

REVISIONS			
LTR	DESCRIPTION	DATE	APPROVED
C	Added additional shield style to table X. Editorial changes throughout.	15 June 2010	Abdo Abdouni
D	Added approved supplier. Technical changes throughout.	1 December 2010	Abdo Abdouni
E	Changed QPL-22759 to QPL-AS22759. Make table showing what SAE QPL companies should be listed on in order to make each particular component wire DLA Land and Maritime Drawing. Added SAE AS22759/80 - /92 and /180 - /192 to referenced docs. Copied and pasted wire type PIN system from component wire DLA Land and Maritime Drawings. Changed UV laser marking from 62% to 55%. Added pages 20 – 24. Added additional cable wire designators. Added jacket style 25. Updated PINs. Updated shield materials. Updated address. Editorial changes throughout.	4 June 2020	Abdo Abdouni
F	Restored Draka Fileca and corresponding PINS to manufacturers list. Correct 04044 title. Add Drawings to section 2. Replaced NCSLI Z540 with ISO/IEC 17025.	23 March 2021	Abdo Abdouni
G	Added Amphenol CIT to manufacturers list. Removed hydrolysis resistant polyimide tape requirement for jacket. Removed 3% leaded tin requirement. Fixed incorrect reference in Table V. Removed ID Methods C and D from Section 3.3. Removed unused ASTM B33 and D4591 references. Updated Sections 3.7.2.2.1 and 3.7.2.2.2 to reference ASTM B971 and B972 instead, in alignment with NEMA WC27500. Updated Carlisle Nogales, AZ location to Amphenol CIT Nogales, MX location.	11 September 2025	Eric Candelaria

CURRENT DESIGN ACTIVITY CAGE CODE
037Z3 HAS CHANGED NAMES TO:
DLA LAND AND MARITIME
COLUMBUS, OHIO 43218-3990



Prepared in accordance with ASME Y14.100

Selected item drawing

REV	F	F	F	G	F	B	A	A	B	A								
PAGE	15	16	17	18	19	20	21	22	23	24								
REV STATUS OF PAGES	REV			G	E	E	E	F	E	G	G	F	F	G	G	F	F	
	PAGE			1	2	3	4	5	6	7	8	9	10	11	12	13	14	
PMIC		PREPARED BY William Carpenter							DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OHIO 43218-3990									
Original date of drawing 12 July 2004		CHECKED BY Lee Surowiec							TITLE CABLE, POWER, ELECTRICAL AND SPECIAL PURPOSE, SHIELDED AND UNSHIELDED, ELECTRICAL, COMPOSITE WIRE, POLYTETRAFLUOROETHYLENE/POLYIMIDE INSULATED									
		APPROVED BY Richard L. Taylor																
		SIZE A	CAGE CODE 037Z3						DWG. NO.					04049				
			REV G						PAGE 1					OF 24				

AMSC N/A

6145-2025-E07

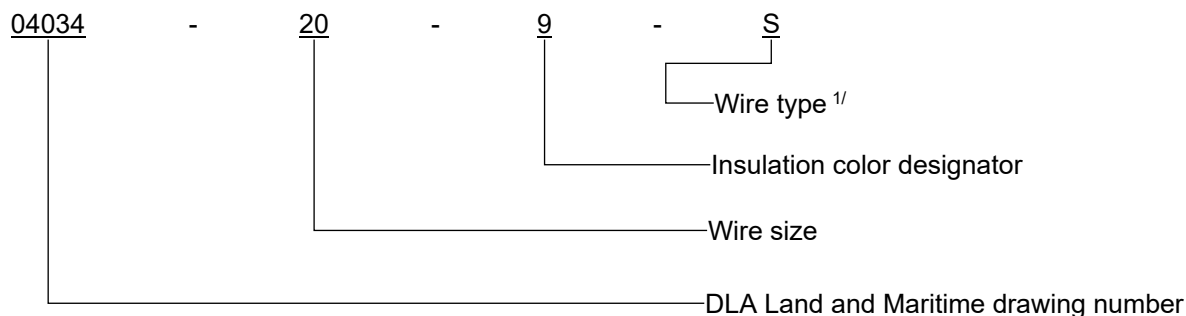
DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

1. SCOPE

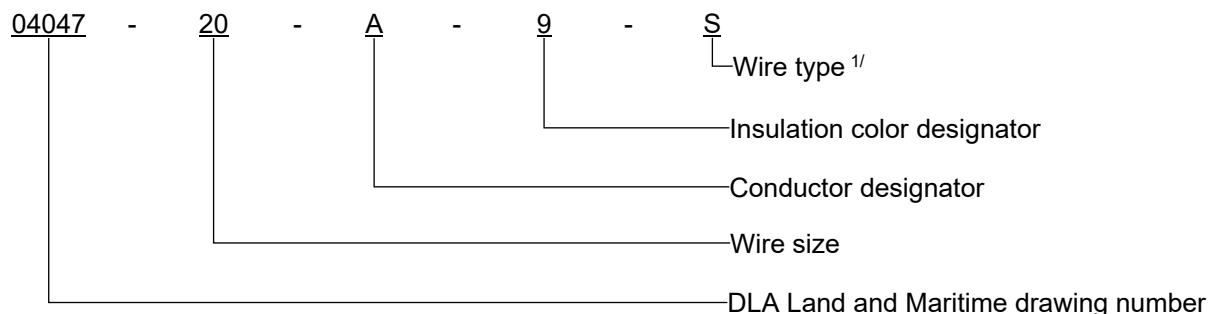
1.1 Scope. This drawing covers the performance characteristics for finished cables. The component wires are covered by DLA Land and Maritime drawings 04034 through 04048. These cables are intended for signal and power applications with environmental or temperature conditions found in commercial aircraft, military aircraft, and high performance vehicles.

1.2 Part or Identifying Number (PIN). The PIN for individual wires are as specified below. See respective DLA Land and Maritime drawing for details.

Drawings 04034 through 04046:



Drawings 04047 and 04048:



1/ 1/ When a SAE-AS22759/1** wire is used, wire type shall be "S" and "-S" added. This will be referred to as "Wire Type S". When SAE-AS22759/** wire is used, wire type is not used. The wire type and the preceding hyphen are not used. This will be referred to as "Wire Type Blank".

