



DEFENSE LOGISTICS AGENCY
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January 6, 2026

MEMORANDUM FOR MILITARY/INDUSTRY DISTRIBUTION

SUBJECT: Initial Drafts of: MIL-DTL-17/90, /92-/95, and /97
Project Numbers: 6145-2026-002 through 6145-2026-007

These initial drafts for these subject documents, are now available for viewing and downloading from the DLA Land and Maritime-VA Web site:

<https://landandmaritimeapps.dla.mil/programs/milspec/default.aspx>

Major changes to these documents include 5 year review; adding qualification tables for clarification, removing inactive review activities, and updating document to be in accordance to MIL-DTL-961.

Concurrence or comments are required at this Center within 45 days from the date of this letter. Late comments will be held for the next coordination of the document. Comments from military departments must be identified as either "Essential" or "Suggested". Essential comments must be justified with supporting data. Military review activities should forward comments to their custodians of this office, as applicable, in sufficient time to allow for consolidating the department reply. Lack of response to this draft will be construed as concurrence

If these documents are of interest to you, please provide your comments or suggested changes. The point of contact for this document is Mr. Candelaria, phone number 614-693-3113, e-mail Eric.Candelaria@dlam.mil, or may be mailed via the US Postal Service to DLA LAND AND MARITIME, ATTN: VAI (Attention: Eric Candelaria), P.O. Box 3990, Columbus, OH 43218-3990.

Sincerely,

-/Signed/-
MUHAMMAD AKBAR
Chief,
Interconnection Branch

NOTE: This draft, dated 6 January 2026 prepared by DLA Land and Maritime-VAI has not been approved and is subject to modification.
DO NOT USE PRIOR TO APPROVAL. (Project 6145-2026-002)

INCH-POUND

MIL-DTL-17/90B
w/AMENDMENT 1
DRAFT 2025
SUPERSEDING
MIL-DTL-17/90B
19 June 2015

MILITARY SPECIFICATION SHEET

CABLE, RADIO FREQUENCY, COAXIAL, 93 OHMS, M17/90-RG71

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-17.

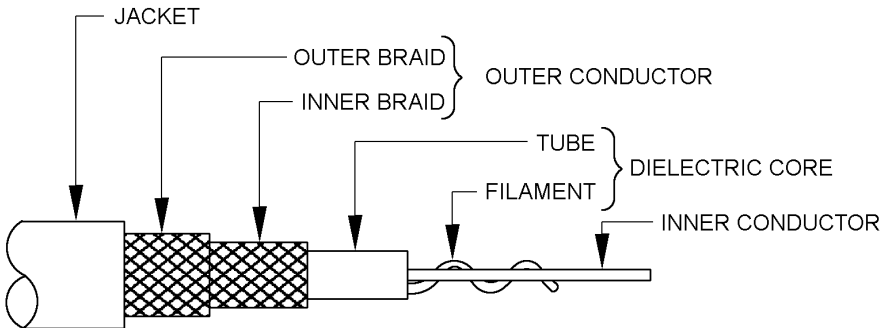


FIGURE 1. Configuration.

TABLE I. Description.

Components	Construction details	
Inner conductors	Solid, copper-covered, steel wire. Diameter: .0253 ± .0010.	
Dielectric core	Type A-3: Air-spaced polyethylene. A monofilament thread, .035 inch approximate diameter with a lay of 1/2 inch approximate, under an extruded tube. Diameter: .146 inch ± .005. Alternate: A continuous tube, .003 inch thick maximum, under two continuous spiral fins, with a lay of 1-1/4 inches approximate, under an extruded tube.	
Outer conductor	Double braid of copper wire. Diameter: .208 inch, maximum.	
Inner braid	Wire gauge: AWG #34	Alternate AWG #36
	Wire coating: Bare	Tinned
	Coverage: 94.3% nominal	95.2% nominal
	Carriers: 16	24
	Ends: 7	6
	Picks/inch: 8.2 ± 10%	12.0 ± 10%
Outer braid	Wire gauge: AWG #36	AWG #36
	Wire coating: Tinned	Tinned
	Coverage: 93.8% nominal	94.6% nominal
	Carriers: 16	24
	Ends: 9	6
	Picks/inch: 10.6 ± 10%	16.0 ± 10%
Jacket	Type IIIa. Diameter: .245 inch ± .005.	



ENGINEERING INFORMATION:

Continuous working voltage: 750 V rms, maximum.

Operating frequency: 1 GHz, maximum.

Velocity of propagation: 84 percent, nominal.

Power rating: See figure 2.

Operating temperature range: -55° to +85°C.

