

WIRE & CABLE

44 Wire

High performance wire and cable

1 Applications

44 wire has a dual wall construction that combines the outstanding physical and electrical characteristics of radiation cross-linked polyalkene with the excellent mechanical and chemical properties of radiation cross-linked polyvinylidene fluoride (PVDF).

44 wire is used extensively throughout industry, applications include commercial wiring avionics, satellites, aircraft, helicopters, ships, trains, offshore platforms and high performance military and motorsport electronics or wherever there is a demand for reliable performance under extreme conditions.

Features & Benefits

- Dual wall construction
- 600,1000 & 2500 voltage ratings
- Small, lightweight and flexible
- Low smoke and low corrosive gas generation
- Resistance to most chemicals and electrical arc tracking

Operating Temperature

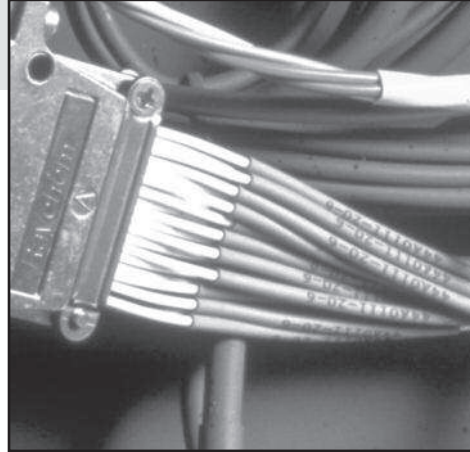
- -65°C to +150°C

Specifications/Approvals

- MIL-W-81044 (wires)
- NEMA-WC-27500 (cables)
- Def Stan 61-12, Part 18 (maintenance)
- Def Stan 61-12 Part 26
- VG 95218 Part 1000
- MTV 6145-005
- NATO stock numbers available for standard constructions

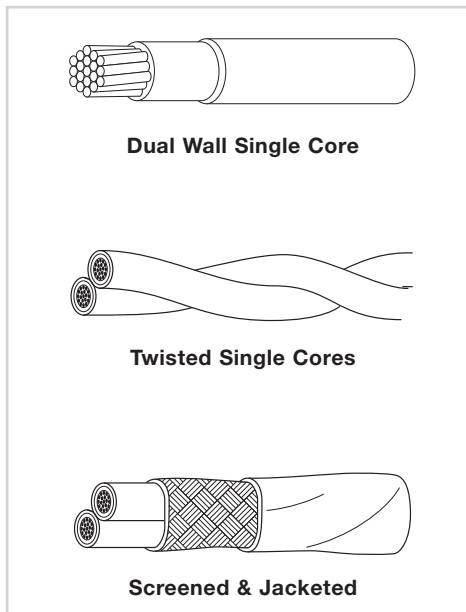
Airframe Application

In airframe applications 44 wire constructions can offer a modern dimensional alternative to MINYVIN and NYVIN (PVC, Nylon and glass braid type wire and cables).



44 Wire Construction

A wide range of 44 spec wire constructions are available, the most commonly used are:



Note: 44 Wire is available in an extensive variety of constructions, voltage ratings, sizes and colours. For further assistance regarding your specific wire and cable requirements, please contact us.

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Product Characteristics

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	Product Characteristics	Product Performance
Physical	Operating temperature	-65°C to +150°C
	Tensile strength (primary insulation)	30N/mm ² (3500psi)
	Ultimate elongation	230% (min)
	Accelerated Ageing 6hrs @ +300°C	Passes mandrel wrap and Dielectric test as per MIL-W-81044
	Electrical arc tracking	Tested to ASTM-D-3032
	Solder iron resistance at +370°C for 1 minute	Pass
	Notch propagation, 0.05mm notch	Pass
	Shrinkage @ +300°C	<1%
	Low temperature bend	-65°C
	Fuels, oils & Solvents resistance	Pass
Electrical	Voltage rating	600V, 1000V and 2500V
	Insulation resistance (min)	1500Mohms/km (5000Mohms/1000ft)
	Voltage withstand	2500V, 3000V and 5000V for 5 minutes, 60Hz, rms
Flammability	Federal aviation reg. FAR-25	Pass
	MIL-W-81044	Pass
	BS-4066 vertical flammability	Pass
	S-424 14751 (Swedish chimney)	Pass
	NFC-32070 (2) (French chimney)	Pass
	IEC-332 Part 3 (cable ladder)	Pass
Smoke/Toxicity	Smoke index, Def Stan 61-12 Part 18	6/metre of wire
	Toxicity index, Def Stan 61-12 Part 18	0.8/metre of wire
	Oxygen index, NES 714	>30%
	Temperature index, NES 715	>300°C

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1 600V Primary Wire Dimensions (all dimensions are in mm)

Conductor Size	Stranding No/mm	Nominal CSA (mm ²)	Nominal Dia. (mm)	Weight (g/m)	Ordering Description
30	7/0.102	0.06	0.69	1.06	44A0111-30-X
28	7/0.127	0.09	0.76	1.48	44A0111-28-X
26	19/0.102	0.15	0.86	2.08	44A0111-26-X
24	19/0.127	0.25	1.02	2.98	44A0111-24-X
22	19/0.16	0.40	1.19	4.46	44A0111-22-X
20	19/0.203	0.60	1.40	6.70	44A0111-20-X
18	19/0.254	1.00	1.65	10.12	44A0111-18-X
16	19/0.287	1.25	1.83	12.80	44A0111-16-X
14	19/0.361	2.00	2.26	19.64	44A0111-14-X
12	37/0.32	3.00	2.75	30.06	44A0111-12-X