DEFENSE SUPPLY CENTER, COLUMBUS
COLUMBUS, OH 43218-3990

SIZE
A

CAGE CODE

037Z3

REV

E

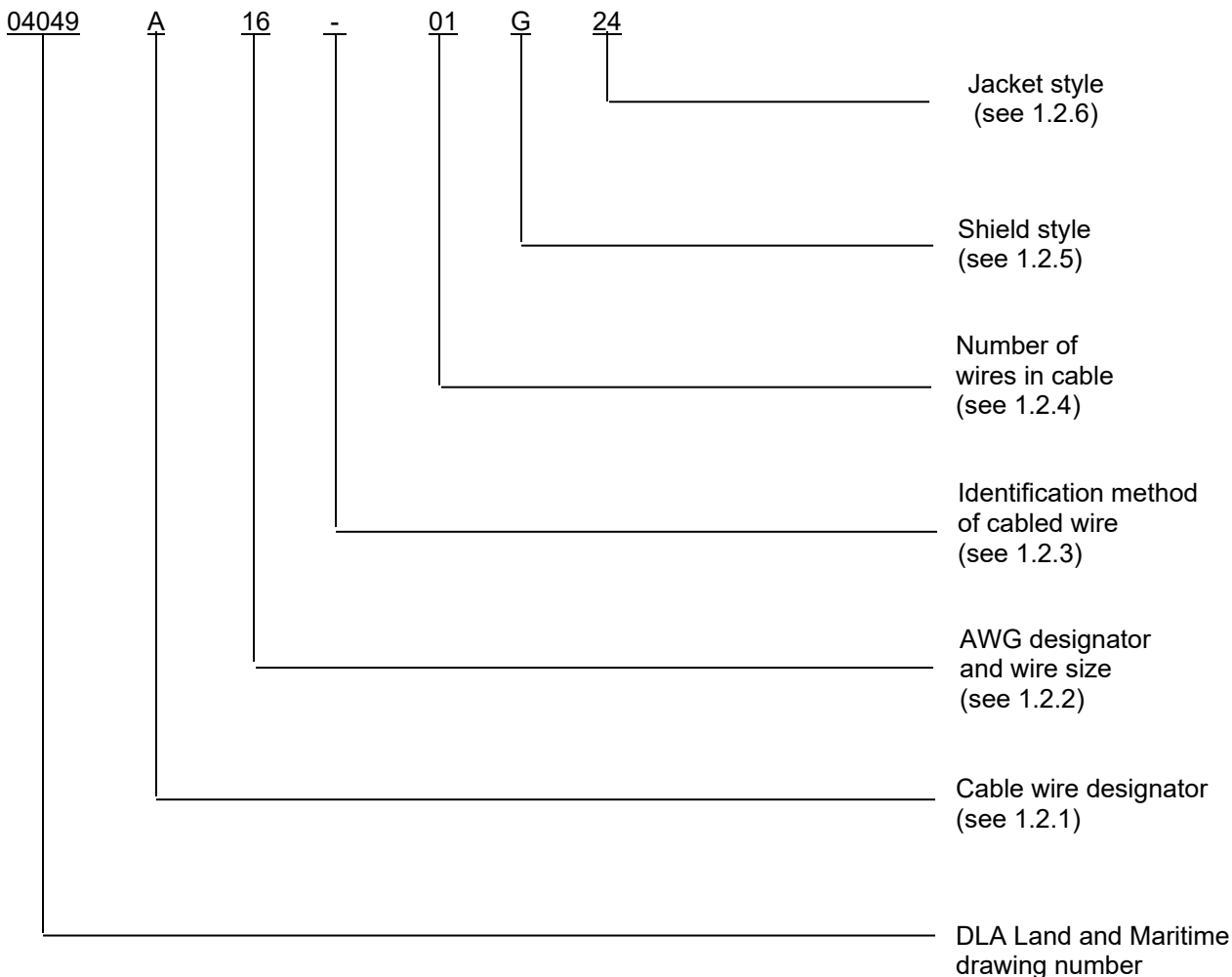
DWG NO.

04049

PAGE

2

The cable PIN is constructed as follows:



1.2.1 Cable wire designator. The cable wire designator is used to identify the individual component wire(s) of the cable. The cable wire designator should be a single letter as shown in tables I, II, and III.

1.2.2 American Wire Gage (AWG) designator. The PIN should include a one or two digit AWG designator (see table IV). Reference DLA Land and Maritime drawings listed in tables I, II and III for wire the AWG sizes available with each designator. All wires used in the cable will be of the same size.

1.2.3 Identification method for cable wire. The PIN should include a dash or single letter designator for the identification method used for the cabled wire (see table V and 3.3).

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43218-3990	SIZE A	CAGE CODE	DWG NO.
		037Z3 REV E	04049 PAGE 3

TABLE I. Light weight wire DLA Land and Maritime drawings.

Designator	DLA Land and Maritime drawing	Description	AWG range	SAE Base Document
A	04034	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Light Weight, Copper Conductor, Tin coated, 150 °C, 600 volt	26 – 10	AS22759/80
AA	04034	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Light Weight, Copper Conductor, Tin coated, 150 °C, 600 volt	26 – 10	AS22759/180
B	04035	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Light Weight, Silver Coated, High Strength or Ultra High Strength Copper Alloy, 200 °C, 600 volt	26 – 20	AS22759/81
BB	04035	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Light Weight, Silver Coated, High Strength or Ultra High Strength Copper Alloy, 200 °C, 600 volt	26 – 20	AS22759/181
C	04036	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Light Weight, Nickel Coated, High Strength or Ultra High Strength Copper Alloy, 260 °C, 600 volt	26 – 20	AS22759/82
CC	04036	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Light Weight, Nickel Coated, High Strength or Ultra High Strength Copper Alloy, 260 °C, 600 volt	26 – 20	AS22759/182
M	04045	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Light Weight, Silver Coated, Copper Conductor, 200 °C, 600 Volt	26 – 10	AS22759/91
MM	04045	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Light Weight, Silver Coated, Copper Conductor, 200 °C, 600 Volt	26 – 10	AS22759/191
N	04046	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, light Weight, Nickel Coated, Copper Conductor, 260 °C, 600 Volt	26 – 10	AS22759/92
NN	04046	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, light Weight, Nickel Coated, Copper Conductor, 260 °C, 600 Volt	26 – 10	AS22759/192
P	04047	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, 30, 28, 26 AWG, 600 Volt	30 – 26	AS22759/**
PP	04047	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, 30, 28, 26 AWG, 600 Volt	30 – 26	AS22759/1**

DEFENSE SUPPLY CENTER, COLUMBUS
COLUMBUS, OH 43218-3990

SIZE

A

CAGE CODE

037Z3

REV

E

DWG NO.

04049

PAGE

4

TABLE II. Medium weight wire DLA Land and Maritime drawings.

Designator	DLA Land and Maritime drawing	Description	AWG range	SAE Base Document
G	04040	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Silver Coated, Copper Conductor, 200 °C, 600 Volt	26 – 4/0	AS22759/86
GG	04040	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Silver Coated, Copper Conductor, 200 °C, 600 Volt	26 – 4/0	AS22759/186
H	04041	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Nickel Coated, Copper Conductor, 260 °C, 600 volt	26 – 4/0	AS22759/87
HH	04041	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Nickel Coated, Copper Conductor, 260 °C, 600 volt	26 – 4/0	AS22759/187
J	04042	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Tin Coated, Copper Conductor, 150 °C, 600 volt	26 – 4/0	AS22759/88
JJ	04042	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Tin Coated, Copper Conductor, 150 °C, 600 volt	26 – 4/0	AS22759/188
K	04043	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Silver Coated, High Strength or Ultra High Strength Copper Alloy, 200 °C, 600 Volt	26 – 20	AS22759/89
KK	04043	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Silver Coated, High Strength or Ultra High Strength Copper Alloy, 200 °C, 600 Volt	26 – 20	AS22759/189
L	04044	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Smooth Surface, Normal Weight, Nickel Coated, High Strength or Ultra High Strength Copper Alloy, 260 °C, 600 Volt	26 – 20	AS22759/90
LL	04044	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Smooth Surface, Normal Weight, Nickel Coated, High Strength or Ultra High Strength Copper Alloy, 260 °C, 600 Volt	26 – 20	AS22759/190
Q	04048	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, 26, 20, 18, 16 AWG, 600 Volt	26 – 16	AS22759/**
QQ	04048	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, 26, 20, 18, 16 AWG, 600 Volt	26 – 16	AS22759/1**

DEFENSE SUPPLY CENTER, COLUMBUS
COLUMBUS, OH 43218-3990

SIZE

A

CAGE CODE

037Z3

REV

F

DWG NO.

04049

PAGE

5

TABLE III. Normal weight wire DLA Land and Maritime drawings.

Designator	DLA Land and Maritime drawing	Description	AWG range	SAE Base Document
D	04037	Wire, electrical, composite, polytetrafluoroethylene/polyimide Insulated, Normal Weight, Silver Coated, Copper Conductor, 200 °C, 600 Volt	8 – 4/0	AS22759/**
DD	04037	Wire, electrical, composite, polytetrafluoroethylene/polyimide Insulated, Normal Weight, Silver Coated, Copper Conductor, 200 °C, 600 Volt	8 – 4/0	AS22759/1**
E	04038	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide insulated, Normal Weight, Nickel Coated, Copper Conductor, 260 °C, 600 Volt	8 – 4/0	AS22759/**
EE	04038	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide insulated, Normal Weight, Nickel Coated, Copper Conductor, 260 °C, 600 Volt	8 – 4/0	AS22759/1**
F	04039	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Tin Coated, Copper Conductor, 150 °C, 600 Volt	8 – 4/0	AS22759/**
FF	04039	Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Tin Coated, Copper Conductor, 150 °C, 600 Volt	8 – 4/0	AS22759/1**

TABLE IV. Gage size designator.

