QQ-W-343F
19 November 1990
(TO SUPERSEDE)
QQ-W-343-E
November 13, 1981

FEDERAL SPECIFICATION

WIRE, ELECTRICAL, COPPER (UNINSULATED)

1. SCOPE AND CLASSIFICATION

1.1 Scope. This specification covers solid, bunch-stranded, concentric-lay-stranded,, and rope-lay-stranded round, uninsulated, copper conductor for use in electrical wire.

1.2 Classification. Copper wire covered by this specification shall be of the followings, size, class, temper, coating and part number.

Part number - Example: QQW343C64A1T

QQW343	C	64	A	1	T
Federal specification designator	Type (See 1.2.1)	Size designator (see 1.2.2)	Class (see 1.2.3)	Temper (see 1.2.4)	Coating (see 1.2.5)

1.2.1 Type (see 3.3). The type designates the construction of the wire.

S - Solid single strands (see 3.3.1 and 3.3.5).
B - Bunch-stranding.
C - Concentric-lay-stranding.
R - Rope-lay-bunched member stranding (formerly type RB).
E - Rope-lay-concentric member stranding (formerly type RC).
H - Hookup conductors.

1.2.2 Size designator. For type S, the wire size is the wire diameter or cross sectional area expressed as American Wire Gauge (AWG) per ASTM B258. For types B,C,R and E, the wire size is the metallic cross sectional area of the wire expressed as the equivalent AWG or as circular mils. For type B, the size is as indicated for each of the wires in ASTM B286. In the part number, the wire sizes shall be indicated by use of the size designators in table II, III, and IV for the respective wire sizes.

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1.2.3 Class. The class letter as shown in tables II and III is to be used in the part number. The class defines the construction details within a particular type. Type S wires are classified as class S for the purposes of this specification.

1.2.4 Temper. The temper is specified in table I and should be indicated by a number in the part number as follows:

1 - Soft or drawn and annealed. (Annealed for type H only).
2 - Medium hard drawn.
3 - Hard drawn.
4 - Unannealed (type H silver or nickel coated conductors only).

1.2.5 Coating. The coating on the wire is specified in table I and should be indicated by a letter in the part number as follows (see 3.3.7).

A - Lead allay.
B - No coating.
L - Lead.
N - Nickel (class 2 of ASTM B355).
S - Silver.
T - Tin.
C - Nickel (class 10 of ASTM B355).
E - Nickel (class 27 of ASTM B355).

2. APPLICABLE

2.1 The following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

Federal Specifications:

MIL-R-626 - Rosin, Gum, Wood, and Tall Oil

Federal Standards:

FED-STD-185 - Identification Marking of Copper and Copper Base Alloy Mill Products.
FED-STD-228 - Cable and Wire, Insulated; Methods of Testing.

(Activities outside the Federal Government may obtain copies of Federal specifications, standards and commercial item descriptions as outlined under General Information in the Index of Federal Specifications, Standards, and Commercial Item Descriptions. The Index, which includes emulative bimonthly supplements as issued, is for sale on a subscription basis by the Superintendent of Documents, U.S. Government Printing office, Washington, D.C. 20402.)

(Single copies of this specification, other Federal specifications and commercial item descriptions required by activities outside the Federal Government for bidding purposes are available without charge from General Services Administration Business Service Centers in Boston; New York; Washington, DC; Philadelphia; Atlanta; Chicago; Kansas City, MD; Fort Worth; Houston; Denver; San Francisco; Los Angeles; and Seattle, WA.)

(Federal Government activities may obtain copies of Federal specifications, standards, and commercial item descriptions, and the Index of Federal Specifications, Standards, and Commercial Item Descriptions from established distribution points in their agencies).

Military Specifications

MIL-C-3993 - Copper and Copper Base Alloy Mill Products, Packaging of.

Military Standards

MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.

MIL-STD-202 - Methods for Electronic and Electrical Components Parts.

MIL-STD-45662 - Calibration Systems Requirements.

(Copies of military specifications and standards required by contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer).