1000V Primary Wire Dimensions (all dimensions are in mm)

Conductor Size	Stranding No/mm	Nominal Dia. (mm)	Weight (g/m)	Ordering Description
24	19/0.127	1.17	3.57	44A0211-24-X
22	19/0.16	1.37	5.21	44A0211-22-X
20	19/0.203	1.57	7.54	44A0211-20-X
18	19/0.254	1.85	11.46	44A0211-18-X
16	19/0.287	2.06	14.58	44A0211-16-X
14	19/0.361	2.49	21.88	44A0211-14-X
12	37/0.32	2.97	32.89	44A0211-12-X

600V Single Core Screened & Jacketed Cable Dimensions (all dimensions are in mm)

Conductor Size	Stranding No/mm	Nominal Dia. (mm)	Weight (g/m)	Ordering Description
30	7/0.102	1.40	4.18	44A1111-30-X-X
28	7/0.127	1.47	4.92	44A1111-28-X-X
26	19/0.102	1.57	5.83	44A1111-26-X-X
24	19/0.127	1.83	8.20	44A1111-24-X-X
22	19/0.16	2.00	10.30	44A1111-22-X-X
20	19/0.203	2.26	14.02	44A1111-20-X-X
18	19/0.254	2.62	19.70	44A1111-18-X-X
16	19/0.287	2.79	23.40	44A1111-16-X-X
14	19/0.361	3.22	32.50	44A1111-14-X-X
12	37/0.32	3.70	45.67	44A1111-12-X-X

Note: X = Colour (please refer to **Part Numbering Guide** for the range of colours available).

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600V 2-Core Screened & Jacketed Cable Dimensions (all dimensions are in mm)

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Conductor Size	Stranding No/mm	Nominal Dia. (mm)	Weight (g/m)	Ordering Description
28	7/0.127	2.38	9.40	44A1121-28-X/X-X
26	19/0.102	2.59	11.49	44A1121-26-X/X-X
24	19/0.127	2.99	16.12	44A1121-24-X/X-X
22	19/0.16	3.35	20.59	44A1121-22-X/X-X
20	19/0.203	3.76	26.71	44A1121-20-X/X-X
18	19/0.254	4.32	36.56	44A1121-18-X/X-X
16	19/0.287	4.67	42.98	44A1121-16-X/X-X
14	19/0.361	5.53	61.34	44A1121-14-X/X-X

600V 3-Core Screened & Jacketed Cable Dimensions (all dimensions are in mm)

Conductor Size	Stranding No/mm	Nominal Dia. (mm)	Weight (g/m)	Ordering Description
28	7/0.127	3.14	13.26	44A1131-28-X/X/X-X
26	19/0.102	3.45	18.85	44A1131-26-X/X/X-X
24	19/0.127	3.91	24.66	44A1131-24-X/X/X-X
22	19/0.16	4.29	32.14	44A1131-22-X/X/X-X
20	19/0.203	4.63	40.78	44A1131-20-X/X/X-X
18	19/0.254	5.20	53.02	44A1131-18-X/X/X-X
16	19/0.287	5.57	67.31	44A1131-16-X/X/X-X
14	19/0.361	6.41	85.88	44A1131-14-X/X/X-X

Note: X = Colour (please refer to the **Part Numbering Guide** for the range of colours available). 44 Wire is available in an extensive variety of constructions, voltage ratings, sizes and colours. For further assistance regarding your specific wire and cable requirements, please contact us.

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Ordering

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1 Ordering Information

Colours: 0 = Black, 1 = Brown, 2 = Red, 2L = Pink, 3 = Orange, 4 = Yellow
45 = Yellow/Green, 5 = Green, 6 = Blue, 7 = Violet, 8 = Grey, 9 = White

Standard packaging: 300m reels for "standard" items
If the product is a non-stock item a Minimum Order Quantity (MOQ) will apply.

Ordering Description: Follow steps 1 to 6.

1. Select the type of wire required
2. Select the number of conductors required
3. Select the type of conductor required
4. Select the wire gauge size required
5. Select the primary wire insulation colour(s) required
6. Select the outer jacket colour required

Ordering Examples:

1. A single 22awg 600V white primary wire is required.
The part number required for the above is **44A0111-22-9**
2. A single 16awg 600V white primary wire, with shield and an outer white jacket is required.
The part number required for the above is **44A1111-16-9-9**
3. A two core 600V cable with an overall shield and an outer jacket is required. The gauge size for each of the primary wires is 18awg, each with the same coloured insulation e.g. red. The outer jacket required is white with a red stripe.
The part number required for the above is **44A1121-18-2/2-92**
4. A three core 600V cable with an overall shield and an outer jacket is required. The gauge size for each of the primary wires is 24awg, each with a separate coloured insulation e.g. red, blue and white. The outer jacket required is white.
The part number required for the above is **44A1131-24-2/6/9-9**

Note: For further information or assistance on how to construct your cable requirements, please refer to the 44 Wire **Part Numbering Guide** on the opposite page, or alternatively please contact us.