AWG designator	Wire size (AWG)
30	30
28	28
26	26
24	24
22	22
20	20
18	18
16	16
14	14
12	12
10	10
8	8
6	6
4	4
2	2
1	1
01	0
02	00
03	000
04	0000

DEFENSE SUPPLY CENTER, COLUMBUS
COLUMBUS, OH 43218-3990

SIZE

A

CAGE CODE

037Z3

REV

E

DWG NO.

04049

PAGE

6

TABLE V. Identification method and shield coverage designators.

Identification and shield coverage designator	Description	Shield coverage (if applicable)
-	Preferred identification method as specified in table VI	85%
A	Optional identification method A as specified in table VI	85%
B	Optional identification method B as specified in table VIII and table IX	85%
C	Preferred identification method as specified in table VI	90%
D	Optional identification method A as specified in table VI	90%
E	Optional identification method B as specified in table VIII	90%
F	Preferred identification method as specified in table VII	85%
G	Optional identification method A as specified in table VII	85%
H	Preferred identification method as specified in table VII	90%
J	Optional identification method A as specified in table VII	90%
P	Optional identification method E as specified in table VIII and table IX	85%
R	Optional identification method E as specified in table VIII and table IX	90%
S	Optional identification method F as specified in table IX	85%
T	Optional identification method F as specified in table IX	90%

1.2.4 Number of wires per cable. The PIN should include a 2 digit number as the designator for the number of wires in the cable (see 3.4).

1.2.5 Shield style and material. A single letter as specified in table X should designate the shield style and material of the overall shield (see 3.5).

1.2.6 Jacket style and material. The jacket style and material should be as specified in table XIII (see 3.6).

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.2 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-681 - Identification Coding and Application of Hookup and Lead Wire
MIL-STD-686 - Cable and Cord, Electrical; Identification Marking and Color Coding of

(Copies of these documents are available online at <https://quicksearch.dla.mil>.)

2.3 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

DLA LAND AND MARITIME DRAWINGS

04034 - Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Light Weight, Copper Conductor, Tin coated, 150 °C, 600 volt

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43218-3990	SIZE	CAGE CODE	DWG NO.
	A	037Z3	04049
		REV G	PAGE 7

- 04035 - Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Light Weight, Silver Coated, High Strength or Ultra High Strength Copper Alloy, 200 °C, 600 volt
- 04036 - Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Light Weight, Nickel Coated, High Strength or Ultra High Strength Copper Alloy, 260 °C, 600 volt
- 04037 - Wire, electrical, composite, polytetrafluoroethylene/polyimide Insulated, Normal Weight, Silver Coated, Copper Conductor, 200 °C, 600 Volt
- 04038 - Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide insulated, Normal Weight, Nickel Coated, Copper Conductor, 260 °C, 600 Volt
- 04039 - Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Tin Coated, Copper Conductor, 150 °C, 600 Volt
- 04040 - Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Silver Coated, Copper Conductor, 200 °C, 600 Volt
- 04041 - Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Nickel Coated, Copper Conductor, 260 °C, 600 volt
- 04042 - Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Tin Coated, Copper Conductor, 150 °C, 600 volt
- 04043 - Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Silver Coated, High Strength or Ultra High Strength Copper Alloy, 200 °C, 600 Volt
- 04044 - Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Smooth Surface, Normal Weight, Nickel Coated, High Strength or Ultra High Strength Copper Alloy, 260 °C, 600 Volt
- 04045 - Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, Light Weight, Silver Coated, Copper Conductor, 200 °C, 600 Volt
- 04046 - Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, light Weight, Nickel Coated, Copper Conductor, 260 °C, 600 Volt
- 04047 - Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, 30, 28, 26 AWG, 600 Volt
- 04048 - Wire, Electrical, Composite, Polytetrafluoroethylene/Polyimide Insulated, 26, 20, 18, 16 AWG, 600 Volt

(Copies of these documents are available online at <https://landandmaritimeapps.dla.mil/programs/milspec/default.aspx>.)

3. Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

ASTM INTERNATIONAL

- ASTM B3 - Standard Specification for Soft or Annealed Copper Wire
- ASTM B272 - Standard Specification for Copper Flat Products with Finished (Rolled or Drawn) Edges (Flat Wire and Strip)
- ASTM B298 - Standard Specification for Silver-Coated Soft or Annealed Copper Wire
- ASTM B355 - Standard Specification for Nickel-Coated Soft or Annealed Copper Wire
- ASTM B624 - Standard Specification for High Strength, High Conductivity Copper-Alloy Wire for Electronic Application
- ASTM B971 - Standard Specification for Silver-Coated Braid and Ribbon Flat Copper Wire intended for use in Electronic Application
- ASTM B972 - Standard Specification for Nickel-Coated Braid and Ribbon Flat Copper Wire Intended for use in Electronic Application

(Copies of these documents are available from <https://www.astm.org/>.)

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43218-3990	SIZE A	CAGE CODE 037Z3	DWG NO. 04049
		REV G	PAGE 8

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

ISO/IEC 17025 -General requirements for the competence of testing and calibration laboratories

(Copies of these documents are available from <https://www.iso.org/>.)

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

NEMA WC27500 - Standard for Aerospace and Industrial Electrical Cable

(Copies of these documents are available from <https://www.nema.org/>.)

SOCIETY OF AUTOMOTIVE ENGINEERS (SAE)

SAE AS4373 - Test Methods for Insulated Electric Wire

SAE AS22759/80 - Wire, Electrical, Polytetrafluoroethylene/ Polymide Insulated, Light Weight, Tin Coated, Copper Conductor, 150 °C, 600 Volt, ROHS

SAE AS22759/81 - Wire, Electrical, Polytetrafluoroethylene/ Polymide Insulated, Light Weight, Silver Coated, High Strength or Ultra High Strength Copper Alloy, 200 °C, 600 Volt, ROHS

SAE AS22759/82 - Wire, Electrical, Polytetrafluoroethylene/Polyimide Insulated, Light Weight, Nickel Coated, High Strength or Ultra High Strength Copper Alloy, 260 °C, 600 Volts

SAE AS22759/83 - Wire, Electrical, Polytetrafluoroethylene/ Polymide Insulated, Normal Weight, Silver Coated, Copper Conductor, 200 °C, 600 Volt, ROHS

SAE AS22759/84 - Wire, Electrical, Polytetrafluoroethylene/ Polymide Insulated, Normal Weight, Nickel Coated, Copper Conductor, 260 °C, 600 Volt, ROHS

SAE AS22759/85 - Wire, Electrical, Polytetrafluoroethylene/ Polymide Insulated, Normal Weight, Tin Coated, Copper Conductor, 150 °C, 600 Volt, ROHS

SAE AS22759/86 - Wire, Electrical, Polytetrafluoroethylene/ Polymide Insulated, Normal Weight, Silver Coated, Copper Conductor, 200 °C, 600 Volt, ROHS

SAE AS22759/87 - Wire, Electrical, Polytetrafluoroethylene/ Polyimide Insulated, Normal Weight, Nickel Coated, Copper Conductor, 260 °C, 600 Volt ROHS

SAE AS22759/88 - Wire, Electrical, Polytetrafluoroethylene/ Polymide Insulated, Normal Weight, Tin Coated, Copper Conductor, 150 °C, 600 Volt, ROHS

SAE AS22759/89 - Wire, Electrical, Polytetrafluoroethylene/Polyimide Insulated, Normal Weight, Silver Coated, High Strength or Ultra High Strength Copper Alloy, 200 °C, 600 Volts ROHS

SAE AS22759/90 - Wire, Electrical, Polytetrafluoroethylene/ Polyimide Insulated, Normal Weight, Nickel Coated, High Strength or Ultra High Strength Copper, Alloy, 260 °C, 600 Volts ROHS

SAE AS22759/91 - Wire, Electrical, Polytetrafluoroethylene/ Polymide Insulated, Light Weight, Silver Coated, Copper Conductor, 200 °C, 600 Volt, ROHS

DEFENSE SUPPLY CENTER, COLUMBUS
COLUMBUS, OH 43218-3990

SIZE

A

CAGE CODE

037Z3

DWG NO.