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply. The issues of the document which are indicated as DoD adopted shall be of the issue listed in the current DoDISS.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARDS:

└1┘	ASTM	B1	-	Hard-Drawn Copper Wire.
	ASTM	B2	-	Medium-Hard Drawn Copper Wire.
└1┘	ASTM	B3	-	Soft or Annealed Copper Wire.
└1┘	ASTM	B8	-	Concentric-Lay-Stranded Copper Conductors,, Hard, Medium-Hard, or Soft.
└1┘	ASTM	B33	-	Tinned Soft or Annealed Copper Wire for Electrical Purposes.
└1┘	ASTM	B49	-	Hot Rolled Copper Redraw Rod for Electrical Purposes.
└1┘	ASTM	B172	-	Rope-Lay Stranded Copper Conductors having Bunch-Stranded Members for Electrical Conductors.
└1┘	ASTM	B173	-	Rope-Lay-Stranded Copper Conductors having Concentric-Stranded Members for Electrical Conductors.

[1]	ASTM	B174 -	Bunch-Stranded Copper Conductors for Electrical Conductors.
[1]	ASTM	B189 -	Lead-Coated and Lead Alloy-Coated Soft Copper Wire for Electrical Purposes.
[1]	ASTM	B193 -	Conductor Materials, Electrical, Resistivity of.
[1]	ASTM	B246 -	Timed Hard-Drawn and Medium-Hard-Drawn Copper Wire for Electrical Purposes.
[1]	ASTM	B258 -	Standard Nominal Diameters and Cross-Sectional Areas of AWG Sizes of Solid Round Wires used as Electrical Conductors.
[1]	ASTM	B286 -	Copper Conductors for use in Hookup Wire for Electronic Equipment.
[1]	ASTM	B298 -	Silver-Coated Soft or Annealed Copper Wire.
[1]	ASTM	B355 -	Nickel-Coated Soft or Annealed Copper Wire.

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA. 19103-1187.

3. REQUIREMENTS

3.1 Detail specification. The individual item requirements shall be as specified herein and in accordance with the applicable ASTM document. In the event of any conflict between requirements of this specification and the ASTM, the former shall govern.

3.2 Materials. The composition of the copper shall conform to ASTM B49.

3.3 Construction.

3.3.1 Solid wire (type S and type H (class S). Solid wires shall conform to and cover the range of wire sizes of the applicable ASTM specified in table I. The diameters and cross-sectional areas shall be in accordance with ASTM B258. Solid wire of 41 through 56 AWG shall be in accordance with table IV.

3.3.2 Bunch-stranded wire (type B). Bunched stranded wire shall conform to the requirements of ASTM B174. Table II shows wire classes, sizes and strand count and also lists the wire size designators which are to be used in the part number (see 1.2.2).

3.3.3 Concentric-lay stranded wire (type C). Concentric-lay-stranded wire shall conform to ASTM B8. Table II shows wire classes, sizes and strand count and also lists the wire size designators which are to be used in the part number (see 1.2.2).

3.3.4 Rope-lay-stranded wire. Rope-lay-stranded wires shall conform to ASTM B172 for bunch-stranded members (type R) and ASTM B173 for concentric-lay-stranded member (type E). Wire classes, sizes, and strand count are included in Table II which also lists the wire size designators which are used in the part numbers (see 1.2.2).

[1] These documents have been adopted by DoD.

TABLE I. Temper and construction.

Type	Coatings [2] available	Tempers [2] available	Shall conform to ASTM B	AWG [2] range
S [1]	Uncoated	Soft or drawn and annealed	3	40 thru 4/0
	Uncoated	Medium hard drawn	2	18 thru 4/0
	Uncoated	Hard drawn	1	18 thru 4/0
	Tin coated	Soft or drawn and annealed	33	40 thru 4/0
	Tin coated	Medium hard drawn or hard drawn	246	16 thru 4
	Lead or lead alloy	Soft or drawn and annealed	189	40 thru 4/0
C	Uncoated or tin or lead or lead alloy	Soft or medium-hard or hard	8	24-4/0 and 250000-5000000 circular mils
R	Uncoated	Soft or drawn and annealed	172	12-4/0 and 250000-2000000 circular mils
	Tin	Soft or annealed		
	Lead or lead alloy	Soft		
E	Uncoated or tin	Soft or drawn and annealed	173	14-4/0 and 250000-5000000 circular mils
	Lead or lead alloy	Soft		
B	Uncoated or tin	Soft or drawn and annealed	174	28-7
	Lead or lead alloy	Soft		
H [1]	Tin or lead alloy	Annealed	286	10-30 even AWGs solid 32-4/0 stranded
	Silver or nickel	Unannealed or annealed	298 and 35	

[1] The requirements for 33 through 56 AWG are in Table IV. These documents have been adopted by DOD.

[2] For information only.

3.3.5 Hookup wire (type H). Wire used as hookup wire shall conform to ASTM B286 and Table III. Type S wire used for hookup and interconnect wire is superseded by type H, class S wire.

