

6	5	4	3	2	1	SH	REV	STATUS	REV	DESCRIPTION	DATE	APPROVED
A	A	A			A							

NOTE:
 INTERPRET IN ACCORDANCE
 WITH DDD-STD-100C

Q# 20089760
 General Cable
 S-28-09

UNLESS OTHERWISE SPECIFIED
 DIM ARE IN INCHES
 2 PL 1 ANGLE 4
 3 PL 4
 INTERPRET DIM AND TOL PER
 ANSI Y14.5M-1982

THIRD ANGLE PROJECTION



LISA Colonial

REPLACES ORIGINAL
 ISSUE WITH CHANGE
 IAW 07123838-A
 (SPALT 30254)

SUT

B.M.
 02/06/13

THIS PRINT IS CURRENT
 AS OF
 MAY 13 2009
 MICROFILM CENTER

MATERIAL:

GENERAL DYNAMICS
 CASE CODE 97993
 ONR W00030-99-G-0059
 SIGNATURES DATE
 DR J. SCHORGE 05-09-01
 DR J. FLYNN 01/09/16
 DR J. PALZER 01/09/20
 DR J. PALZER 01/09/01
 DR J. PALZER 01/09/01
 DR J. PALZER 01/09/01
 DR J. PALZER 01/09/01

DEPARTMENT OF THE NAVY
 STRATEGIC SYSTEMS PROGRAMS
 WASHINGTON, D.C. 20352

CABLE, SPECIAL PURPOSE,
 ELECTRICAL, SHIELDED AND JACKETED
 SPECIFICATION CONTROL DRAWING

SIZE CODE A
 53711
 Dwg No 7123838

SSPALT 11298

SCALE NONE

SHEET 1 OF 6

51000

DWG NO. 7123838

1. SCOPE

1.1 This document establishes the requirements for the procurement of a special purpose shielded and jacketed electrical cable that has fire retardant and low toxic insulation materials. The cable is rated at 75°C.

2. APPLICABLE DOCUMENTS

2.1 In the event of conflict, the requirements of the contract or purchase order, this document, and the referenced documents shall govern in that order.

2.2 The latest issue of the following documents, in effect on the effective date of the contract or purchase order, form a part of this document to the extent specified herein.

MIL-STD-130	Identification Marking of US Military Property
MIL-STD-202	Test Methods for Electronic and Electrical Component Parts
MIL-C-24643	Cable and Cord, Electrical, Low Smoke, for Shipboard Use, General Specification for

All Military Standards (MIL-STD-), Military Specifications (MIL-), Ordnance Pamphlets (OP-), Federal Standards (FED-STD-), Federal Specifications and Commercial Item Descriptions (CID) shall be ordered from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, Pennsylvania 19111-5094.

3. REQUIREMENTS

3.1 Material

3.1.1 The finished cable shall meet the low smoke and toxicity requirements of MIL-C-24643 as applicable. Polyvinyl Chloride(PVC) compounds shall not be used in the cable construction for any purpose.

3.1.2 Components

3.1.2.1 Conductors. - Conductor: #24 AWG Solid bare copper.

3.1.2.1.1 Insulation. - High-density polyethylene in accordance with Mil-C-24643.

3.1.2.2 Binder Tape. - A binder tape of polyester may be used to provide a means for bundling the primary conductor pairs.

3.1.2.3 Drain Wire. - The drain wire shall be #24AWG 7/32 tinned copper.

3.1.2.4 Shield. - The shield shall be an aluminum/polyester tape.

SIZE	CAGE CODE	DWG NO.	REV
A	53711	7 1 2 3 8 3 8	-
SCALE	None	SHEET	2

DWG NO. 7123838

3. REQUIREMENTS (continued)

3.1 Material

3.1.2.5 Jacket. - The outer jacket shall be comprised of a material that will meet the following requirements.

REQUIREMENT	RATING
Temperature Rating	75°C Maximum
Acid Gas Generation	2.0 percent maximum
Halogen Content	0.2 Percent maximum
Smoke Index	25 Maximum
Toxicity Index	5 maximum

3.2 Construction

3.2.1 Splicing. - No splicing of any kind is acceptable in the construction of this cable.

3.2.2 Component Identification. - The cable components shall be the colors specified.

Pair Number	Primary Color	Bandmark Color
1	Blue White	Blue
2	Orange White	Orange
3	Green White	Green
4	Brown White	Brown

3.2.3 The eight conductor, shielded and jacketed cable shall be constructed as follows:

First: Twist together four pairs of insulated conductors, in accordance with 3.1.2.1 and 3.2.2, with a left hand lay that is 20 to 25 times the diameter of a single insulated conductor.