04049

REV

F

PAGE

9

SAE AS22759/92	- Wire, Electrical, Polytetrafluoroethylene/ Polyimide Insulated, Light Weight, Nickel Coated, Copper Conductor, 260 °C, 600 Volts, ROHS
SAE AS22759/180	- Wire, Electrical, Polytetrafluoroethylene/Polyimide Insulated, Smooth Surface, Light Weight, Tin-Coated Copper Conductor, 150 °C, 600 Volts ROHS
SAE AS22759/181	- Wire, Electrical, Polytetrafluoroethylene/Polyimide Insulated, Smooth Surface, Light Weight, Silver-Coated High Strength or Ultra High Strength Copper Alloy, 200 °C, 600 Volts ROHS
SAE AS22759/182	- Wire, Electrical, Polytetrafluoroethylene/Polyimide Insulated, Smooth Surface, Light Weight, Nickel-Coated High Strength or Ultra High Strength Copper Alloy, 260 °C, 600 Volts ROHS
SAE AS22759/183	- Wire, Electrical, Polytetrafluoroethylene/Polyimide Insulated, Smooth Surface, Normal Weight, Silvercoated Copper Conductor, 200 °C, Volts ROHS
SAE AS22759/184	- Wire, Electrical Polytetrafluoroethylene/ Polyimide Insulated, Smooth Surface, Normal Weight, Nickel-Coated Copper Conductor, 260 °C, 600 Volts ROHS
SAE AS22759/185	- Wire, Electrical, Polytetrafluoroethylene/ Polyimide Insulated, Smooth Surface, Normal Weight, Tin-Coated Copper Conductor, 150 °C, 600 Volts ROHS
SAE AS22759/186	- Wire, Electrical, Polytetrafluoroethylene/Polyimide Insulated, Smooth Surface, Normal Weight, Silver-Coated Copper Conductor, 200 °C, 600 Volts ROHS
SAE AS22759/187	- Wire, Electrical, Polytetrafluoroethylene/Polyimide Insulated, Smooth Surface, Normal Weight, Nickel-Coated Copper Conductor, 260 °C, 600 Volts ROHS
SAE AS22759/188	- Wire, Electrical Polytetrafluoroethylene/ Polyimide Insulated, Smooth Surface, Normal Weight, Tin-Coated Copper Conductor, 150 °C, 600 Volts ROHS
SAE AS22759/189	- Wire, Electrical, Polytetrafluoroethylene/Polyimide Insulated, Smooth Surface, Normal Weight, Silver-Coated High Strngth or Ultra High Strength Copper Alloy, 200 °C, 600 Volts ROHS
SAE AS22759/190	- Wire, Electrical, Polytetrafluoroethylene/Polyimide Insulated, Smooth Surface, Normal Weight, Nickel-Coated High Strngth or Ultra High Strength Copper Alloy, 260 °C, 600 Volts ROHS
SAE AS22759/191	- Wire, Electrical, Polytetrafluoroethylene/ Polyimide Insulated, Smooth Surface, Light Weight, Silver-Coated Copper Conductor, 200 °C, 600 Volts ROHS
SAE AS22759/192	- Wire, Electrical, Polytetrafluoroethylene/ Polyimide Insulated, Smooth Surface, Light Weight, Nickel-Coated Copper Conductor, 260 °C, 600 Volts ROHS

DEFENSE SUPPLY CENTER, COLUMBUS
COLUMBUS, OH 43218-3990

SIZE
A

CAGE CODE

037Z3

REV

F

DWG NO.

04049

PAGE

10

(Copies of these documents are available online at from <https://www.sae.org>.)

3. REQUIREMENTS

3.1 DLA Land and Maritime requirements. Items shall meet the requirements of NEMA WC27500 except as specified herein. Any requirements included in this drawing shall be in addition to, or supersede those requirements included in NEMA WC27500. In case of conflict between the requirements in this drawing and those in NEMA WC27500, the requirements of this drawing shall take precedence.

3.2 Design configuration. The design, construction, and physical dimensions shall be this drawing.

3.2.1 Design documentation. Design documentation shall be retained by the manufacturer and shall be available upon request for review by the contracting activity, DLA Land and Maritime, or contractor.

3.3 Identification method for cable wire and color requirements.

3.3.1 Preferred identification method. The insulation of wire used in the cable shall be white (or basic color or natural color) with one or two colored spiral stripes in table VI or table VII as applicable. The color stripe(s) may be applied by an inking process or be incorporated in the textile braid when the braid is employed in the basic wire. When the inking process is used, the stripe(s) shall be as specified in MIL-STD-681 except the stripe color and sequence shall be as specified herein. For wire diameters larger than .300 inch (7.62 mm), a longitudinal ink stripe is acceptable in lieu of a spiral stripe. When the braid is used, colored fibers shall be used for two parallel and adjacent carriers of the braid. The color identification fibers shall be woven in the opposite direction of any identification marker.

3.3.2 Optional identification method A. The insulation shall be a solid color as specified in table VI or table VII as applicable. Solid coloring shall be done by the manufacturer of the wire, and the coloring shall meet the requirements of the basic wire specification.

3.3.3 Optional identification method B. The insulation on each wire in the cable shall be the same solid color. The color shall denote wire size in table VIII. In order to identify each wire in the cable, color bands shall be applied as specified in table IX. Color of the bands shall be contrasting to the base color of the insulation. The narrow bands shall be 0.030 to 0.120 inch (0.76 to 3.05 mm) wide. The wide bands shall be twice the width of the narrow bands and spaced 0.030 to 0.120 inch (0.76 to 3.05 mm) apart in a group. Group separation shall be 0.38 to 1.50 inch (9.65 to 38.10 mm). The distance between the beginning of one group and the end of the next group shall be 3.0 inches (76.20 mm) maximum.

3.3.4 Optional identification method E. The insulation on each wire shall be white with the same colored helical stripe. The color of the stripe shall denote the wire size as specified in table VIII. In order to identify each wire in the cable, color bands shall be applied in table IX. The color of the bands shall be contrasting to the base color of the insulation. The narrow bands shall be 0.030 to 0.120 inch (0.76 to 3.05 mm) wide. The wide bands shall be twice the width of the narrow bands and spaced 0.030 to 0.120 inch (0.76 to 3.05 mm) apart in a group. Group separation shall be 0.38 to 1.50 inch (9.65 to 38.10 mm). The distance between the beginning of one group and the end of the next group shall be 3.0 inches (76.20 mm) maximum.

3.3.5 Optional identification method F. The insulation on each wire shall be white. In order to identify each wire in the cable, color bands shall be applied as specified in table IX. The color of the bands shall be contrasting to the base color of the insulation. The narrow bands shall be 0.030 to 0.120 inch (0.76 to 3.05 mm) wide. The wide bands shall be twice the width of the narrow bands and spaced 0.030 to 0.120 inch (0.76 to 3.05 mm) apart in a group. Group separation shall be 0.38 to 1.50 inches (9.65 to 38.10 mm). The distance between the beginning of one group and the end of the next group shall be 3.0 inches (76.20 mm) maximum.