3.3.6 Splices. Splices shall not be made in wire, except as permitted by the applicable ASTM standard. Splices shall be so constructed and distributed throughout the wire that the diameter, configuration, resistance, flexibility, and mechanical strength of the completed wire shall not be adversely affected.

3.3.7 Conductor coatings. Conductor coatings (see 1.2.5) shall be in accordance with the applicable ASTM standards and Table I.

3.4 Performance. All wires shall meet the performance requirements of the applicable ASTM standard and Table IV.

3.4.1 Solderability (type H only). All finished wires shall provide good electrical and mechanical solder joints when tested in accordance with 4.6.3.

3.4.2 Elongation 33 through 40 AWG and 41 through 44 AWG wires only. wire sizes 33 through 40 AWG shall meet the minimum elongation percentage of 15 percent and wire sizes 41 through 44 AWG shall meet the minimum elongation of 10 percent when tested in accordance with 4.6.4.

3.5 Marking. Marking for identification shall be in accordance with FED-STD-185.

3.6 Workmanship. Strands and wire shall be manufactured and processed in a careful and workman like manner in accordance with good design and sound practice. Each solid wire and strand shall be uniform in cross section and free from injurious flaws, scales, and other imperfections.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Test equipment and inspection facilities. Test and measuring equipment and inspection facilities of sufficient accuracy, quality and quantity to permit performance of the required inspection shall be established and maintained by the contractor. The establishment and maintenance of a calibration system to control the accuracy of the measuring and test equipment shall be in accordance with MIL-STD-45662.

TABLE II. Construction details. 1/

Wire size designator	Cross section area (circular mils)	Approximate American wire gauge size 2/	Type C					Type E	
			Class AA	Class A	Class B	Class C	Class D	Class G	Class H
99	5000000	—	—	169	217	—	271	1159	1729
98	4500000	—	—	169 3/	217 3/	—	271 3/	1159	1729
97	4000000	—	—	169 3/	217 3/	—	271 3/	1159	1729
96	3500000	—	—	127 3/	169 3/	217 3/	271 3/	1159	1729
95	3000000	—	—	127	169	217	271	1159	1729
94	2500000	—	—	91	127	169	217	703	1159
93	2000000	—	—	91	127	169	217	703	1159
92	1900000	—	—	91 3/	127 3/	169 3/	217 3/	703	1159
91	1900000	—	—	91 3/	127 3/	169 3/	217 3/	703	1159
90	1750000	—	—	91	127	169	217	703	1159
89	1700000	—	—	91 3/	127 3/	169 3/	217 3/	703	1159
88	1600000	—	—	91 3/	127 3/	169 3/	217 3/	703	1159
87	1500000	—	—	61	91	127	169	427	703
86	1400000	—	—	61 3/	91 3/	127 3/	169 3/	427	703
85	1300000	—	—	61 3/	91 3/	127 3/	169 3/	427	703
84	1250000	—	—	61	91	127	169	427	703
83	1200000	—	—	61 3/	91 3/	127 3/	169 3/	427	703
82	1100000	—	—	61 3/	91 3/	127 3/	169 3/	427	703
81	1000000	—	37	—	61	91	127	427	703
80	900000	—	37 3/	—	61 3/	91 3/	127 3/	427	703
79	800000	—	37	—	61	91	127	427	703
78	750000	—	37	—	61	91	127	427	703
77	700000	—	37	—	61	91	127	427	703
76	650000	—	37 3/	—	61 3/	91 3/	127 3/	427	703
75	600000	—	—	37	61	91	127	427	703
74	550000	—	—	37 3/	61 3/	91 3/	127 3/	427	703
73	500000	—	19	—	37	61	91	259	427
72	450000	—	19 3/	—	37 3/	61 3/	91 3/	259	427
71	400000	—	—	19	37	61	91	259	427
70	350000	—	12	19	37	61	91	259	427
69	300000	—	12	19	37	61	91	259	427
68	250000	—	12	19	37	61	91	259	427
67	211600	0000	—	7	19	37	61	133	259
66	167800	000	—	7	19	37	61	133	259
65	133100	00	—	7	19	37	61	133	259
64	105600	0	—	7	19	37	61	133	259
01	83690	1	3	7	19	37	61	133	259
02	66360	2	3	—	7	19	37	49	133
03	52620	3	3	—	7	19	37	49	133
04	41740	4	3	—	7	19	37	49	133
05	33090	5	—	—	7	19	37	49	133
06	26240	6	—	—	7	19	37	49	133
07	20820	7	—	—	7	19	37	49	133
08	16510	8	—	—	7	19	37	49	133
09	13090	9	—	—	7	19	37	49	133
10	10380	10	—	—	7	19	37	49	—
12	6530	12	—	—	7	19	37	49	—
14	4110	14	—	—	7	19	37	49	—
16	2580	16	—	—	7	19	—	—	—
18	1620	18	—	—	7	19	—	—	—
20	1020	20	—	—	7	19	—	—	—
22	640	22	—	—	7	19	—	—	—
24	404	24	—	—	7	19	—	—	—
26	253	26	—	—	—	—	—	—	—
28	159	28	—	—	—	—	—	—	—
30	100	30	—	—	—	—	—	—	—
32	64	32	—	—	—	—	—	—	—

