

INCH-POUND
MIL-DTL-27072/94D
w/AMENDMENT 1
23 January 2018
SUPERSEDING
MIL-DTL-27072/94D
8 August 2006

DETAIL SPECIFICATION SHEET

CABLE, SPECIAL PURPOSE, ELECTRICAL,
SINGLE CONDUCTOR, SINGLE SHIELDED

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-27072.

Inactive for new design. For new design use MIL-DTL-55021/2.

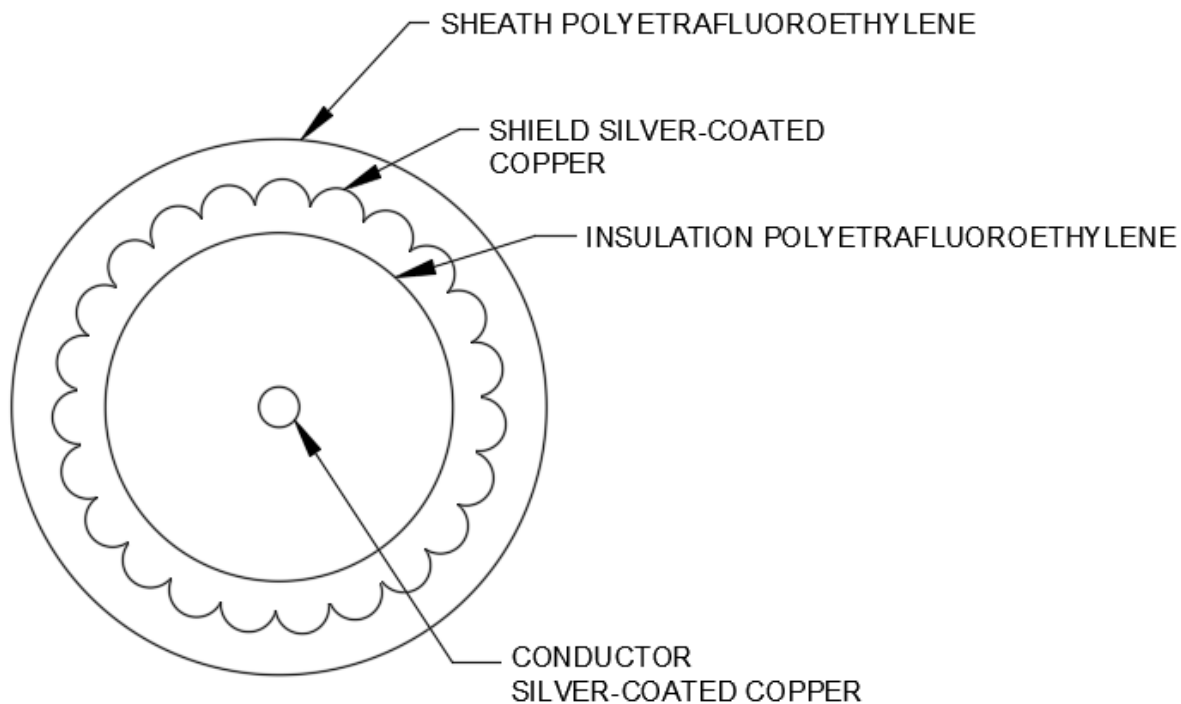


FIGURE 1. Cable configuration.



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REQUIREMENTS:

Design and construction:	See figure 1
Number of conductors:	1
Temperature rating:	200 °C
Components:	
Basic wire:	Either NEMA-HP3 or SAE-AS22759 (see table I)
Conductor:	Silver-coated copper
Primary insulation:	Polytetrafluoroethylene
Colors:	White
Jacket over insulation:	Not applicable
Filler:	Not applicable
Cabling:	Not applicable
Binder tape material:	Not applicable
Insulation:	Polytetrafluoroethylene extruded
Marking tape:	Marking tape shall be placed under the sheath or shield
Shield:	
Material:	Silver-coated copper
Gauge:	38 AWG
Braid angle:	20 to 40 degrees
Jacket under shield:	Not applicable
Sheath:	
Material:	Polytetrafluoroethylene
Wall thickness:	Not applicable
Tensile strength:	In accordance with MIL-DTL-27072
Ultimate elongation:	In accordance with MIL-DTL-27072
Accelerated aging:	In accordance with MIL-DTL-27072
Color:	See MIL-DTL-27072
Finished cable:	See table I
Cold bend:	Mandrel size in accordance with MIL-DTL-27072
Dielectric withstanding voltage:	2,000 V rms
Conductor resistance:	In accordance with basic wire specification

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TABLE I. Construction data.

PIN M27072/94 <u>1/</u> , <u>2/</u>	Wire size	Number of Strands <u>3/</u>	Strand size (AWG)	Nominal diameter Inches(mm)	Finished cable diameter inches (mm)	
					Minimum	Maximum
EDDE*	14	19	27	.072 (1.83)	.125 (3.18)	.152 (3.86)
FDDE*	16	19	29	.057 (1.45)	.111 (2.82)	.138 (3.51)
GDDE*	18	19	30	.050 (1.27)	.102 (2.59)	.121 (3.07)
JDDE*	20	19**	32	.041 (1.04)	.095 (2.41)	.112 (2.84)
KDDE*	20	7	28	.038 (.97)	.092 (2.34)	.109 (2.77)
LDDE*	22	19**	34	.032 (.81)	.086 (2.18)	.103 (2.62)
MDDE*	22	7	30	.030 (.76)	.084 (2.13)	.101 (2.57)
NDDE*	24	19**	36	.035 (.89)	.076 (1.93)	.098 (2.49)
PDDE*	24	7	32	.024 (.61)	.073 (1.85)	.095 (2.41)
SDDE*	26	7	34	.019 (.48)	.068 (1.73)	.090 (2.29)
TDDE*	28	7	36	.015 (.38)	.064 (1.63)	.086 (2.18)
WDDE*	30	7	38	.012 (.30)	.061 (1.55)	.083 (2.11)

PIN M27072/94 <u>1/</u> , <u>2/</u>	Basic wire (either / or may be used) (reference)		Formerly basic wire M16878/4 or M16878/21 (reference)
	M22759	NEMA HP3	
EDDE*		EWBKE*	BKE9
FDDE*	/11-16*	EWBJE*	BJE9
GDDE*	/11-18*	EWBHE*	BHE9
JDDE*	/11-20*	EWBGE*	BGE9
KDDE*	-	EXBGB* EWBGB*	BGB9
LDDE*	/11-22*	EWBFE*	BFE9
MDDE*	-	EXBFB* EWBFB*	BFB9
NDDE*	/11-24*	EWBEE*	BEE9
PDDE*	-	EXBEB* EWBEB*	BEB9
SDDE*	-	EXBDB* EWBDB*	BDB9
TDDE*	/11-28*	EWBCB*	BCB9
WDDE*	-	EXBBB* EWBBB*	BBB9

1/ Part or Identifying Number (PIN).

2/ Asterisks (*) shall be replaced by the appropriate color designator in accordance with MIL-STD-681 and table I. If a stripe or a band is to be added, it shall be in accordance with MIL-DTL-27072.

3/ Asterisks (**) Preferred stranding number for wire size.

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Note: These constructions supersede the shielded single conductor cables of the same construction formerly covered by MIL-DTL-16878.

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-27072, this document references the following:

NEMA-HP3
SAE-AS22759
MIL-STD-681
MIL-DTL-16878
MIL-DTL-55021/2

CONCLUDING MATERIAL

Custodians:
Army - CR
Navy - SH
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 6145-2018-006)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organization and responsibilities can change, please verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.