3.3.6 Polyimide tape material. Polyimide tape material for wires shall be hydrolysis resistant.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43218-3990	SIZE A	CAGE CODE 037Z3	DWG NO. 04049
		REV G	PAGE 11

3.4 Number of wires per cable. The number of wires in the cable shall be from 1 to 15. The number of wires and the wire designator for each jacket/shield type shall be as follows:

- a. 01 to 15 for shielded and jacketed cables.
- b. 02 to 15 for unshielded and unjacketed.
- c. 02 to 15 for unshielded jacketed cables.

3.5 Recycled, recovered, environmentally preferable, or biobased materials. Recycled, recovered, environmentally preferable, or biobased materials should be used to the maximum extent possible, provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

3.6 Workmanship. The cable shall be free of kinks, abrasions, and cracked or peeled surfaces. The cable shall be a uniform and consistent product and shall be free from defects that adversely affect the serviceability of the product.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43218-3990	SIZE A	CAGE CODE 037Z3	DWG NO. 04049
		REV G	PAGE 12

TABLE VI. Circuit identification colors for basic wires.

No. of wires in cable	Wire number <u>1/</u>														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue/Blue	Orange/Orange	Green/ Green	Red/Red	Black/ Black
2	White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue/Blue	Orange/Orange	Green/ Green	Red/Red	
3	White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue/Blue	Orange/Orange	Green/ Green	Red/Red	
4	White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue/Blue	Orange/Orange	Green/ Green	Red/Red	
5	White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue/Blue	Orange/Orange	Green/ Green	Red/Red	
6	White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue/Blue	Orange/Orange	Green/ Green	Red/Red	
7	White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue/Blue	Orange/Orange	Green/ Green	Red/Red	
8	White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue/Blue	Orange/Orange	Green/ Green	Red/Red	
9	White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue/Blue	Orange/Orange	Green/ Green	Red/Red	
10	White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue/Blue	Orange/Orange	Green/ Green	Red/Red	
11	White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue/Blue	Orange/Orange	Green/ Green	Red/Red	
12	White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue/Blue	Orange/Orange	Green/ Green	Red/Red	
13	White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue/Blue	Orange/Orange	Green/ Green	Red/Red	
14	White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue/Blue	Orange/Orange	Green/ Green	Red/Red	
15	White	Blue	Orange	Green	Red	Black	Yellow	Violet	Gray	Brown	Blue/Blue	Orange/Orange	Green/ Green	Red/Red	

1/ For cables having more than 10 wires, the wires shall be identified by double tracers. Blue/Blue indicates a white base wire with double blue tracers.

DEFENSE SUPPLY CENTER, COLUMBUS
COLUMBUS, OH 43218-3990

SIZE

A

CAGE CODE

037Z3

REV

F

DWG NO.

04049

PAGE

13

TABLE VII. Identification colors for basic wires in cable.

No. of wires in cable	Identification colors for respective wires in cable 1/2/														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Red	Blue	Yellow	Green	Basic	Black	Brown	Orange	Violet	Gray	Red/ White	Blue/ White	Yellow/ White	Green / White	Black/ White
2	Red	Blue	Yellow	Green	Basic	Black	Brown	Orange	Violet	Gray	Red/ White	Blue/ White	Yellow/ White	Green / White	
3	Red	Blue	Yellow	Green	Basic	Black	Brown	Orange	Violet	Gray	Red/ White	Blue/ White	Yellow/ White	Green / White	
4	Red	Blue	Yellow	Green	Basic	Black	Brown	Orange	Violet	Gray	Red/ White	Blue/ White	Yellow/ White	Green / White	
5	Red	Blue	Yellow	Green	Basic	Black	Brown	Orange	Violet	Gray	Red/ White	Blue/ White	Yellow/ White	Green / White	
6	Red	Blue	Yellow	Green	Basic	Black	Brown	Orange	Violet	Gray	Red/ White	Blue/ White	Yellow/ White	Green / White	
7	Red	Blue	Yellow	Green	Basic	Black	Brown	Orange	Violet	Gray	Red/ White	Blue/ White	Yellow/ White	Green / White	
8	Red	Blue	Yellow	Green	Basic	Black	Brown	Orange	Violet	Gray	Red/ White	Blue/ White	Yellow/ White	Green / White	
9	Red	Blue	Yellow	Green	Basic	Black	Brown	Orange	Violet	Gray	Red/ White	Blue/ White	Yellow/ White	Green / White	
10	Red	Blue	Yellow	Green	Basic	Black	Brown	Orange	Violet	Gray	Red/ White	Blue/ White	Yellow/ White	Green / White	
11	Red	Blue	Yellow	Green	Basic	Black	Brown	Orange	Violet	Gray	Red/ White	Blue/ White	Yellow/ White	Green / White	
12	Red	Blue	Yellow	Green	Basic	Black	Brown	Orange	Violet	Gray	Red/ White	Blue/ White	Yellow/ White	Green / White	
13	Red	Blue	Yellow	Green	Basic	Black	Brown	Orange	Violet	Gray	Red/ White	Blue/ White	Yellow/ White	Green / White	
14	Red	Blue	Yellow	Green	Basic	Black	Brown	Orange	Violet	Gray	Red/ White	Blue/ White	Yellow/ White	Green / White	
15	Red	Blue	Yellow	Green	Basic	Black	Brown	Orange	Violet	Gray	Red/ White	Blue/ White	Yellow/ White	Green / White	

1/ This color code was originally intended for basic wires as specified in MIL-W-5086 and associated replacement wire and cable.

2/ For cables having more than 10 wires, the wires shall be identified by a solid color with a stripe (red/white – indicates a red wire with a white stripe).

TABLE VIII. Color of insulation for identification of wire sizes. 1/

Wire size	Insulation color (solid)
30	Purple (violet)
28	Yellow
26	Black
24	Blue
22	Green
20	Red
18	White
16	Blue
14	Green
12	Yellow
10	Brown
8	Red
6	Blue
4	Yellow
2	Red
1	White
0	Blue
00	Green
000	Purple (violet)
0000	Black

1/ Color code for AWG sizes 26 through 00 are as specified in MIL-STD-686.

TABLE IX. Circumferential band configuration for wire number identification.

Wire number	Band group configuration	Number of bands
1	No marking	None
2		2 narrow
3		3 narrow
4		4 narrow
5		5 narrow
6		6 narrow
7		7 narrow
8		1 wide 1 narrow
9		1 wide 2 narrow
10		1 wide 3 narrow
11		1 wide 4 narrow
12		1 wide 5 narrow
13		2 wide 1 narrow
14		2 wide 2 narrow
15		2 wide 3 narrow

DEFENSE SUPPLY CENTER, COLUMBUS
COLUMBUS, OH 43218-3990

SIZE

A

CAGE CODE

037Z3

REV

F

DWG NO.

04049

PAGE

15

3.7 Shield style and material. A single letter in table X shall designate the shield style and material of the overall shield. The shield braid shall be a push back type. When the cable designation specifies that a shield is to be incorporated into the cable construction, either a closely woven braid of round strands or a closely woven braid of flat strands shall be applied over the basic wire or cable. The shield strands shall be free from lumps, kinks, abrasions, scraped or corroded surfaces, and surface impurities. The strand coating shall be smooth, continuous, and adherent to the underlying material.

TABLE X. Shield style.

Single shield style designator	Double shield style designator	Shield material	Maximum temperature limit (reference only)
U	Not applicable	No shield	Not applicable
T	V	Tin-coated copper, round	150 °C
S	W	Silver-coated copper, round	200 °C
N	Y	Nickel-coated copper, round	260 °C
F	Z	Stainless steel, round	400 °C
C	R	Nickel-coated copper 27%, round	400 °C
M	K	Silver-coated high strength copper alloy, round	200 °C
P	L	Nickel-coated high strength copper alloy, round	260 °C
G	A	Silver-coated copper, flat	200 °C
H	B	Silver-coated high strength copper alloy, flat	200 °C
NF	ND	Nickel-coated copper, flat	260 °C
J	D	Tin-coated copper, flat	150 °C
E	X	Nickel-coated high-strength copper alloy, flat	260 °C
I	Q	Nickel-chromium alloy, flat	400 °C
HS	HD	Heavy Silver-coated copper, round	200 °C

3.7.1 Round shield.

3.7.1.1 Round shield strand material.

3.7.1.1.1 Round copper shield strands. Before shielding, the copper strands used in the shields shall be annealed or soft-drawn copper wire from commercially pure copper and shall conform to ASTM B3. Before application to the cable, individual silver, or nickel coated copper strands shall have a minimum elongation of 6 percent.