1/ Number 23 AWG has been dropped.
2/ For number 10 AWG and smaller wire, the AWG chosen for stranded wires is the number nearest the even numbered solid wire with the larger cross sectional area.
3/ Inactive for new design.
4/ Not covered by ASTM's.
5/ Replace 16 strands.

TABLE II. Construction details. 1/ - Continued

Wire size designator	Type B								Type R		
	Class I 24 AWG strands	Class J 28 AWG strands	Class K 30 AWG strands	Class L 32 AWG strands	Class M 34 AWG strands	Class O 36 AWG strands	Class P 38 AWG strands	Class Q 40 AWG strands	Class I 24 AWG strands	Class K 30 AWG strands	Cla 34 A str
99	—	—	—	—	—	—	—	—	—	—	—
98	—	—	—	—	—	—	—	—	—	—	—
97	—	—	—	—	—	—	—	—	—	—	—
96	—	—	—	—	—	—	—	—	—	—	—
95	—	—	—	—	—	—	—	—	—	—	—
94	—	—	—	—	—	—	—	—	—	—	—
93	—	—	—	—	—	—	—	—	4921	—	—
92	—	—	—	—	—	—	—	—	4788	—	—
91	—	—	—	—	—	—	—	—	4522	—	—
90	—	—	—	—	—	—	—	—	4389	—	—
89	—	—	—	—	—	—	—	—	4256	—	—
88	—	—	—	—	—	—	—	—	3990	—	—
87	—	—	—	—	—	—	—	—	3724	—	—
86	—	—	—	—	—	—	—	—	3458	—	—
85	—	—	—	—	—	—	—	—	3192	—	—
84	—	—	—	—	—	—	—	—	3059	—	—
83	—	—	—	—	—	—	—	—	2926	—	—
82	—	—	—	—	—	—	—	—	2793	—	—
81	—	—	—	—	—	—	—	—	2527	10101	25913
80	—	—	—	—	—	—	—	—	2261	9065	22631
79	—	—	—	—	—	—	—	—	1995	7980	20069
78	—	—	—	—	—	—	—	—	1862	7581	18788
77	—	—	—	—	—	—	—	—	1729	6916	17507
76	—	—	—	—	—	—	—	—	1596	6517	16226
75	—	—	—	—	—	—	—	—	1470	5985	14945
74	—	—	—	—	—	—	—	—	1372	5453	13664
73	—	—	—	—	—	—	—	—	1225	5054	12691
72	—	—	—	—	—	—	—	—	1127	4522	11396
71	—	—	—	—	—	—	—	—	980	3990	10101
70	—	—	—	—	—	—	—	—	882	3458	8806
69	—	—	—	—	—	—	—	—	735	2989	7581
68	—	—	—	—	—	—	—	—	637	2499	6384
67	—	—	—	—	—	—	—	—	532	2107	5320
66	—	—	—	—	—	—	—	—	418	1666	4256
65	—	—	—	—	—	—	—	—	342	1323	3325
64	—	—	—	—	—	—	—	—	266	1064	2646
63	—	—	—	—	—	—	—	—	210	836	2107
62	—	—	—	—	—	—	—	—	161	665	1666
61	—	—	—	—	—	—	—	—	133	532	1323
60	—	—	—	—	—	—	—	—	105	420	1064
59	—	—	—	—	—	—	—	—	84	336	836
58	—	—	—	—	—	—	—	—	63	266	665
57	52	—	—	—	—	—	—	—	—	210	532
56	41	—	—	—	—	—	—	—	—	168	420
55	33	—	—	—	—	—	—	—	—	133	326
54	26	65	104	165	—	—	—	—	—	—	259
52	—	41	65	104	—	—	—	—	—	—	168
50	—	26	41	65	104	—	—	—	—	—	—
48	—	16	26	41	65	104	165	—	—	—	—
46	—	10	16	26	41	65	104	165	—	—	—
44	—	7	10	16	26	41	65	104	—	—	—
42	—	—	7	10 3/	19	26 4/	41 4/	65 4/	—	—	—
40	—	—	—	7	—	19 3/	26 4/	41 4/	—	—	—
38	—	—	—	—	7	10 4/	16 4/	26 4/	—	—	—
36	—	—	—	—	—	7	10 4/	16 4/	—	—	—
34	—	—	—	—	—	—	7 4/	10 4/	—	—	—
32	—	—	—	—	—	—	—	—	—	—	—

