

MIL-S-23190E  
AMENDMENT 1  
30 December 1987

MILITARY SPECIFICATION

STRAPS, CLAMPS, AND MOUNTING HARDWARE, PLASTIC AND  
METAL FOR CABLE HARNESS TYING AND SUPPORT

This amendment forms a part of MIL-S-23190, dated 28 March 1986, and is approved for use by all Departments and Agencies of the Department of Defense.

PAGE 1

Delete "FSC 5340" at bottom, right side of page.

PAGE 4

3.3: Add the following sentence at the end of the first paragraph:

"When reworked nylon is added to virgin material, the new mixture shall be verified to the appropriate ASTM-D-4066 requirement for relative viscosity and shall have a maximum moisture content of 0.35% by weight (see 4.3.1). Before authorization can be granted to use a mixture of virgin material and reworked nylon plastic the in-house documentation which implements these material requirements. The frequency of measurement based on a batch or continuous process shall be specified in the in-house documentation."

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3.4.2: Delete "Class I" and substitute "Class 1" first line, 2 places.

3.4.3: Delete "Class II" and substitute "Class 2" first line, 2 places.

3.5.4: Delete and substitute the new paragraph as follows:

"Corrosion (Types I, II, III, V, and VI metallic devices only).  
for all devices which contain metallic materials (see 3.1), the component shall show no evidence of basic metal corrosion when tested as specified in 4.6.7 and shall meet the requirements of 3.5.1 following the corrosion test."

AMSC N/A

FSC 5975

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PAGE 6

3.6.1, first sentence: Delete "and/or" and substitute "or".

4.1.1, last sentence: Delete "MIL-C-45662" and substitute "MIL-STD-45662".

Following 4.3: Add the following paragraph:

"4.3.1 Nylon material. The manufacturer shall obtain certification from the nylon material supplier that the material furnished is the virgin nylon plastic which satisfies the requirements of ASTM-D-4066 Type PA111, PA121, PA181, PA611 or approved equivalent. Manufacturers using a mixture of virgin material and reworked nylon plastic shall measure the relative viscosity and maximum moisture content (see 3.3)."

PAGE 7

4.4, second sentence: Delete "<6.4.1)" and substitute "<6.7.1)".

PAGE 8

4.4.3, last sentence: Delete "<6.8)" and substitute "<6.7.1)".

4.4.5, Add the following sentence after the first sentence:

"All relative viscosity and maximum moisture content data generated from mixtures of virgin material and reworked nylon plastic shall be retained by the manufacturer and provided at each Retention of Qualification reporting period as part of the Group A data. The manufacturer shall provide certification to the qualifying activity that all cable ties or clamps are produced from either nylon plastic material or a mixture of virgin material and reworked nylon plastic."

PAGE 9

Table II, Test column, item a: Delete "Types I, II, III, and IV" and substitute "Types I, II, III, V, and VI".

PAGE 12

4.6.5, third sentence, after "mechanism)(" : Delete "<".

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5.2.2, first sentence: Delete "PPP-B-592" and substitute "PPP-B-591".

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6.5, first sentence: Delete "types I, II, and III" and substitute "types I, IA, II, and III".

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6.8: Renumber paragraph as 6.9 and substitute new 6.8 as follows:

"6.8 Definitions. The following definitions apply to this specification:

a. Reworked Nylon Plastic - Reworked nylon plastic is defined as 'nylon plastic from a processor's own production that has been reground, pelletized, or solvated after having been previously processed by molding, extrusion, or other manufacturing processes'."

PAGE 17

Note 1, first paragraph: Delete and substitute:

"The mandrel diameter, Dimension A, shall be 0.375 inches for straps with minimum length requirements equal to or less than 5 inches. For straps with minimum length requirements greater than 5 inches, the mandrel diameter shall be 1.5 inches."

PAGE 22

Figure 6: Add "Top View" beneath drawing.

Note 3: Delete and substitute new paragraph as follows:

"The bundle diameter shall be of sufficient size to permit the straps to slide over the required tensile strength fixture mandrels specified in the applicable figures 1 thru 5."

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Figure 7: Add "Top View" beneath drawing.

PAGE 24

Figure 8: Add "Front View" beneath drawing.

Figure 8: Add the following Note 1:

"Tie straps shall be mounted at different 90° increments around the wire bundles."

Figure 8: Delete "" and substitute ".

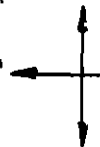

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Figure 9: Add "Front View" beneath drawing.

Figure 9: Add the following Note 1:

"Tie straps shall be mounted at different 90° increments around the wire bundles."

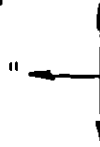
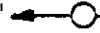
Figure 9: Delete "" and substitute ".

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Figure 10: Add "Front View" beneath drawing.

Figure 10: Add the following Note 1:

"Tie straps shall be mounted at different 90° increments around the wire bundles."

Figure 10: Delete "" and substitute ".

## Custodians:

Army - ER  
Navy - AS  
Air Force - 85

## Preparing Activity:

Navy - AS  
DOD project No. 5975 - 1008

## Review Activities:

Army - AR, MI  
Navy - EC  
Air Force - 80,99  
DSA - GS  
DOD - NS

## User Activities:

Army - AV, ME  
Navy - SH, OS, MC  
Air Force