3.7.1.1.2 Round copper alloy shield strands. Before shielding, the high strength copper alloy strands shall conform to ASTM B624 except the minimum tensile strength shall be 55,000 lbf/in², the minimum elongation shall be 6 percent, and the conductivity shall be 80 percent (minimum).

3.7.1.2 Round shield strand coating.

3.7.1.2.1 Silver-coated copper and copper alloy strands. When the cable designation specifies a silver-coated shield, the individual strands shall be coated uniformly with a smooth continuous layer of commercially pure silver. Prior to braiding, silver-coated copper strands shall meet the requirements of ASTM B298. Silver-coated high strength copper alloy strands shall meet the requirements of 3.7.1.1.1 and the adhesion and the continuity of coating requirements of ASTM B298. The thickness of the silver shall not be less than 40 microinches (1.02 µm).

3.7.1.2.2 Nickel-coated copper and copper alloy strands. When the cable designation specifies a nickel-coated shield, the individual strands shall be coated uniformly with a smooth continuous layer of commercially pure nickel. The thickness of the nickel coating shall be not less than 50 microinches (1.27 µm), nor greater than 250 microinches (6.35 µm) nickel-coated copper strands shall meet the coating requirements of ASTM B355 prior to braiding. Nickel-coated high strength copper alloy strands shall meet the requirements of 3.7.1.1.2 and the adhesion and continuity of coating requirements of ASTM B355.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43218-3990	SIZE A	CAGE CODE 037Z3	DWG NO. 04049
		REV F	PAGE 16

3.7.1.3 Round copper or copper alloy strand size. Cables with braided shields as specified in round copper or round copper alloy strands shall conform to the shield group A or B (see tables XI and XII). The core diameter referred to in group A or B shall be the nominal outside core diameter of the unshielded, unjacketed cable equal to the basic wire nominal diameter multiplied by factor A for filled cables and factor G for unfilled cables in table XII.

TABLE XI. Round shield strand size.

Shield strand size (AWG)	Cable core diameter (inch)	Cable core diameter (mm) ^{1/}
38	.000 to .250	0.00 to 6.35
36	.251 to .400	6.375 to 10.16
34	.401 to .1.00	10.182 to 25.4
32	1.001 inches and larger	25.425 and larger

^{1/} Metric equivalents are given for general information only.

TABLE XII. Cable and geometry factors.

Number of conductors	A ^{1/}	B ^{2/}	G ^{3/}
1	1.00	1.0	1.00
2	2.00	1.8	1.64
3	2.16	2.1	1.95
4	2.73	2.4	2.27
5	3.00	2.7	2.59
6	3.00	3.0	2.87
7	3.00	3.0	2.91
8	3.72	3.4	3.38
9	4.05	3.6	3.55
10	4.08	3.8	3.65
11	4.16	4.1	3.95
12	4.16	4.1	3.95
13	4.75	4.4	4.27
14	4.75	4.4	4.27
15	5.00	4.7	4.59

^{1/} Geometry factor for cables filled to round (See 3.7.1.3 and NEMA WC27500 "braid angle and shield coverage" and "cable diameter").

^{2/} Geometry factor for cable weight calculation (See NEMA WC27500 "cable weight").

^{3/} Geometry factor for unfilled cables (See 3.7.1.3 and NEMA WC27500 "braid angle and shield coverage").

3.7.2 Flat shield.

3.7.2.1 Flat shield strand material.

3.7.2.1.1 Flat copper shield. Strands flattened copper wire shall meet the requirements of ASTM B272 except the wire shall be made by flattening round wire.

3.7.2.1.2 Flat copper alloy shield strands. Flat high strength copper alloy wire shall be made by flattening round wire. The flattened wire tensile strength shall be not less than 55,000 lbf/in² (3867 kilogram/centimeter²), and the elongation shall be one (1) percent minimum after flattening.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43218-3990	SIZE A	CAGE CODE 037Z3	DWG NO. 04049
		REV F	PAGE 17

3.7.2.2 Flat shield strand coating.

3.7.2.2.1 Silver-coated copper and copper alloy strands. Silver-coated copper strands shall conform to ASTM B971 after flattening. Silver-coated high strength copper alloy strands shall meet the requirements in 3.7.2.1.2 and shall meet the continuity of coating requirements of ASTM B971 after flattening. The thickness of coating shall be 40 microinches (1.02 µm) minimum after flattening.

3.7.2.2.2 Nickel-coated copper and copper alloy strands. Nickel-coated copper strands shall conform to ASTM B972 after flattening. Nickel-coated high strength copper alloy strands shall meet the requirements in 3.7.2.1.2 and shall meet the continuity of coating requirements of ASTM B972 after flattening. The thickness of coating shall be 50 microinches (1.27 µm) minimum after flattening.

3.7.2.3 Flat shield strand size. Flat wire shields shall be braided of copper, high-strength copper alloy, or nickel chromium alloy. The flattened wire shall be 0.0015 inch to 0.0004 inch (0.29 to 0.10 mm) thickness.

3.7.3 Shield splices. If splices are used in the shield, they shall not affect the geometry of the finished cable. No more than one carrier may be spliced at any one point in the shield.

3.7.4 Braid angle and shell coverage. The angle of the carriers of the braid with the axis of the cable in woven wire shields shall be not less than 18° nor more than 40°. When the major diameter of the cable beneath the braid is greater than 0.31 inches (0.79 mm), the above braid angle restriction shall not apply. In this case, the shield shall be suitably applied to provide good push-back characteristics. (See NEMA WC27500 for formulas to calculate "braid angle" and "percent coverage of the braid").

3.8 Jacket style and material. The jacket style and material shall be as specified in table XIII.

TABLE XIII. Jacket material.

Jacket style designator	Jacket material	Maximum temperature limit (reference only)
00	No jacket	Not applicable
06	Taped and heat sealed white polytetrafluoroethylene (PTFE)	260 °C
24	Tape layer of white PTFE wrapped over a tape layer of natural polyimide combined with FEP and heat sealed	260 °C
25	Smooth Surface Taped Polyimide/Polytetrafluoroethylene	260 °C

3.8.1 Taped polyimide/polytetrafluoroethylene jacket. The jackets of polyimide/polytetrafluoroethylene shall consist of two tapes:

a. The inner tape shall be dependent on the diameter of the cabled wires under the jacket.

(1) For cable construction with an under the jacket diameter of .500 inches (12.70 mm) or less

a. Jacket thickness shall be .006 to .010 inch (0.15 to 0.25 mm). The inner tape shall be a fluoropolymer/polyimide/fluoropolymer coated tape .001 inch (0.03 mm) minimum thickness applied with a minimum 50 percent overlap. The outer tape shall be an unsintered seamless PTFE tape .002 inch (0.05 mm) nominal thickness applied in an opposite direction to the first tape and with a minimum 50 percent overlap.

(2) For cable construction with an under the jacket diameter of .501 (12.72 mm) inches or more.

DEFENSE SUPPLY CENTER, COLUMBUS
COLUMBUS, OH 43218-3990

SIZE
A

CAGE CODE

037Z3

REV

G

DWG NO.

