



# SPEC 55 Wire

SPEC 55 wire is insulated with modified radiation cross-linked ETFE polymer. It is available as single-wall or as a dual-wall construction when used as an airframe wire. Chosen for its balance of properties, SPEC 55 wire has outstanding resistance to chemicals and solvents, electrical arc track resistance and is not susceptible to UV and moisture degradation. SPEC 55 wire is lightweight and can be used continuously at temperatures up to 200°C and as such is widely used on aircraft, satellites and in formula one autosport harness systems.



## Technical Characteristics

Continuous operating temperature	Tin-plated copper	-65°C to +150°C
	Silver or nickel-plated copper	-65°C to +200°C
Voltage rating	450V and 600V	

## Part Numbering System



Primary Wire (single-wall)



Primary Wire (dual-wall)



Twisted Pair



Screened & Jacketed Single



Screened & Jacketed Pair

55 X X X X X- Size- X/X- X

### Jacket Colour

(in accordance with MIL-STD-681 white preferred)

### Primary Wire Insulation Colour

(in accordance with MIL-STD-681)  
 0 = Black      3 = Orange      7 = Violet  
 1 = Brown      4 = Yellow      8 = Grey  
 2 = Red      5 = Green      9 = White  
 2L = Pink      6 = Blue  
 Additional number after base colour indicates stripe

### Conductor Size (AWG)

### Conductor Type

1 = Tin-plated copper  
 2 = Silver-plated copper (non-standard)  
 3 = Nickel-plated copper  
 4 = Silver-plated high strength copper alloy  
 6 = Nickel-plated high strength copper alloy

### Number of Conductors

1 to 9

### Class of Wire

1 = 600V equipment wire, lightweight  
 2 = 600V airframe wire, lightweight  
 4 = 450V equipment wire (55M only sizes 20-30)  
 8 = 600V airframe wire, normal weight

### Construction

0 = Primary wire & unscreened unjacketed cables  
 1 = Round braid screened & jacketed cable  
 2 = Flat braid screened & jacketed cable  
 3 = Round braid screened cable no jacket  
 4 = Jacket cable no screen  
 5 = Spiral screened & jacketed cable  
 8 = Special constructions (part number not coded)  
 9 = Special constructions including lightweight

### Type

A = AWG conductor  
 M = Metric conductor  
 / = Space wire

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## Part Numbering Information

**SPEC 55 wire & cable:** Standard constructions, sizes, strandings, diameters and weights.

### 55A-AWG conductor: Equipment/Interconnect wires & cables

Size	55A011X			55A012X		55A111X		55A112X	
	Stranding (mm)	OD (mm)	Weight (g/m)	OD (mm)	Weight (g/m)	OD (mm)	Weight (g/m)	OD (mm)	Weight (g/m)
30	7/0.102	0.61	0.98	1.27	1.94	1.51	5.10	2.12	7.74
28	7/0.127	0.68	1.35	1.42	2.68	1.59	5.80	2.27	8.90
26	19/0.102	0.81	2.10	1.67	4.20	1.71	6.85	2.53	11.32
24	19/0.127	0.94	2.98	1.93	5.96	1.84	8.20	2.80	13.86
22	19/0.160	1.09	4.20	2.23	8.60	1.99	10.30	3.07	17.90
20	19/0.203	1.27	6.40	2.66	13.26	2.20	13.40	3.50	23.80
18	19/0.250	1.52	9.70	3.20	19.57	2.45	17.88	4.10	32.60
16	19/0.287	1.73	12.40	3.58	25.80	2.67	21.75	4.43	39.70
14	19/0.360	2.20	19.40	4.47	39.60	3.10	30.40	5.30	57.00
12	37/0.320	2.62	29.35	5.38	60.00	3.55	42.46	6.30	81.20
10	37/0.403	3.25	47.40	6.65	96.70	4.20	62.70	-	-
8	133/0.287	4.77	87.60	9.80	178.80	5.80	110.50	-	-

### 55A-AWG conductor: Airframe wires & cables

Size	55A081X			55A082X		55A181X		55A182X	
	Stranding (mm)	OD (mm)	Weight (g/m)	OD (mm)	Weight (g/m)	OD (mm)	Weight (g/m)	OD (mm)	Weight (g/m)
26	19/0.102	1.01	2.50	2.10	5.10	1.71	6.85	2.63	11.32
24	19/0.127	1.14	3.40	2.33	6.84	1.84	8.20	2.80	13.86
22	19/0.160	1.27	4.80	2.64	9.98	1.99	10.30	3.07	17.90
20	19/0.203	1.47	7.00	3.07	14.75	2.20	13.40	3.50	23.80
18	19/0.250	1.78	10.70	3.63	21.90	2.45	17.88	4.10	32.60
16	19/0.287	1.95	13.40	4.06	27.50	2.67	21.75	4.43	39.70
14	37/0.360	2.40	20.50	4.90	42.30	3.10	30.40	6.30	57.00
12	37/0.320	2.82	30.50	5.80	63.00	3.55	42.46	6.30	81.20
10	37/0.403	3.40	48.30	7.10	99.10	4.20	62.70	-	-

### 55M-Metric conductor: Lightweight equipment wires & cables

Size	55M041X			55M042X		55M141X		55M142X	
	Stranding (mm)	OD (mm)	Weight (g/m)	OD (mm)	Weight (g/m)	OD (mm)	Weight (g/m)	OD (mm)	Weight (g/m)
32	7/0.08	0.46	0.60	0.92	1.24	-	-	-	-
30	7/0.10	0.53	0.90	1.06	1.85	1.18	3.61	1.75	5.51
28	7/0.13	0.61	1.23	1.22	2.54	1.26	4.12	1.87	6.72
26	19/0.10	0.71	1.92	1.42	3.96	1.35	4.92	2.07	8.93
24	19/0.13	0.84	2.84	1.68	5.86	1.49	6.50	2.33	11.54

**X =** 1 - Tin-plated copper  
 4 - Silver-plated high strength copper alloy.  
 Recommended for size 24 and 26 in airframe applications.

## Availability

Specifications: MIL-W-22759/32-35 and /41 to /46 and NEMA-WC-27500 (Cables)  
 Def Stan 61-12 Part 33  
 VG95218 Part 20, Type D; Part 21, Type A; Part 22, Type A; Part 23, Type A; Part 1001 and Part 1002  
 VDE 9426, 9427, 9428  
 British Standard 3G233  
 Civil Aviation Authority Accessory Approval EI 1749  
 Boeing BMS 13-48  
 Airbus ABS 0820 to 0826  
 Underwriters Laboratory Style 3467  
 NASA preferred product list  
 European Space Agency 3901/012, 3901/020 and 3901/022