TABE III. Construction details (type H wire).

Wire size designator	Approximate AWG size 1/	Class B	Class C	Class E	Class F	Class J	Class K	Class S
67	4/0						2109	
66	3/0						1672	
65	2/0						1330	
64	0					1045	1064	
01	1					817	836	
02	2						665	
04	4				133		420	
06	6				133		266	
08	8				133		168	
10	10			37	49	104	105	1
12	12		19	37		65		1
14	14		19		41			1
16	16		19	26				1
18	18	7	19	26				1
20	20	7	10	19				1
22	22	7		19				1
24	24	7		19				1
26	26	7		19				1
28	28	7						1
30	30	7	10					1

1/ Except for 3/0 and 1, the AWG number chosen for stranded wires is the number nearest the even numbered solid wire with the larger cross sectional area.

4.2 Classification of inspections. The inspections specified herein are classified as follows:

a. Materials inspection (see 4.3).
b. Quality conformance inspections (see 4.5).

4.3 Materials inspection (when specified see 6.2f). Materials inspection shall consist of certificate of compliance that the materials conform to 3.2.

4.4 Inspection conditions. Unless otherwise specified herein, all inspections shall be performed in accordance with the test conditions specified in the General Requirements of FED-STD-228.

4.4.1 Inspection of Packaging. The sampling and inspection of the preservation packing and container marking shall be in accordance with the requirements of MIL-C-3993.

4.5 Quality conformance inspection.

4.5.1 Sampling for visual and dimensional inspection. From each lot, sample units shall be selected at random in accordance with MIL-STD-105 at inspection level III. The acceptable quality level (AQL) shall be 0.65 percent defective.

4.5.2 Sampling for performance. From each lot, sample units shall be selected at random in accordance with MIL-STD-105 at inspection level S-4. The AQL shall be 4.0 percent defective.

4.5.3 Definitions.

4.5.3.1 Lot. All the wire of one type, class, size and temper, made under the same essential conditions, produced on a substantially continuous basis, and offered for inspection at one tine shall be considered a lot for purposes of sampling.

4.5.3.2 Unit. A unit shall be one continuous length of wire.

4.5.3.3 Sample unit. The sample unit is the individual unit from which the test specimen is taken.

4.5.3.4 Sample. The sample is the group of sample units selected from the lot for purpose of inspection.

4.6 Performance.

4.6.1 Visual and mechanical inspection. Wire furnished under this specification shall be inspected for compliance with 3.1, 3.3 through 3.3.7, 3.5, 3.6 and table IV.

TABLE IV. Small solid uninsulated wire dimensions.

Wire size designator	Approximate AWG size	Diameter inches
33	33	.0071 nom.
34	34	.0063 nom.
35	35	.0056 nom.
36	36	.0050 nom.
37	37	.0045 nom.
38	38	.0040 nom.
39	39	.0035 nom.
40	40	.0031 nom.
41	41	.0028 nom.
42	42	.0025 nom.
43	43	.0022 nom.
44	44	.0020 nom.
45	45	.00176 nom.
46	46	.00157 nom.
47	47	.00140 nom.
48	48	.00124 nom.
49	49	.00111 nom.
50	50	.00099 nom.
51	51	.00088 nom.
52	52	.00078 nom.
53	53	.00070 nom.
54	54	.00062 nom.
55	55	.00055 nom.
56	56	.00049 nom.

4.6.2 Performance test. Performance test on wire furnished under this specification shall conform to all the requirements and tests specified in the applicable ASTM Standards (see 3.1, 3.3.5, 3.4, 3.4.1, and 3.4.2).