04049

PAGE

18

- a. Jacket thickness shall be .008 to .012 inch (0.20 to 0.30 mm). The inner tape shall be a fluoropolymer/polyimide/fluoropolymer coated tape .001 inch (0.03 mm) minimum thickness applied with a minimum 50% overlap. The outer tape shall be an unsintered seamless PTFE tape .002 inch (0.05 mm) nominal thickness shall be applied in the opposite direction to the first tape and with a minimum 67 percent overlap.
- b. After sintering, the bonding between FP layer will be homogenous. No evidence of tape edges or seams will be present when visually examined with the unaided eye. The outer surface will be smooth and free of tape edges at the overlap. The PTFE material shall be formulated in such a manner to achieve a minimum average contrast of 55% when marked with an ultraviolet (UV) laser source at a maximum energy of 1.5j/cm².

3.8.2 Taped PTFE jacket. Taped PTFE jackets shall have a wall thickness specified in table XIV. The jacket shall consist of a minimum of two contrahelically wrapped tapes each applied with a minimum 25 percent overlap. After sintering, the bonding between tape layers will be homogenous. No evidence of tape edges or seams will be present on the outer PTFE layer when visually examined with the unaided eye. The outer surface will be smooth and free of tape edges at the overlap.

TABLE XIV. Jacket wall thickness. 1/2/

Diameter of cable beneath jacket (inches)	Jacket material designation (inches)	Diameter of cable beneath jacket (mm)	Jacket material designation (mm)
	06		06
Up to .150	.010 to .015	Up to 3.81	0.25 to 0.38
.151 to .200	.010 to .015	3.84 to 5.08	0.25 to 0.38
.201 to .250	.010 to .015	5.11 to 6.35	0.25 to 0.38
.251 to .300	.010 to .015	6.38 to 7.62	0.25 to 0.38
.310 to .400	.015 to .025	7.87 to 10.16	0.38 to 0.64
.401 to .500	.015 to .025	10.19 to 12.70	0.38 to 0.64
.501 to .600	.020 to .030	12.53 to 15.24	0.51 to 0.76
.601 to .700	.020 to .030	15.27 to 17.68	0.51 to 0.76
.710 to .750	.020 to .030	18.03 to 19.05	0.51 to 0.76
.751 to .800	.020 to .030	19.08 to 20.32	0.51 to 0.76
.801 to 1.000	.020 to .030	20.35 to 25.40	0.51 to 0.76
over 1.000	.020 to .030	over 25.40	0.51 to 0.76

1/ Metric equivalents are given for information only.

2/ Dimensions are in inches.

3.8.3 Smooth Surface Taped Polyimide/Polytetrafluoroethylene (Style 25 Jacket). The jackets of polyimide/ polytetrafluoroethylene shall consist of two tapes. For constructions requiring an 0.006- to 0.010 inch jacket thickness, the inner tape shall be a fluoropolymer/ polyimide/ fluoropolymer coated tape (1 mm minimum thickness) applied with a minimum 50% overlap. The outer tape shall be an unsintered polytetrafluoroethylene tape (2 mm thickness) applied in the opposite direction to the first tape and with a minimum of 50% overlap. For constructions requiring an 0.008- to 0.012-inch jacket thickness, the 2-mm outer polytetrafluoroethylene tape shall have a minimum overlap of 67%. The tapes shall be heat sealed after wrapping. The polytetrafluoroethylene tape material shall be formulated in such a manner to achieve a minimum 55% contrast level when marked by a UV laser source in accordance with SAE AS4373 Method 1001.

The outermost layer of PTFE tape shall be applied such that the tape will appear to have a smooth surface and shall be tested per SAE AS4373 Method 110 to verify conformance.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43218-3990	SIZE A	CAGE CODE 037Z3	DWG NO. 04049
		REV F	PAGE 19

3.9 Cable lay-up. For multi-conductor construction, wires shall be cabled with a left-hand lay. The lay of the individual wires shall be not less than 6 nor more than 16 times the outside major axis diameter of the unshielded, unjacketed cable as specified in 4.4. The basic wire shall not be spliced. When cables are cut, wires shall not splay more than twice the diameter of the cable.

3.10 Polyimide tape. The polyimide tape used for the individual component wires shall be hydrolysis resistant.

3.11 Voltage rating. 600 V_{rms} at sea level.

3.12 Marking. The cable assembly shall be marked with the complete DLA Land and Maritime PIN, the manufacturers name or CAGE code, and the production date code. The marking shall be permanent and legible.

4. VERIFICATION

4.1 Classification of inspections. The inspection requirements specified herein are classified as follows:

- a. Qualification inspection (see 4.2).
- b. Conformance inspection (see 4.3).

4.1.1 Equipment calibration. All test equipment and inspection facilities shall be maintained as specified in ISO/IEC 17025 or equivalent.

4.2 Qualification inspection. Not required.

4.3 Conformance inspection. Conformance inspection shall be as specified herein and in NEMA WC27500.

4.3.1 Smooth Surface Verification. Finished cable with jacket types 25 shall be tested in accordance to SAE AS4373 Method 110 to verify conformance.

4.4 Certification. In order to be certified and listed as an approved source of supply for cable manufactured to this drawing, a manufacturer shall:

- a. Agree to make available to DLA Land and Maritime, upon request, all pertinent test data indicating compliance to the tests specified in NEMA WC27500 and this drawing.
- b. Provide to DLA Land and Maritime-VAI, or its designated agent, upon request, free of charge and without obligation, current production samples of the types and quantities requested.
- c. Meet one of the following criteria:
 - (1) Currently be listed on QPL-AS22759 for at least one wire within the series SAE AS22759/80 through SAE AS22759/92 or SAE AS22759/180 through SAE AS22759/192. See Table XV for which SAE wires qualify a source to produce which DLA Land and Maritime drawing wires.
 - (2) Be in current production of the subject part.

4.5 Certificate of compliance. A certificate of compliance shall be required from a manufacturer in order to be listed as an approved source of supply (see 6.7).

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43218-3990	SIZE A	CAGE CODE 037Z3	DWG NO. 04049
		REV B	PAGE 20

Table XV. SAE QPL to DLA Land and Maritime Drawing Qualification.

SAE QPL	DLA Land and Maritime Drawing
SAE AS22759/80, SAE AS22759/180	04034
SAE AS22759/81, SAE AS22759/181	04035
SAE AS22759/82, SAE AS22759/182	04036
SAE AS22759/83 (2 - 0000 AWG), SAE AS22759/86 (8 - 4 AWG), SAE AS22759/183 (2 - 0000 AWG), SAE AS22759/186 (8 - 4 AWG)	04037
SAE AS22759/84 (2 - 0000 AWG), SAE AS22759/87 (8 - 4 AWG), SAE AS22759/184 (2 - 0000 AWG), SAE AS22759/187 (8 - 4 AWG)	04038
SAE AS22759/85 (2 - 0000 AWG), SAE AS22759/88 (8 - 4 AWG), SAE AS22759/185 (2 - 0000 AWG), SAE AS22759/188 (8 - 4 AWG)	04039
SAE AS22759/86, SAE AS22759/186	04040
SAE AS22759/87, SAE AS22759/187	04041
SAE AS22759/88, SAE AS22759/188	04042
SAE AS22759/89, SAE AS22759/189	04043
SAE AS22759/90, SAE AS22759/190	04044
SAE AS22759/91, SAE AS22759/191	04045
SAE AS22759/92, SAE AS22759/192	04046
AS22759/80, AS22759/81, AS22759/82, AS22759/91, AS22759/92, AS22759/180, AS22759/181, AS22759/182, AS22759/191, AS22759/192	04047
AS22759/86, AS22759/87, AS22759/88, AS22759/89, AS22759/90, AS22759/186, AS22759/187, AS22759/188, AS22759/189, AS22759/190	04048

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When packaging of materiel is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Service or Defense Agency, or within the military service's system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

6.1 Intended use. Cables conforming to this drawing are intended for use when military specifications do not exist for cables that will perform the required function. This drawing is intended to prevent the proliferation of unnecessary duplicate specifications, drawings and stock catalog listings.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43218-3990	SIZE A	CAGE CODE 037Z3	DWG NO. 04049
		REV A	PAGE 21

6.2 Acquisition requirements. Acquisition documents should specify the following:

- a. Complete PIN (see 1.2).
- b. Requirements for delivery of a copy of the conformance inspection data for the lot being supplied, if applicable. This data should be supplied with each shipment.
- c. Requirements for certificate of compliance, if applicable.
- d. Requirements for packaging and packing.

