

INCH-POUND

MIL-DTL-55021/1C  
 11 August 2000  
 SUPERSEDING  
 MIL-C-55021/1B  
 16 April 1991

### DETAIL SPECIFICATION SHEET

#### CABLE, ELECTRICAL, SHIELDED SINGLES, SHIELDED AND JACKETED SINGLES, TWISTED PAIRS AND TRIPLES, INTERNAL HOOKUP, -40 TO 105 °C

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

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of MIL-DTL-55021 listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation.

#### REQUIREMENTS.

Cable construction: The cable shall consist of shielded singles, shielded and jacketed singles, or twisted pairs or triples in accordance with MIL-DTL-55021 (see figure 1 for an example).

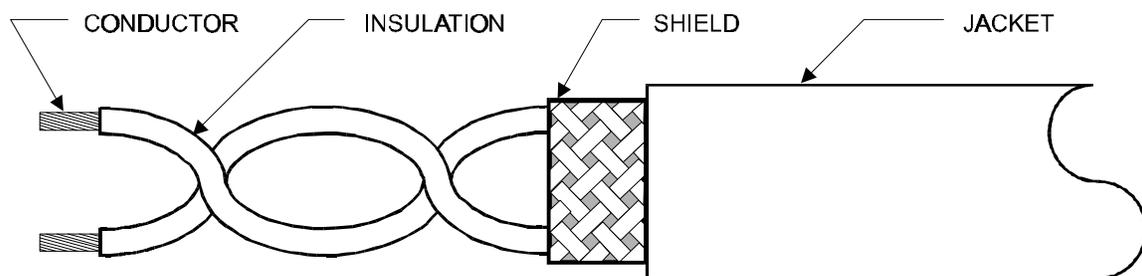


FIGURE 1. Shielded and jacketed cable

Type of wire(s): The insulated wires used in constructing the cable shall conform to MIL-DTL-16878/1 (type B), MIL-DTL-16878/2 (type C), MIL-DTL-16878/3 (type D), MIL-DTL-16878/17 (type BJ), MIL-DTL-16878/18 (type CJ), or MIL-DTL-16878/19 (type DJ) as specified (see 6.2 of MIL-DTL-55021). All wires in the cable shall be of the same wire type and AWG size.

Length of lay: The length of lay shall be as specified in table I.

Shield coverage and braid angle: If shielding is required by the contract or order (see 1.2.1.5 of MIL-DTL-55021), the minimum allowable coverage shall be 90 percent, and the angle made by the shielding braid with the longitudinal axis of the twisted conductors shall be between 20 and 40 degrees.

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TABLE I. Length of lay.

Wire size range (AWG)	Inches per twist	Twist tolerance (inch)
32 to 24	2.0	±.5
22 to 18	2.5	±.5
16 to 14	3.5	±.5
12 to 10	4.5	±.5
8 to 6	5.5	±.5
4 to 1/0	6.0	±.5

Jacket materials: If jacketing is required by the contract or order (see 1.2.1.5 of MIL-DTL-55021), the jacket materials shall be polyvinyl chloride or polyamide.

Jacket wall thickness: The jacket wall thickness shall be in accordance with table II or table III. When a polyamide jacket of greater than .250 inches is specified, a polyamide braid conforming to MIL-C-572 shall be used.

TABLE II. Polyvinyl chloride jacket thickness.

Diameter over braided shield <sup>1/</sup> (inch)	Jacket thickness (nominal) (inch)	Jacket thickness (minimum) (inch)
Under .375	.016	.008
.375 and over	.025	.015

Notes:

<sup>1/</sup> When specifying a jacket thickness, both unshielded and shielded constructions are applicable.

TABLE III. Polyamide jacket thickness.

Diameter over braided shield <sup>1/</sup> (inch)	Jacket thickness (nominal) (inch)	Jacket thickness (minimum) (inch)
Under .200	.006	.004
.200 and over	.008	.006

Notes:

<sup>1/</sup> When specifying a jacket thickness, both unshielded and shielded constructions are applicable.

Heat resistance: The cable shall be conditioned at 105±5 °C for 96+1, -0 hours.

## CONCLUDING MATERIAL

Custodians:

Army - MI  
Navy - AS  
Air Force - 11  
DLA - CC

Preparing activity:

DLA - CC

(Project 6145-2242-01)

Review activities:

Army - AR, AT, CR, CR4