

SPECIFICATION CONTROL DRAWING

44/7031

TITLE: WIRE, ELECTRICAL, RADIATION-CROSSLINKED, TIN-COATED COPPER, LIGHTWEIGHT, GENERAL PURPOSE, 300 VOLT

Date
9th March 2005

Issue
5

The complete requirements for procuring the wire herein shall consist of this document, Quality Plan QP-D-0004 Issue 1, UL subject 758, style 1385, File E 38136, CSA C22.2 No. 210.2-M90. Class Number 5851-01 and carries UL and CSA labels to this effect

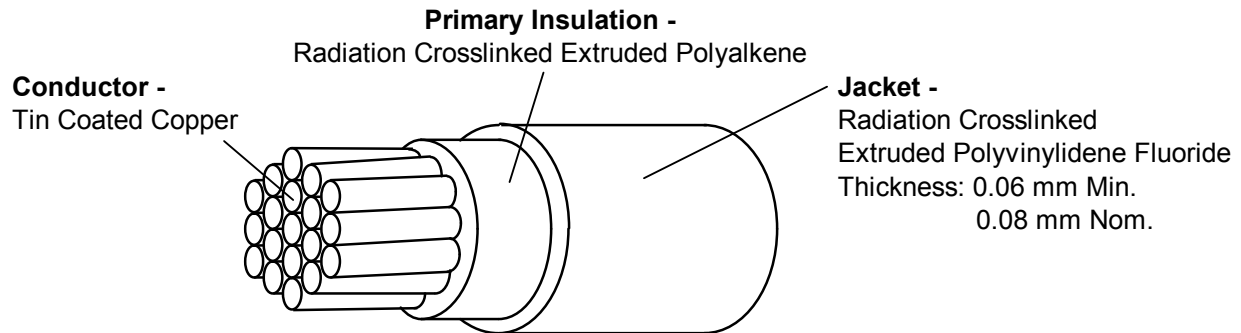


TABLE 1. CONSTRUCTIONAL DETAILS

Part Number	Wire Size (AWG)	Conductor Stranding	Conductor Diameter (mm) Max	FINISHED WIRE			
				Maximum Resistance @ 20°C (Ω/ km)	Diameter (mm)		Maximum Weight (kg/ km)
					Min	Max	
44/7031-28-*	28	7/0.13	0.41	222	0.71	0.81	2.09
44/7031-26-*	26	19/0.10	0.53	133	0.81	0.91	2.83
44/7031-24-*	24	19/0.12	0.66	83.3	0.97	1.07	4.02
44/7031-22-*	22	19/0.15	0.84	50.9	1.14	1.24	5.51
44/7031-20-*	20	19/0.20	1.04	31.8	1.35	1.45	7.75
44/7031-18-*	18	19/0.25	1.32	20.0	1.60	1.70	11.5
44/7031-16-*	16	19/0.30	1.48	13.7	1.80	1.95	15.6

TABLE II. PERFORMANCE DETAILS

Mandrel Diameter (mm ± 3%) Immersion			Weight (kg ± 3%) Immersion	
Life cycle and Accelerated ageing	Cold Bend	Wrap	Life cycle and Accelerated ageing	Cold Bend
9.5	9.53	4.78	0.11	0.23
12.7	12.7	6.35	0.11	0.23
12.7	12.7	6.35	0.17	0.23
19.1	19.1	9.53	0.17	0.45
19.1	19.1	9.53	0.17	0.45
25.4	25.4	12.7	0.23	0.45
25.4	25.4	12.7	0.23	0.45

COLOUR CODE: The "*" in the part number shall be replaced by a standard colour code designator in accordance with Mil Std 681. eg: 44/7031-26-9 White insulation

PRODUCT IDENTIFICATION: 20 AWG and larger shall be marked in a contrasting colour at 600 mm (maximum) intervals as follows: "CSA LL41234 AWM I A 125°C 300V FT1"



COLOURS AND COLOUR CODE DESIGNATORS SHALL BE IN ACCORDANCE WITH MIL-STD-681

WIRE RATING AND ADDITIONAL REQUIREMENTS

TEMPERATURE RATING: 125°C, Maximum continuous conductor temperature

ACCELERATED AGEING: 225 ±3°C for 6 hours

*BLOCKING: 150±2°C for 24 hours

IDENTIFICATION AND COLOUR STRIPING DURABILITY: 125 cycles (250 strokes) (minimum)

FLAMMABILITY: 30 seconds (maximum); 76.2 mm (maximum); no flaming of facial tissue

*HUMIDITY RESISTANCE: Insulation resistance, 152 MΩ for km. (minimum)

INSULATION ELONGATION AND TENSILE STRENGTH:

Primary insulation:

Tensile strength, 20.7 N/ mm² (minimum).

Elongation, 150% (minimum)

INSULATION FLAWS:

Primary insulation:

Spark test, 1.5kV(rms) 100% test

Impulse dielectric test, 6.0 kV(peak), 100% test

Finished wire:

Spark Test, 3.0 kV (rms) 100% test

Impulse dielectric test, 8kV(peak), 100% tests

INSULATION RESISTANCE: 152 MΩ for km (minimum)

*LIFE CYCLE: 185 ±3°C for 168 hours

LOW TEMPERATURE-COLD BEND: -65 ±2°C for 4 hours

SHRINKAGE: 225 ±3°C, 3.2 mm. (maximum) in 300 mm.

*SMOKE TEST: 165 ±3°C. No visible smoke

*SURFACE RESISTANCE: 500 MΩ for 25.4 mm (minimum), both readings

VOLTAGE WITHSTAND TEST (POST ENVIRONMENTAL): 2500volts (rms)

WICKING: 63.5 mm (maximum)

*Qualification test

APPROVAL:

Electronic sign off - no signatures will appear.

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