4.6.3 Solderability. Solderability shall be tested in accordance with method 208 of MIL-STD-202 (see 3.4.1). The sample size shall be in accordance with MIL-STD-105, AQL 6.5, level S4. Sample length shall be 2 inches. The sample shall be immersed 1/2 inch +/-1/8 inch. The test wire shall be wrapped 1/4 +/- 1/16 inch from the end dipped in the solder.

4.6.3.1 Wire sizes 41 through 46. A specimen of wire shall be wound for a distance of 1/2 to 3/4 inch around the end of a 6-inch length of 20 AWG (0.0320 inch) clean, tinned copper wire, hot-dipped in accordance with ASTM B33. There shall be a minimum of five turns and a maximum of ten turns, with a slight spacing between each turn. The specimens so prepared shall be immersed in a rosin-alcohol flux (10 parts of water white rosin conforming to grade WW of LLL-R-626 mixed with 90 parts of denatured alcohol by weight) and then immersed to a depth of at least 1 inch in a soldering pot of 50/50 tin-lead solder maintained at a temperature of 360 deg. +/- 5 deg. C. The immersion time shall be 4 seconds maximum after which the specimen shall be removed from the pot and. examined. Visual examination shall be made under 6X to 1OX magnification.

4.6.4 "Elongation (33 - 40 AWG and Al - 44 AWG wires only)". A specimen of wire having effective length of 10 inches shall be elongated to its breaking point at a rate of 12 inches +/- 1 inch per minute. The gripping jaws shall be such that a break will not occur within 1/4 inch of either jaw. The travel distance of the jaw at the instant of break shall be noted and the percentage of elongation calculated.

5. PREPARATION FOR DELIVERY

5.1 Packaging requirements. The wire shall be packaged in accordance with MIL-C-3993.

6. NOTES

6.1 Intended use. Wires covered by this specification are intended to be used for electrical conductors in equipment and may be used as conductors in electrical cables.

6.2 Ordering data. Purchasers should select the preferred options permitted herein and include the following information in procurement documents.

a. Title, symbol, and date of this specification.
b. Part number (see 1.2).
c. Identification if required (see 3.5).
d. Inspection responsibility, when other than specified (see 4.1).
e. Inspection conditions, if other than specified (see 4.4).
f. If materials inspection is required (see 4.3).

6.3 Wire size. For solid wires 56 thru 4/0, the wire size is the American Wire Gauge (AWG) size per ASTM B258. For all wires larger than 4/0, the size is indicated by the cross section area in circular mils (thousandth of an inch); for sizes of stranded wires smaller than 250000 circular mils, the AWG number which is closest but larger in size is used except for hookup wire (type H) in which only the even numbers are used.

6.4 Changes from previous issue. The margins of this specification are marked with asterisks to indicate where changes (additions, modifications, corrections, deletions) from the previous issue were made. This was done as a convenience only and the government assures no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based m the entire content irrespective of the marginal notations and relationship to the last previous issue.

NOTE: Caution should be taken during handling and disposal of all coating materials in accordance with ASTM C930 and FED-STD-313.

CIVIL AGENCY COORDINATING ACTIVITY:
GSA-FSS

Custodians:
Army - CR
Navy - YD
Air Force - 85

Preparing activity:
Army - CR

(Project 6145-1166)

Review activities:
Army - AR, MI
Navy - YD
Air Force - 11, 99
DLA - ES, IS

User activities:
Army - MI
Navy - CG, M, SH, OS

QQ-W-343F
NOTICE- 1
December 21, 1990

ATTACH THIS NOTICE TO FRONT OF SPECIFICATION

FEDERAL SPECIFICATION

WIRE, ELECTRICAL, COPPER (UNINSULATED)

This notice is approved by the Commissioner, Federal Supply Service, General Services Administration.

This notice is issued to correct the supersession information and to add the preamble to the specification.

On page 1, in the upper right corner, immediately below "19 November 1990", delete "(TO SUPERSEDE)" and substitute "SUPERSEDING".

On page 1, two spaces below "WIRE, ELECTRICAL, COPPER (UNINSULATED)" add the preamble as follows:

"This specification is approved by the Commissioner, Federal Supply Service, General Services Administration, for the use of all Federal agencies."

CIVIL AGENCY COORDINATING ACTIVITY:
GSA-FSS

Custodians:
Army - CR
Navy - YD
Air Force - 85

Preparing activity:
Army - CR
(Project 6145-2001)

Review activities:
Army - AR, MI
Air Force - 11, 99
DLA - ES, IS

User activities;
Navy - CG, MC, SH, OS

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