Span = 335.30 ft Special Load Zone
Creep governs the final sag

Loading Limits

Cond. Temp ˚F	Temp ˚C	Ice in	Wind lb/ft²	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. Temp ˚F	Temp ˚C	Ice in	Wind lb/ft²	K lb/ft	Weight lb/ft	Final Sag ft	Final Tension lb	Initial Sag ft	Initial Tension lb
15.0	-9.4	0.25G	4.00	0.20	0.849	4.23	2821	4.11	2905
32.0	0.0	0.25G	0.00	0.00	0.544	3.55	2152	3.18	2407
0.0	-17.8	0.00	0.00	0.00	0.291	1.71	2388	1.57	2610
15.0	-9.4	0.00	0.00	0.00	0.291	1.96	2087*	1.70	2401
30.0	-1.1	0.00	0.00	0.00	0.291	2.26	1807	1.87	2190
60.0	15.6	0.00	0.00	0.00	0.291	3.06	1335	2.31	1773
61.0	16.1	0.00	0.00	0.00	0.291	3.10	1321	2.33	1759
62.0	16.7	0.00	0.00	0.00	0.291	3.13	1308	2.34	1746
63.0	17.2	0.00	0.00	0.00	0.291	3.16	1295	2.36	1732
64.0	17.8	0.00	0.00	0.00	0.291	3.19	1283	2.38	1719
65.0	18.3	0.00	0.00	0.00	0.291	3.22	1270	2.40	1705
66.0	18.9	0.00	0.00	0.00	0.291	3.25	1258	2.42	1692
67.0	19.4	0.00	0.00	0.00	0.291	3.28	1245	2.44	1679
68.0	20.0	0.00	0.00	0.00	0.291	3.32	1233	2.46	1665
69.0	20.6	0.00	0.00	0.00	0.291	3.35	1221	2.48	1652

* Design Condition

G Glazed Ice Density of 57.0 lb/ft³

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4/0ACSR 70-79degF

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Loading Limits

Cond. Temp ˚F	Temp ˚C	Ice in	Wind lb/ft²	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
70.0	21.1	0.00	0.00	0.00		Creep

Design Points

Cond. Temp ˚F	Temp ˚C	Ice in	Wind lb/ft²	K lb/ft	Weight lb/ft	Final Sag ft	Final Tension lb	Initial Sag ft	Initial Tension lb
15.0	-9.4	0.25G	4.00	0.20	0.849	4.23	2821	4.20	2842
32.0	0.0	0.25G	0.00	0.00	0.544	3.55	2152	3.27	2336
0.0	-17.8	0.00	0.00	0.00	0.291	1.71	2388	1.62	2524
15.0	-9.4	0.00	0.00	0.00	0.291	1.96	2087*	1.77	2315
30.0	-1.1	0.00	0.00	0.00	0.291	2.26	1807	1.94	2104
70.0	21.1	0.00	0.00	0.00	0.291	3.38	1210	2.62	1561
71.0	21.7	0.00	0.00	0.00	0.291	3.41	1198	2.64	1549
72.0	22.2	0.00	0.00	0.00	0.291	3.45	1187	2.66	1536
73.0	22.8	0.00	0.00	0.00	0.291	3.48	1176	2.69	1523
74.0	23.3	0.00	0.00	0.00	0.291	3.51	1164	2.71	1511
75.0	23.9	0.00	0.00	0.00	0.291	3.55	1154	2.73	1498
76.0	24.4	0.00	0.00	0.00	0.291	3.58	1143	2.75	1486
77.0	25.0	0.00	0.00	0.00	0.291	3.61	1132	2.78	1474
78.0	25.6	0.00	0.00	0.00	0.291	3.65	1122	2.80	1461
79.0	26.1	0.00	0.00	0.00	0.291	3.68	1111	2.82	1449

* Design Condition

G Glazed Ice Density of 57.0 lb/ft³

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4/30/2024

Southwire Company

795AAC 60-69degF

Conductor: 795.0 kcmil 37 Strand AAC "Arbutus"