Inner conductor properties:

DC resistance (maximum at 20°C): 4.4 ohms per 100 feet.

Elongation: 1 percent, minimum.

Tensile strength: 110 klb/inch², minimum.

Engineering notes: This cable useful in low temperature applications (see connector series TNC or BNC per MIL-PRF-39012).

REQUIREMENTS:

Dimensions, configuration, and descriptions: See figure 1 and table I.

Environmental and mechanical:

Adhesion of conductors: Not applicable.

Aging stability: +90° ± 2°C.

Stress crack resistance: Not applicable.

Outer conductor integrity: Not applicable.

Cold bend: -55 ± 2°C.

Dimensional stability: Not applicable.

Contamination: Not applicable.

Bendability: Not applicable.

Flammability: Not applicable.

Weight: 5 pounds per 100 feet, maximum.

Electrical:

Test frequency: 50 MHz to 1 GHz.

Spark test: 5,000 V rms, +25%, -0%.

Voltage withstanding: 3,000 Vrms, minimum.

Insulation resistance: Not applicable.

Corona extinction voltage: Not applicable.

Characteristic impedance: 93 ohms ± 5.

Attenuation: 8.0 dB per 100 feet at 400 MHz.

Structural return loss: Not applicable.

Capacitance: 14.5 pF per foot, maximum.

Capacitance stability: ± 1.5 percent.

Capacitance unbalance: Not applicable.

Transmission unbalance: Not applicable.

Mechanically induced noise voltage: Not applicable.

Time delay: Not applicable.

