

INCH-POUND

MIL-W-81044B
 AMENDMENT 3
 30 June 1990
 SUPERSEDING
 AMENDMENT 2
 19 June 1980

MILITARY SPECIFICATION

WIRE, ELECTRIC, CROSSLINKED POLYALKENE, CROSSLINKED
 ALKANE-IMIDE POLYMER, OR POLYARYLENE INSULATED, COPPER OR COPPER ALLOY

This amendment forms a part of Military Specification MIL-W-81044B, dated 31 December 1973, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 1

Delete the title and replace it with:

"WIRE, ELECTRICAL, CROSSLINKED POLYALKENE, CROSSLINKED ALKANE-IMIDE
 POLYMER, OR POLYARYLENE INSULATED, COPPER OR COPPER ALLOY"

Add the following at the bottom of the page:

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commanding Officer, Naval Air Engineering Center (Code 53), Systems Engineering and Standardization Department, Lakehurst, NJ 08733-5100 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

PAGE 2

2.1 Under "SPECIFICATIONS, Military", delete the following documents:

| | |
|-------------|--|
| MIL-T-5438 | Tester; Abrasion, Electrical Cable |
| MIL-P-7254 | Propellant, Nitric Acid |
| MIL-P-26536 | Propellant, Hydrazine |
| MIL-P-26539 | Propellant, Nitrogen Tetroxide |
| MIL-P-27402 | Propellant, Hydrazine-uns-Dimethylhydrazine (50% N ₂ H ₄ -50% UDMH) |

AMSC-N/A

FSC 6145

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PAGE 2 (continued)

Delete referenced Military Specification:

MIL-D-26937 Detergent Synthetic, Anionic (Alkyl Benzene Sulfonate)

It has been cancelled and has been superseded by the following document:

P-D-410 Type I, Dishwashing Compound, Hand

PAGE 3

Under STANDARDS, Military, add the following document reference:

MIL-STD-202 Test Methods for Electronic and Electrical Component Parts

2.2 Change the document identifiers and issue dates of the referenced ASTM documents in the paragraph and throughout the specification to read as follows:

ANSI/ASTM B 33
ANSI/ASTM B 298
ANSI/ASTM B 355

PAGE 4

3.1 Delete paragraph and substitute the following:

"3.1 Specification sheets. The requirements for the individual wires under this specification shall be as specified herein and in accordance with the applicable specification sheet. In the event of any conflict between the requirements of this specification and those of the specification sheet, the requirements of the specification sheet shall govern except as follows:

- a. All specification sheet references to tape abrasion or resistance to propellants shall be considered as cancelled.
- b. All specification sheet requirements for blocking shall be at the rated temperature of the wire of that specification sheet (for example: the blocking test temperature of MIL-W-81044/12 shall be 150°C in lieu of 225°C)."

PAGE 9

TABLE II:

| | | |
|------------------------------------|--------|----------|
| Solderability (when applicable) | 3.6.10 | 4.7.5.27 |
|------------------------------------|--------|----------|

PAGE 10

TABLE II under "EXAMINATION OR TEST," delete "Abrasion resistance, initial;" also the applicable entries under "REQUIREMENT" and under "METHOD."

TABLE II under "REQUIREMENT," opposite "Immersion tests," delete "Meet initial abrasion requirements after immersion."

PAGE 11

TABLE II under "EXAMINATION OR TEST," delete "Propellant resistance (When required in specification sheet);" also, the applicable entries under "REQUIREMENT" and under "METHOD."

3.6.3 (continued from page 8) Delete "Specification sheet part number" as first item of the identification and substitute:

"Specification sheet part number, except that inclusion of the color code portion of the part number is not required. At the option of the supplier, the color code portion of the part number may be included but, if included, it shall be included in full, not in part."

Add after first sentence of 3.6.3:

"The identification mark shall not be applied by hot stamp marking or other methods which significantly penetrate the insulation."

PAGE 12

Add the following paragraph:

"3.6.10 Solderability. Conductors of finished wires that have tin coated copper strands, silver coated copper strands, or silver coated high strength copper alloy strands shall be tested for solderability as specified in 4.7.5.27. The requirement for acceptable solder coverage of the stranded conductor shall be as defined in MIL-STD-202, Method 208. The test is not applicable to finished wires with nickel coated copper strands or nickel coated high strength alloy strands."

PAGE 15

TABLE IV, Group II, add:

| | | |
|---|--------|----------|
| Solderability (Tin plated conductors only) | 3.6.10 | 4.7.5.27 |
|---|--------|----------|

PAGE 16

TABLE IV under "EXAMINATION OR TEST," delete "Abrasion resistance, initial;" also the applicable entries under "REQUIREMENT" and under "METHOD."

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PAGE 19

TABLE VI:

| | | |
|---|--------|----------|
| Solderability (Silver plated conductors) | 3.6.10 | 4.7.5.27 |
|---|--------|----------|

TABLE VI: Under "TEST," delete "Propellant resistance (When required in specification sheet);" also, the applicable entries under "REQUIREMENT" and under "METHOD."

PAGE 27

4.7.5.11 In the fifth sentence, replace "temperature specified" with "rated temperature specified (see 3.1)."

PAGES 28 AND 29

Paragraph 4.7.5.14, line 8: Change "MIL-D-26937" to read "P-D-410."

4.7.5.15 through 4.7.5.15.2 Delete entirely.

PAGE 32

4.7.5.21 Delete the last two sentences of the paragraph.

PAGE 34

4.7.5.25 Delete entirely.

Add the following paragraph:

"4.7.5.27 Solderability. Five specimens shall be prepared by removing the insulation from finished wires. The exposed conductors of these wires shall be tested for solderability using Method 208 of MIL-STD-202. The specimens shall be tested without steam aging using a type RMA flux."

PAGE 37

6.3 Delete the last sentence of the paragraph and substitute the following:

"The activity responsible for the Qualified Products List is the Naval Air Systems Command, Washington, DC 20361; however, application for qualification of products should be made to the Commanding Officer, Naval Avionics Center (Code 444), 6000 East 21st Street, Indianapolis, IN 46219-2189, who has been designated Naval Air Systems Command agent for establishing this Qualified Products List."

Supersession Note: This amendment supersedes and completely replaces Amendment 2 of 19 June 1980, which is cancelled as of the issue date of Amendment 3.

Custodians:

Navy - AS
Army - CR
Air Force - 85

Preparing Activity:

Navy - AS
(Project No. 6145-1140)

Review activities:

Navy - EC, OS
Army - AR, AT, AV, EA, MI
Air Force - 85
DLA - IS
NSA

User activities:

Navy - MC
Army - ME