

INCH-POUND

MIL-DTL-55021/1D
23 March 2011
SUPERSEDING
MIL-DTL-55021/1C
11 August 2000

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 MIL-DTL-55021.

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 herein).

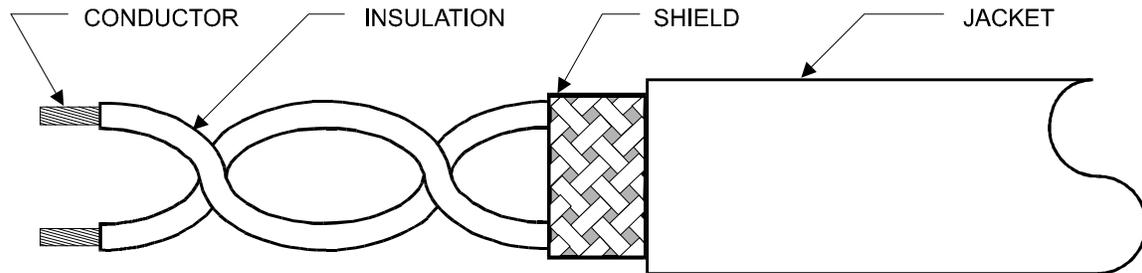


FIGURE 1. Shielded and jacketed cable.

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 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 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.

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 MIL-DTL-55021), the jacket materials shall be polyvinyl chloride or polyamide.

Jacket wall thickness: The jacket wall thickness shall be specified in 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 ^{1/} (inch)	Jacket thickness (nominal) (inch)	Jacket thickness (minimum) (inch)
Under .375	.016	.008
.375 and over	.025	.015

^{1/} When specifying a jacket thickness, both unshielded and shielded constructions are applicable.

TABLE III. Polyamide jacket thickness.

Diameter over braided shield ^{1/} (inch)	Jacket thickness (nominal) (inch)	Jacket thickness (minimum) (inch)
Under .200	.006	.004
.200 and over	.008	.006

^{1/} 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.

Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issues due to the extensiveness of the changes.

Referenced documents. In addition to MIL-DTL-55021, this document references the following:

MIL-C-572
MIL-DTL-16878/1
MIL-DTL-16878/2
MIL-DTL-16878/3
MIL-DTL-16878/17
MIL-DTL-16878/18
MIL-DTL-16878/19

CONCLUDING MATERIAL

Custodians:

Army - MI
Navy - AS
Air Force – 85
DLA - CC

Preparing activity:
DLA - CC

(Project 6145-2011-011)

Review activities:

Army - AR, AT, CR, CR4

Note: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information using the Assist Online database at <https://assist.daps.dla.mil>.