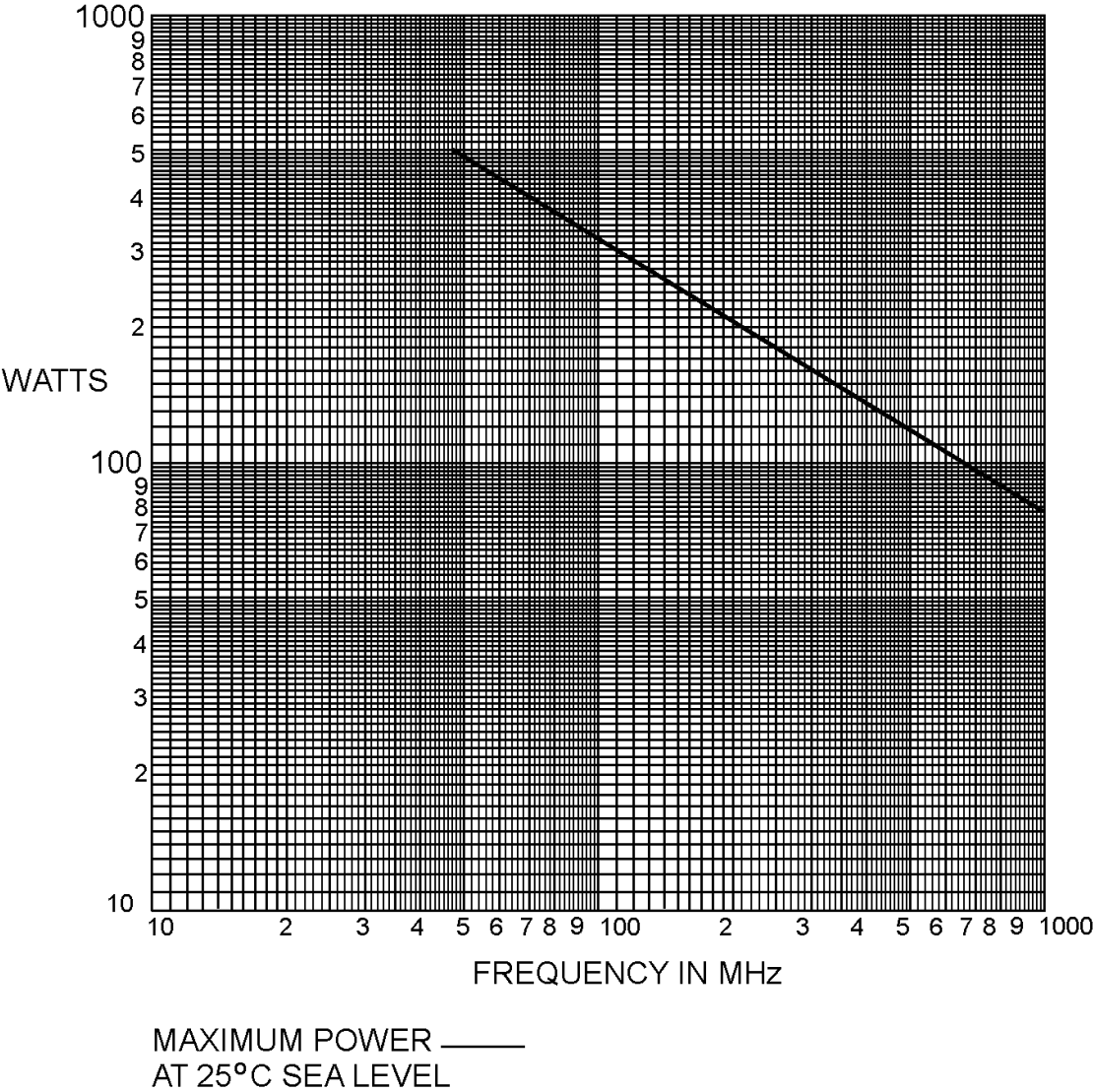


FIGURE 2. Power rating.

Part or Identifying Number (PIN): M17/90-RG71.

Marking: Applicable

Marking Durability: 125 cycles (250 strokes), 1 pound

Workmanship: Applicable

Supersession data: See table II.

Qualification: Shall consist of the inspections specified in table III.

TABLE II. Cross reference of part number.

PIN	Superseded PIN or type designation
M17/90-RG71	RG71B/U

TABLE III. Qualification and Group A, B, and C Table.

Group	Qualification inspection	Requirement paragraph	Test paragraph	Qual- # of Specimens	Conf - # of Specimens	Conformance inspection
I	In-process inspection		4.5	Entire sample		
	Continuity	3.7.1	4.8.2	Entire sample		
	Spark test	3.7.2	4.8.3	Entire sample		
	Voltage withstanding	3.7.3	4.8.4	Entire sample		
	Insulation resistance	3.7.4	4.8.5	Entire Sample		
	Visual and mechanical inspection	3.6	4.8.1	Entire sample	Per Table VIII	A
	Diameter measurements	3.6.1	4.8.1.1	Entire sample	Per Table VIII	A
	Out-of-roundness	3.6.2	4.8.1.2	Entire Sample		
	Eccentricity of inner conductor	3.6.3	4.8.1.3	2	Per Table VIII	A
	Adhesion of conductors	3.6.4	4.8.1.4	4	Per Table VIII	A
	Marking	3.8	4.8.1	Entire sample	Per Table VIII	A
	Marking Durability	3.8.2	4.8.39	3	Per Table VIII	A
	Workmanship	3.10	4.8.1	Entire sample	Per Table VIII	A
II	Corona extinction voltage	N/A				
	Characteristic impedance	3.7.6	4.8.7	1	Per Table VIII	A
	RF transmission loss (attenuation)	3.7.7	4.8.8	2	Per Table VIII	A
	Standing wave ratio (return loss)	N/A				
	Capacitance	3.7.9	4.8.10	1	Per Table VIII	B
	Capacitance stability	3.7.10	4.8.11	1	Per Table VIII	C
	Capacitance unbalance	N/A				
	Transmission unbalance	N/A				
	Inductance	N/A				
	Mechanically induced noise voltage	N/A				
	Time delay	N/A				
	Aging stability	3.7.15	4.8.16	4	Per Table VIII	C

TABLE III. Qualification and Group A, B, and C Table – Continued.

Group	Qualification inspection	Requirement paragraph	Test paragraph	Qual- # of Specimens	Conf - # of Specimens	Conformance inspection
II	Stress crack resistance	N/A				
	Outer conductor integrity	N/A				
	Cold bend	3.7.18	4.8.19	3	Per Table VIII	B
	Dimensional stability	N/A				
	Contamination	N/A				
	Bendability	N/A				
	Flammability	N/A				
	Flame propagation	N/A				
	Acid gas generation	N/A				
	Halogen content	N/A				
	Immersion	N/A				
	Smoke index	N/A				
	Toxicity index	N/A				
	Durometer hardness	N/A				
	Weathering	N/A				
	Abrasion resistance	N/A				
	Tear strength	N/A				
	Heat distortion	N/A				
	Physicals (aged)	N/A				
	Tensile strength and elongation	N/A				
	Weight	3.9	4.8.24	1	Per Table VIII	B

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

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Referenced documents. In addition to MIL-DTL-17, this document references the following:

MIL-PRF-39012

CONCLUDING MATERIAL

Custodians:

Army – CR
Navy – EC
Air Force – 85
DLA - CC

Preparing activity:
DLA - CC

(Project 6145-2026-002)

Review activities:

Army – AT, CR4, MI
Navy – AS, MC, OS, SH
Air Force – 19, 99

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 above using the ASSIST Online database at <https://assist.dla.mil>.