

MIL-C-24643/1B
3 October 1986
SUPERSEDING
MIL-C-0024643/1A(SH)
8 November 1985
MIL-C-24643/1
28 September 1984

MILITARY SPECIFICATION SHEET

CABLE, ELECTRICAL, 600 VOLTS, TYPE LSCVSF

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the cable described herein shall consist of this specification and the latest issue of MIL-C-24643.

REQUIREMENTS:

Qualification required.

Construction (non-watertight)

Insulated conductors (three)

- First - Copper conductor, AWG size 3, class K stranding, uncoated.
- Second - Separator.
- Third - Ethylene propylene rubber insulation. Minimum wall thickness 0.070 inch. Standard identification code applied by method 3.

Uninsulated conductor (one)

- First - Copper conductor, AWG size 5, class K stranding, uncoated.

Assembly

- First - Three insulated conductors cabled with a lay not greater than 14 inches. The uninsulated conductor shall be placed in one valley. Fillers shall be used in all valleys as necessary to form a round cable.
- Second - A binder tape.
- Third - Cross-linked polyolefin jacket. Nominal wall thickness 0.125 inch.

(B) denotes changes.

AMSC N/A

FSC 6145

DISTRIBUTION STATEMENT A Approved for public release; distribution unlimited

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TABLE I. Details.

Military part no. M24643/1	Type and size	Conductors		Overall diameter (max) (inches)
		Number	AWG	
-01UN	LSCVSF-4	3	3 (class K)	1.45
		1	5 (class K)	

EXAMINATION AND TESTS:

RequirementsBasic electrical:

Voltage withstand - volts, root mean square, minimum....	2500
Insulation resistance - megohms/1000 feet, minimum.....	150
Conductor resistance - ohms/1000 feet at 25°C, maximum	
AWG no. 3	0.221
AWG no. 5.....	0.354
Conductor continuity.....	No failure

Group A:

Visual and dimensional.....	No failure
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Group B:

Drip - 95 + 1°C.....	Zero
Tear - pounds per inch thickness, minimum (ASTM D 470)..	35
Bending endurance - 4 inches maximum diameter roller, at minus 30 + 2°C, cycles, minimum.....	500
Physicals (unaged)	
Insulation	
Tensile strength - lb/in ² , minimum.....	700
Elongation - percent, minimum.....	250
Jacket (cable)	
Tensile strength - lb/in ² , minimum.....	1300
Elongation - percent, minimum.....	160

Group C:

Physicals (aged)	
Insulation	
Air oven	
Tensile strength - percent of unaged, minimum.....	75
Elongation - percent of unaged, minimum..	75
Jacket (cable)	
Air oven	
Tensile strength - percent of unaged, minimum.....	60
Elongation - percent of unaged, minimum..	60
Hot oil immersion	
Tensile strength - lb/in ² , minimum.....	50
Elongation - percent, minimum.....	50
Shrinkage.....	No failure
Heat distortion - percent of unaged, maximum.....	30
Cable filler removability.....	No failure

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QUALIFICATION INSPECTION:

Qualification inspection shall include basic electricals, all of groups A, B, and C, plus the following:

	<u>Requirements</u>
(B) Aging and compatibility (cable)(125 + 5°C).....	No failure
Abrasion resistance (jacket) - scrapes, minimum.....	75
Acid gas equivalent - percent, maximum	
Jacket.....	2
Fillers.....	2
Insulation.....	18
Halogen content - percent, maximum	
Jacket.....	0.2
Fillers.....	0.2
Flame propagation (cable).....	No failure
Immersion (jacket)	
Tensile strength - percent of unaged, minimum.....	50
Elongation - percent of unaged, minimum.....	50
Smoke index, maximum	
Jacket.....	25
Fillers.....	—
(B) Insulation.....	45
Toxicity index, maximum	
Jacket.....	5
Fillers.....	5
Insulation.....	1.5
Durometer (jacket) - (type A) hardness, minimum.....	80
Weathering (jacket).....	No failure

UNIT ORDERING LENGTH: 1000 feet (nominal)

Custodians:

Army - MI
Navy - SH

Preparing activity:

Navy - SH
(Project 6145-1005-01)

Review activities:

Army - AV, CR, ER
Navy - EC
DLA - IS

User activities:

Army - ME, AR, AL
Navy - CG