Area = 0.6244 in², Diameter = 1.026 in, Weight = 0.745 lb/ft, RBS = 13900 lb
Notes =
Stress-strain data from Chart No. 1-1049
Limits and Outputs in Average Tensions

Span = 335.30 ft Special Load Zone
Creep governs the final sag

Loading Limits

Cond. Temp ˚F	Temp ˚C	Ice in	Wind lb/ft²	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. Temp ˚F	Temp ˚C	Ice in	Wind lb/ft²	K lb/ft	Weight lb/ft	Final Sag ft	Final Tension lb	Initial Sag ft	Initial Tension lb
15.0	-9.4	0.25G	4.00	0.20	1.450	4.38	4652	3.78	5389
32.0	0.0	0.25G	0.00	0.00	1.142	4.46	3598	3.57	4496
0.0	-17.8	0.00	0.00	0.00	0.745	2.56	4087	2.01	5213
15.0	-9.4	0.00	0.00	0.00	0.745	3.06	3426	2.26	4629*
30.0	-1.1	0.00	0.00	0.00	0.745	3.62	2890	2.58	4059
60.0	15.6	0.00	0.00	0.00	0.745	4.85	2162	3.44	3046
61.0	16.1	0.00	0.00	0.00	0.745	4.89	2144	3.47	3017
62.0	16.7	0.00	0.00	0.00	0.745	4.93	2127	3.51	2988
63.0	17.2	0.00	0.00	0.00	0.745	4.97	2110	3.54	2959
64.0	17.8	0.00	0.00	0.00	0.745	5.01	2093	3.57	2931
65.0	18.3	0.00	0.00	0.00	0.745	5.05	2076	3.61	2903
66.0	18.9	0.00	0.00	0.00	0.745	5.09	2059	3.64	2875
67.0	19.4	0.00	0.00	0.00	0.745	5.13	2043	3.68	2848
68.0	20.0	0.00	0.00	0.00	0.745	5.17	2027	3.71	2821
69.0	20.6	0.00	0.00	0.00	0.745	5.21	2012	3.75	2794

* Design Condition

G Glazed Ice Density of 57.0 lb/ft³

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Notes =
Stress-strain data from Chart No. 1-1049
Limits and Outputs in Average Tensions

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Loading Limits

Cond. Temp ˚F	Temp ˚C	Ice in	Wind lb/ft²	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
70.0	21.1	0.00	0.00	0.00		Creep

Design Points

Cond. Temp ˚F	Temp ˚C	Ice in	Wind lb/ft²	K lb/ft	Weight lb/ft	Final Sag ft	Final Tension lb	Initial Sag ft	Initial Tension lb
15.0	-9.4	0.25G	4.00	0.20	1.450	4.34	4693	3.83	5318
32.0	0.0	0.25G	0.00	0.00	1.142	4.42	3633	3.63	4423
0.0	-17.8	0.00	0.00	0.00	0.745	2.53	4146	2.04	5121
15.0	-9.4	0.00	0.00	0.00	0.745	3.01	3475*	2.31	4538
30.0	-1.1	0.00	0.00	0.00	0.745	3.58	2929	2.64	3972
70.0	21.1	0.00	0.00	0.00	0.745	5.20	2015	3.87	2707
71.0	21.7	0.00	0.00	0.00	0.745	5.24	2000	3.91	2682
72.0	22.2	0.00	0.00	0.00	0.745	5.28	1985	3.94	2657
73.0	22.8	0.00	0.00	0.00	0.745	5.32	1970	3.98	2633
74.0	23.3	0.00	0.00	0.00	0.745	5.36	1956	4.02	2609
75.0	23.9	0.00	0.00	0.00	0.745	5.40	1941	4.05	2585
76.0	24.4	0.00	0.00	0.00	0.745	5.44	1927	4.09	2562
77.0	25.0	0.00	0.00	0.00	0.745	5.48	1913	4.13	2539
78.0	25.6	0.00	0.00	0.00	0.745	5.52	1900	4.16	2516
79.0	26.1	0.00	0.00	0.00	0.745	5.56	1887	4.20	2494

* Design Condition

G Glazed Ice Density of 57.0 lb/ft³