Second: A binder tape, in accordance with 3.1.2.2 with a 25 percent minimum overlap.

Third: A drain wire, in accordance with 3.1.2.3 and cabled in over the binder tape.

Fourth: A shield, in accordance with 3.1.2.4 applied longitudinally with a 25 percent minimum overlap.

Fifth: A jacket, in accordance with 3.1.2.5.

3.2.3.1 The overall cable diameter shall be 0.265 inches maximum.

SIZE	CAGE CODE	DWG NO.	REV
A	53711	7 1 2 3 8 3 8	-
SCALE	None	SHEET	3

DWG NO. 7123838

3.3 Dielectric Withstanding. - The cable shall meet the values tabulated, between the points specified, when tested in accordance with MIL-STD-202, Method 301, except the test duration shall be 5 seconds.

<u>Test Point</u>	
<u>Conductor to Conductor</u>	<u>1500Vrms</u>
<u>Conductors to Shield</u>	<u>1500Vrms</u>
<u>Shield to Ground</u>	<u>500Vrms</u>

3.4 Insulation Resistance. - When tested in accordance with MIL-STD-202, Method 302, Test Condition B, the cable shall have an insulation resistance of 100 megohms minimum. Insulation resistance shall be measured from conductor to conductor, conductors to shield and shield to ground.

3.5 Item Identification. - Do not mark on part. Mark on reel ends or on a tag firmly attached to coil of cable. Identify in accordance with MIL-STD-130 using:

"53711-7123838", dash number, revision letter and manufacturer's CAGE code. For revision letter see Rev Status Table.

Any marking that is consistent with the manufacturer's normal practice is acceptable.

3.6 Workmanship. - Cable shall be manufactured in such a manner as to be uniform in quality and shall be free from crazing, cracks, voids, pimples, chips, blisters, pinholes, and other defects that will adversely affect life, serviceability, or appearance.

3.7 Manufacturer's Changes. - Subsequent to qualification approval, all cables shall be identical with respect to design, materials, finishes, construction, and manufacturing processes, unless prior written approval has been obtained from the procuring activity. Failure to comply with this requirement shall be sufficient cause for withdrawal of qualification approval and for rejection of all cables affected by such changes.

4. QUALITY ASSURANCE PROVISIONS

4.1 Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any commercial laboratory acceptable to the Government. The Government reserves the right to perform any of the inspections set forth in the document where such inspections are deemed necessary to assure that supplies and services conform to prescribed requirements.

SIZE	CAGE CODE	DWG NO.	REV
A	53711	7 1 2 3 8 3 8	A
SCALE	None		SHEET 4

SHEET

7123838

DWG NO.

4.2 Quality Conformance Inspection

4.2.1 Inspection Lot Definition. - A lot shall consist of all the cable manufactured from the same materials and finishes, using the same methods and processes, and offered for acceptance at the same time.

4.2.2 Sampling. - A sample shall consist of a 2-foot length from each reel or coil of finished cable

4.2.3 Rejection Criteria. - If any one of the samples fails any inspection or test, the entire lot from which it was selected shall be rejected. A rejected lot may be resubmitted after the entire lot has been reinspected and all nonconforming units have been removed.

4.2.4 Specimen cable selected in accordance with 4.2.2 shall be subjected to all the Quality Conformance inspections and tests specified herein.

4.2.4.1 The supplier shall furnish a certification, with each lot offered for inspection, that the cable complies with the requirements of 3.1, 3.2, 3.3, 3.4 and 3.7.

4.2.4.2 Visual and Mechanical. - The specimen device shall be inspected to verify conformance with 3.2.2 (color), 3.5 and 3.6.

5. PREPARATION FOR DELIVERY

5.1 Packaging. - The cable shall be packaged to the extent necessary to provide protection from the hazards of contamination and physical damage encountered in general shipping, handling, and shelf storage.

6. NOTES

6.1 Cable length shall be specified (in feet) in the purchase order.

SIZE	CAGE CODE	DWG NO.	REV
A	53711	7 1 2 3 8 3 8	A
SCALE	None	SHEET	5

SH 6

8383838

7123838

SUGGESTED SOURCE(S) OF SUPPLY

Identification of the "suggested source(s) of supply" herein is not to be construed as a guarantee of present or continued availability as a source of supply for the item(s).

General Cable
Willimantic, CT
CAGE Code: 71124
Vendor Ident (for reference only): T-15037

Rev Status	
Dash No.	Ltr
-1	A

SIZE	CAGE CODE	ONG NO.	REV
A	53711	7 1 2 3 8 3 8	A
SCALE	None	SHEET	6