



# MARMON AEROSPACE & DEFENSE

## RSCC Aerospace & Defense™

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### Product Title:

**TYPE AD50**

**Temperature Rating:**

**-100°C to + 200°C**

**Voltage Rating: 600 V rms**

Low Fluoride Cross-Linked ETFE Wire

**Conductor:** Silver Plated Copper, Stranded

### Drawing Number

**AD50**

**Insulation:** Irradiation Cross-Linked Modified Extruded Ethylene TetraFluoroEthylene ETFE

### Applications

These normal and light weight, high and low temperature space wires utilize an insulation of cross-linked, modified EthyleneTetrafluorethylene copolymer (ETFE) with special scavengers to reduce the amount of Fluoride which could evolve during the manufacturing processes. It is available in a number of constructions as defined in this document.

### Performance Requirements

- Fluoride Evolution: 20 ppm max.
- Accelerated Aging (Crosslink proof): Oven Temperature, 300°C for 7 hours
- Blocking: 200°C
- Cold Bend: -65°C
- Elongation: 100% min
- Flammability: 30 Second (max) 3" (max); No flaming of tissue paper
- Fluid Immersion: Per AS22759/43
- Humidity Resistance: 5000 Meg-ohms for 1000 ft, min
- Identification Durability: 125 cycles min – 500 grams
- Insulation Resistance: 5000 Meg-ohms for 1000 ft. min
- Life Cycle: 500 hrs @ 230°C
- Solderability: MIL-STD-202 Method 208 without steam aging
- Shrinkage: .125" max @ 230°C
- Smoke: 250°C
- Spark Test: 5700 V rms
- Surface Resistance: 500 Meg-ohms min
- Tensile Strength: 5000 psi min
- Thermal Shock: 200°C - .060" max change
- Wicking: 2.25" Max. Dye travel
- Wrap Test: 313°C

### Part Number Designation

The part number will begin with the AD50 part which designates this as a low fluoride irradiation Cross-linked ETFE  
 The slash will be two letter designating if this is a light weight (LW) or normal weight (NW) construction  
 Followed by the AWG size (if alloy this is followed by an A)  
 Followed by the minimum average conductor silver plating thickness.  
 Followed by the color designation.

### Examples:

- AD50/LW-18-40-9** Low Fluoride XLETFE – Light weight – 18AWG – 40 micro-inches – White
- AD50/NW-24A-80-9** Low Fluoride XLETFE – Normal weight – 24AWG Alloy – 80 micro-inches – White

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Revised By: JR Winn

Date: 6/13/17

TABLE 1

Part Number	Conductor			Diameter (inches)	
	AWG	Stranding	Resistance (max.)	Min.	Max.
AD50/LW-30A-40-9	30	7/38	117.4	.022	.026
AD50/LW-30A-80-9	30	7/38	117.4	.022	.026
AD50/LW-28A-40-9	28	7/36	74.4	.025	.029
AD50/LW-28A-80-9	28	7/36	74.4	.025	.029
AD50/LW-26A-40-9	26	19/38	44.8	.030	.034
AD50/LW-26A-80-9	26	19/38	44.8	.030	.034
AD50/LW-26-40-9	26	19/38	38.4	.030	.034
AD50/LW-26-80-9	26	19/38	38.4	.030	.034
AD50/NW-26-40-9	26	19/38	38.4	.038	.042
AD50/NW-26-80-9	26	19/38	38.4	.038	.042
AD50/LW-24A-40-9	24	19/36	28.4	.035	.039
AD50/LW-24A-80-9	24	19/36	28.4	.035	.039
AD50/LW-24-40-9	24	19/36	24.3	.035	.039
AD50/LW-24-80-9	24	19/36	24.3	.035	.039
AD50/NW-24-40-9	24	19/36	24.3	.043	.047
AD50/NW-24-80-9	24	19/36	24.3	.043	.047
AD50/LW-22-40-9	22	19/34	15.1	.041	.045
AD50/LW-22-80-9	22	19/34	15.1	.041	.045
AD50/NW-22-40-9	22	19/34	15.1	.048	.052
AD50/NW-22-80-9	22	19/34	15.1	.048	.052
AD50/LW-20-40-9	20	19/32	9.19	.048	.052
AD50/LW-20-80-9	20	19/32	9.19	.048	.052
AD50/NW-20-40-9	20	19/32	9.19	.056	.060
AD50/NW-20-80-9	20	19/32	9.19	.056	.060
AD50/LW-18-40-9	18	19/30	5.79	.058	.062
AD50/LW-18-80-9	18	19/30	5.79	.058	.062
AD50/NW-18-40-9	18	19/30	5.79	.067	.073
AD50/NW-18-80-9	18	19/30	5.79	.067	.073
AD50/LW-16-40-9	16	19/29	4.52	.066	.070
AD50/LW-16-80-9	16	19/29	4.52	.066	.070
AD50/NW-16-40-9	16	19/29	4.52	.074	.080
AD50/NW-16-80-9	16	19/29	4.52	.074	.080
AD50/LW-14-40-9	14	19/27	2.88	.082	.088
AD50/LW-14-80-9	14	19/27	2.88	.082	.088
AD50/NW-14-40-9	14	19/27	2.88	.091	.097
AD50/NW-14-80-9	14	19/27	2.88	.091	.097
AD50/LW-12-40-9	12	37/28	1.90	.100	.106
AD50/LW-12-80-9	12	37/28	1.90	.100	.106
AD50/NW-12-40-9	12	37/28	1.90	.108	.114
AD50/NW-12-80-9	12	37/28	1.90	.108	.114

All products are manufactured to meet RoHS compliance.

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