INCH-POUND

MIL-C-5756/4
10 April 1990

MILITARY SPECIFICATION SHEET

CABLE, ELECTRICAL, 600 VOLTS, PORTABLE, MULTICONDUCTOR, OZONE RESISTANT

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the cable described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specifications and Standards (DODISS) specified in the solicitation: MIL-C-5756.

REQUIREMENTS:

Qualification required.

Construction

First - Copper conductor, see Table I of MIL-C-5756 for requirements, sizes 10 AWG and smaller shall be tin-coated, sizes 8 AWG and larger shall be uncoated.

Second - Separator, required where uncoated conductors are used, optional where tin-coated conductors are used.

Third - Insulation of ozone resistant synthetic rubber (see Table I for thickness), color coded per paragraph 3.4.6 of MIL-C-5756.

Fourth - The required number of conductors cabled together with a left-hand lay not greater than 16 times the diameter under the jacket. When needed, fillers shall be employed to obtain a firm, well-rounded assembly.

Fifth - Binder tape applied helically with overlap.

Sixth - Jacket of ozone resistant synthetic rubber (see Table I for thickness), colored black. Cable surface marking required.

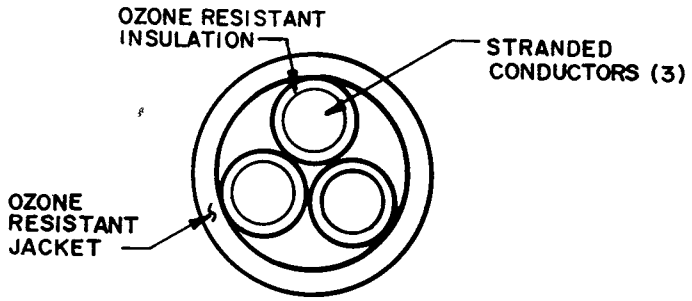

FIGURE 1. Example of 3 conductor cable.

AMSC N/A FSC 6145

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

TABLE I. Details of construction.

Military Part No. M5756/1	Conductor Size	Number of Conductors	Nominal Insulation Thickness (Inch) 1/	Nominal Jacket Thickness (Inch) 2/	Overall Diameter of Jacketed Cable		Conductor Resistance Per 1000 Feet (Max) @ 20°C (ohms)	Nominal Weight Per 1000 Feet (Pounds) 3/
					Min (Inches)	Max (Inches)		
-001	18	2	.031	.0625	.316	.375	7.49	60.9
-002	16	2	.031	.0625	.338	.399	4.70	72.5
-003	14	2	.047	.078	.429	.530	2.96	127.9
-004	12	2	.047	.078	.499	.576	1.86	159.3
-005	10	2	.047	.094	.549	.648	1.20	217.7
-006	8	2	.063	.109	.705	.824	.699	335.0
-007	6	2	.063	.125	.831	.962	.444	487.2
-008	4	2	.063	.141	.965	1.100	.279	676.9
-009	2	2	.063	.156	1.150	1.270	.177	945.1
-010	1	2	.078	.156	1.270	1.410	.141	1173.1
-011	1/0	2	.078	.172	1.360	1.540	.111	1422.5
-012	2/0	2	.078	.187	1.560	1.740	.0893	1780.0
-013	3/0	2	.078	.187	1.710	1.890	.0708	2131.3
-014	4/0	2	.078	.203	1.840	2.050	.0562	2586.6
-015	250	2	.094	.203	2.010	2.220	.0476	3045.2
-016	18	3	.031	.0625	.331	.392	7.49	71.9
-017	16	3	.031	.0625	.356	.418	4.70	87.2
-018	14	3	.047	.078	.482	.557	2.96	154.0
-019	12	3	.047	.094	.527	.606	1.86	213.9
-020	10	3	.047	.094	.611	.692	1.20	268.9
-021	8	3	.063	.109	.772	.869	.699	429.9
-022	6	3	.063	.141	.910	1.020	.444	639.5
-023	4	3	.063	.156	1.050	1.190	.279	888.4
-024	2	3	.063	.172	1.210	1.310	.177	1252.9
-025	1	3	.078	.172	1.350	1.520	.141	1556.6
-026	1/0	3	.078	.172	1.480	1.630	.111	1837.1
-027	2/0	3	.078	.187	1.680	1.840	.0893	2295.1
-028	3/0	3	.078	.203	1.820	2.030	.0708	2832.2
-029	4/0	3	.078	.203	1.990	2.180	.0562	3369.2
-030	250	3	.094	.203	2.140	2.360	.0476	3995.8

1/ The minimum insulation thickness shall be at least 90% of the nominal.
2/ The minimum jacket thickness shall be at least 90% of the nominal.
3/ The nominal weight is for information only.

TABLE I. Details of construction (continued).