6.3 Replaceability. Cables covered by this drawing will replace the same generic wires covered by a contractor-prepared specification or drawing.

6.4 Comments. Comments on this drawing should be directed to DLA Land and Maritime-VAI, Post Office Box 3990, Columbus, Ohio 43218-3990 or e-mail: WireCable@dla.mil.

6.5 Certificate of compliance. The certificate of compliance submitted to DLA Land and Maritime-VAI, prior to listing as an approved source of supply, should state that the manufacturer's product meets the requirements of this drawing.

6.6 Generic test data. Generic test data may be used to satisfy the requirements of 4.3. Generic test data should be on date coded cables no more than 1 year old when the cable is made of the same material, of the same design, and is made as specified in the same manufacturing processes. The vendor is required to retain the generic data for a period of not less than 3 years from the date of shipment.

6.7 Approved sources of supply. Approved sources of supply are listed herein. Additional sources will be added as they become available. The vendors listed have agreed to the contents of this drawing and a certificate of compliance has been submitted to DLA Land and Maritime-VAI (see table XV).

6.7.1 DLA Land and Maritime drawing PIN. Due to the number of possible DLA Land and Maritime drawing PINs and vendor similar PINs, individual PINs are not listed on this drawing.

DEFENSE SUPPLY CENTER, COLUMBUS COLUMBUS, OH 43218-3990	SIZE A	CAGE CODE 037Z3	DWG NO. 04049
		REV A	PAGE 22

TABLE XVI. Approved source of supply.

/DLA Land and Maritime drawing PIN 1/	Vendor CAGE number	Vendor similar PIN 1/ 2/	Vendor CAGE number	Vendor similar PIN 1/ 2/
04049AWW-XXYZZ	92607, SBTM0	SMLAWW-(XX)YZZ	F1868	D04049AWW-XXYZZ
04049AAWW-XXYZZ	92607, SBTM0	SMLTAWW-(XX)YZZ	F1868	D04049AAWW-XXYZZ
04049BWW-XXYZZ	92607, SBTM0	SMLBWW-(XX)YZZ	F1868	D04049BWW-XXYZZ
04049BBWW-XXYZZ	92607, SBTM0	SMLTBWW-(XX)YZZ	F1868	D04049BBWW-XXYZZ
04049CWW-XXYZZ	92607, SBTM0	SMLCWW-(XX)YZZ	F1868	D04049CWW-XXYZZ
04049CCWW-XXYZZ	92607, SBTM0	SMLTCWW-(XX)YZZ	F1868	D04049CCWW-XXYZZ
04049DWW-XXYZZ	92607, SBTM0	SMLDWW-(XX)YZZ	F1868	D04049DWW-XXYZZ
04049DDWW-XXYZZ	92607, SBTM0	SMLTDWW-(XX)YZZ	F1868	D04049DDWW-XXYZZ
04049EWW-XXYZZ	92607, SBTM0	SMLEWW-(XX)YZZ	F1868	D04049EWW-XXYZZ
04049EEWW-XXYZZ	92607, SBTM0	SMLTEWW-(XX)YZZ	F1868	D04049EEWW-XXYZZ
04049FWW-XXYZZ	92607, SBTM0	SMLFWW-(XX)YZZ	F1868	D04049FWW-XXYZZ
04049FFWW-XXYZZ	92607, SBTM0	SMLTFWW-(XX)YZZ	F1868	D04049FFWW-XXYZZ
04049GWW-XXYZZ	92607, SBTM0	SMLGWW-(XX)YZZ	F1868	D04049GWW-XXYZZ
04049GGWW-XXYZZ	92607, SBTM0	SMLTGW-(XX)YZZ	F1868	D04049GGWW-XXYZZ
04049HWW-XXYZZ	92607, SBTM0	SMLHWW-(XX)YZZ	F1868	D04049HWW-XXYZZ
04049HHWW-XXYZZ	92607, SBTM0	SMLTHWW-(XX)YZZ	F1868	D04049HHWW-XXYZZ
04049JWW-XXYZZ	92607, SBTM0	SMLJWW-(XX)YZZ	F1868	D04049JWW-XXYZZ
04049JJWW-XXYZZ	92607, SBTM0	SMLTJWW-(XX)YZZ	F1868	D04049JJWW-XXYZZ
04049KWW-XXYZZ	92607, SBTM0	SMLKWW-(XX)YZZ	F1868	D04049KWW-XXYZZ
04049KKWW-XXYZZ	92607, SBTM0	SMLTKWW-(XX)YZZ	F1868	D04049KKWW-XXYZZ
04049LWW-XXYZZ	92607, SBTM0	SMLLWW-(XX)YZZ	F1868	D04049LWW-XXYZZ
04049LLWW-XXYZZ	92607, SBTM0	SMLTLWW-(XX)YZZ	F1868	D04049LLWW-XXYZZ
04049MWW-XXYZZ	92607, SBTM0	SMLMWW-(XX)YZZ	F1868	D04049MWW-XXYZZ
04049MMWW-XXYZZ	92607, SBTM0	SMLTMWW-(XX)YZZ	F1868	D04049MMWW-XXYZZ
04049NWW-XXYZZ	92607, SBTM0	SMLNWW-(XX)YZZ	F1868	D04049NWW-XXYZZ
04049NNWW-XXYZZ	92607, SBTM0	SMLTNWW-(XX)YZZ	F1868	D04049NNWW-XXYZZ
04049PWW-XXYZZ	92607, SBTM0	SMLWW-(XX)YZZ	F1868	D04049PWW-XXYZZ
04049PPWW-XXYZZ	92607, SBTM0	SMLTWW-(XX)YZZ	F1868	D04049PPWW-XXYZZ
04049QWW-XXYZZ	92607, SBTM0	SMLWW-(XX)YZZ	F1868	D04049QWW-XXYZZ
04049QQWW-XXYZZ	92607, SBTM0	SMLTWW-(XX)YZZ	F1868	D04049QQWW-XXYZZ

1/ Legend:

WW = Wire size (AWG) (see 1.2.1).

XX = Identification method (see 1.2.3)

Y = Shield style (see 1.2.5)

ZZ = Jacket style (see 1.2.6)

2/ Parts must be purchased to this DLA Land and Maritime PIN to assure that all performance requirements and tests are met.Vendor CAGE
Code

92607

Vendor name
and addressAmphenol CIT
100 Tensolite Drive
Saint Augustine, FL 32092DEFENSE SUPPLY CENTER, COLUMBUS
COLUMBUS, OH 43218-3990SIZE
A

CAGE CODE

037Z3

REV

B

DWG NO.

04049

PAGE

23

SBTM0

Amphenol Cable & Interconnect Technologies
Blvd Luis Donaldo Colosio No. 1195
Nogales, Sonora, 84048, Mexico

F1868

Draka Fileca
Route Nationale 1
60730 Sainte Geneviève
France

6.8 Tin whisker growth. The use of alloys with tin content greater than 97 percent may exhibit tin whisker growth problems after manufacture. Tin whiskers may occur anytime from a day to years after manufacture, and can develop under typical operating conditions on products that use such materials. Conformal coatings applied over top of a whisker-prone surface will not prevent the formation of tin whiskers. Alloys of 3 percent lead have shown to inhibit the growth of tin whiskers. Do not use tin for space applications and other scenarios where tin whiskers / sintering pose higher risk.

6.9 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.

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PAGE

24