Military Part No. M5756/1	Conductor Size	Number of Conductors	Nominal Insulation Thickness (Inch) 1/	Nominal Jacket Thickness (Inch) 2/	Overall Diameter of Jacketed Cable		Conductor Resistance Per 1000 Feet (Max) @ 20°C (ohms)	Nominal Weight Per 1000 Feet (Pounds) 3/
					Min (Inches)	Max (Inches)		
-031	18	4	.031	.0625	.358	.421	7.49	85.2
-032	16	4	.031	.0625	.385	.450	4.70	104.8
-033	14	4	.047	.078	.523	.601	2.96	185.6
-034	12	4	.047	.094	.603	.689	1.86	258.4
-035	10	4	.047	.109	.664	.749	1.20	349.2
-036	8	4	.063	.109	.872	.975	.699	511.3
-037	6	4	.063	.125	1.020	1.140	.444	749.6
-038	4	4	.063	.156	1.170	1.300	.279	1095.5
-039	2	4	.063	.172	1.330	1.490	.177	1555.4
-040	1	4	.078	.172	1.510	1.660	.141	1941.6
-041	1/0	4	.078	.187	1.620	1.810	.111	2352.8
-042	2/0	4	.078	.203	1.840	2.050	.0893	2936.5
-043	3/0	4	.078	.203	2.020	2.220	.0708	3554.9
-044	4/0	4	.078	.203	2.180	2.390	.0562	4246.3
-045	250	4	.094	.203	2.350	2.590	.0476	5052.8
-046	18	5	.031	.0625	.387	.452	7.49	99.5
-047	16	5	.031	.078	.417	.515	4.70	137.5
-048	14	5	.047	.094	.568	.682	2.96	238.5
-049	12	5	.047	.109	.655	.744	1.86	326.3
-050	10	5	.047	.109	.748	.842	1.20	413.6
-051	8	5	.063	.141	.948	1.090	.699	693.4
-052	6	5	.063	.156	1.140	1.260	.444	968.6
-053	4	5	.063	.156	1.280	1.410	.279	1311.4
-054	2	5	.063	.172	1.480	1.620	.177	1869.4
-055	1	5	.078	.187	1.680	1.840	.141	2392.9
-056	1/0	5	.078	.203	1.800	2.010	.111	2899.6
-057	2/0	5	.078	.203	2.050	2.240	.0893	3544.5
-058	3/0	5	.078	.203	2.220	2.430	.0708	4303.7
-059	4/0	5	.078	.203	2.400	2.620	.0562	5153.9
-060	250	5	.094	.203	2.590	2.840	.0476	6122.6

1/ The minimum insulation thickness shall be at least 90% of the nominal.
2/ The minimum jacket thickness shall be at least 90% of the nominal.
3/ The nominal weight is for information only.

TABLE I. Details of construction (continued).

Military Part No. M5756/1	Conductor Size	Number of Conductors	Nominal Insulation Thickness (Inch) 1/	Nominal Jacket Thickness (Inch) 2/	Overall Diameter of Jacketed Cable		Conductor Resistance Per 1000 Feet (Max) @ 20°C (ohms)	Nominal Weight Per 1000 Feet (Pounds) 3/
					Min (Inches)	Max (Inches)		
-061	18	6	.031	.078	.417	.516	7.49	128.0
-062	16	6	.031	.078	.479	.556	4.70	157.0
-063	14	6	.047	.094	.646	.734	2.96	273.2
-064	12	6	.047	.109	.709	.833	1.86	374.3
-065	10	6	.047	.125	.810	.940	1.20	505.0
-066	8	6	.063	.156	1.060	1.210	.699	833.2
-067	6	6	.063	.156	1.230	1.370	.444	1120.4
-068	4	6	.063	.172	1.420	1.560	.279	1571.8
-069	2	6	.063	.187	1.610	1.790	.177	2231.6
-070	1	6	.078	.203	1.830	2.030	.141	2855.0
-071	1/0	6	.078	.203	1.990	2.180	.111	3388.0
-072	2/0	6	.078	.203	2.330	2.440	.0893	4147.1
-073	3/0	6	.078	.203	2.430	2.650	.0708	5046.1
-074	4/0	6	.078	.203	2.620	2.860	.0562	6053.0
-075	250	6	.094	.203	2.840	3.100	.0476	7227.5
-076	18	7	.031	.078	.417	.516	7.49	138.9
-077	16	7	.031	.078	.479	.556	4.70	172.0
-078	14	7	.047	.094	.646	.734	2.96	300.3
-079	12	7	.047	.109	.709	.833	1.86	412.4
-080	10	7	.047	.125	.810	.940	1.20	557.8
-081	8	7	.063	.156	1.060	1.210	.699	921.6
-082	6	7	.063	.156	1.230	1.370	.444	1249.0
-083	4	7	.063	.172	1.420	1.560	.279	1760.2
-084	2	7	.063	.187	1.610	1.790	.177	2511.0
-085	1	7	.078	.203	1.830	2.030	.141	3216.5
-086	1/0	7	.078	.203	1.990	2.180	.111	3829.7
-087	2/0	7	.078	.203	2.230	2.440	.0893	4699.9
-088	3/0	7	.078	.203	2.430	2.650	.0708	5736.5
-089	4/0	7	.078	.203	2.620	2.860	.0562	6898.8
-090	250	7	.094	.203	2.840	3.100	.0476	8255.3

1/ The minimum insulation thickness shall be at least 90% of the nominal.
2/ The minimum jacket thickness shall be at least 90% of the nominal.
3/ The nominal weight is for information only.

REQUIREMENTS:

Ozone resistance - required.

NOTES:

1. The insulating and jacketing materials shall be resistant to degradation due to sunlight, ozone, and other forms of weathering exposure. This cable is designed to be suitable for use where it may be exposed to these conditions.

2. Cables covered under this specification sheet are designed for use in cable assemblies conforming to MIL-C-7974. These cables are suitable alternatives for multiconductor cables specified in MIL-C-5756B.

3. Examples of typical insulating and jacketing materials include Ethylene Propylene Rubber (EPR) and Polychloroprene, respectively.

Custodians:
AF - 85

Review Activities:
Army - CR
DLA - GS

Preparing Activity:
Navy - AS
(Project No. 6145-1121-04)