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MIL-R-17343D  
AMENDMENT 1  
9 August 1971

# MILITARY SPECIFICATION

## ROPE, NYLON

This amendment forms a part of MIL-R-17343D, dated 2 June 1969, and is mandatory for use by all Departments and Agencies of the Department of Defense.

Page 1

2.1, "SPECIFICATIONS, FEDERAL", delete "CCC-T-191 - Textile Test Methods."

2.1, add "STANDARD, FEDERAL", and add: "FED-STD-191 - Textile Test Methods."

Page 4

Table III, delete and substitute:

"Table III - Put-up

Circumference	Minimum length	Approximate weight <sup>1/</sup>
Inches	Feet	Pounds
5/8	2,250	23
3/4	2,250	35
1	2,250	64
1-1/8	1,620	59
1-1/4	1,200	61
1-1/2	1,200	75
1-3/4	1,200	99
2	1,200	127
2-1/4	1,200	172
2-1/2	1,200	203
2-3/4	1,200	248
3	1,200	303
3-1/2	1,200	416
3-3/4	600	240
4	600	272
4-1/2	600	349
5	600	421
5-1/2	600	506
6	600	635
6-1/2	600	708
7	600	900
<sup>2/</sup> 8	600	1,169
9	600	1,505
10	600	1,918
11	600	2,302
12	600	2,750

<sup>1/</sup> Not a specification requirement - included for informational purposes only.  
<sup>2/</sup> Also available in 720 ft. length (min.) at 1403 lbs. (approx.)"

Pages 5 and 6

4.2.5 and table VI, delete and substitute:

"4.2.5 Testing of the end item. The methods of testing specified in FED-STD-191 wherever indicated in table VII, shall be followed. The physical and chemical values specified in Section 3 apply to the results of determinations made on a sample unit for test purposes. Test reports shall contain all values utilized in expressing the final result. The sample unit shall be 75 feet of rope. The lot shall be unacceptable if one or more sample units fails to meet any specified test requirement. The sample size (number of test units) shall be in accordance with table VI:

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Pages 5 and 6 (Cont'd)

Table VI - Sampling for tests

No. of reels, spools or coils in lot	Sample size (units)
3 and under	1
4 - 50	2
51 - 500	3
501 and over	5

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Table VII: Delete and substitute:

Table VII - Test methods.<sup>1/</sup>

Characteristic	Spec. ref.	Test method	No. of deter. per individ. unit of product	Results reported as:
Plied yarns per strand	3.4	Visual	1	Pass or fail
Direction of rope twist	3.4	4050	1	Pass or fail
Circumference	3.5	4.2.5.1	3	Pass or fail
Length per pound	3.5	4.2.5.2	1	Pass or fail (reported to nearest 0.1 ft. for ropes 5 inches or less and to nearest 0.01 ft. for ropes over 5 inches in circumference)
Breaking strength				
Spliced ropes				
Initial	3.5	4.2.5.3.1	1	Pass or fail (report to nearest 10 lbs.)
After heat aging	3.7	4.2.5.3.2.1	1	Pass or fail (report to nearest 10 lbs. and calculated to nearest 0.1 percent)
Alternate plied yarn method				
control	3.7	4.2.5.3.2.2	3	Average of 3 determinations to nearest 1 lb.
After heat aging	3.7	4.2.5.3.2.2	3	Average of 3 determinations to nearest 1 lb. and calculated to nearest 0.1 percent.
Elongation	3.5.1	4.2.5.4	1	Pass or fail (report to nearest 0.1 percent)
Hardness				
Initial	3.5.2	4.2.5.5.1	3	Averages of 3 determinations to nearest 1.0 lb.
After immersion	3.5.2	4.2.5.5.2	3	Averages of 3 determinations to nearest 1.0 lb.
Extractable matter	3.6	2611	1	Pass or fail (report to nearest 0.1 percent)
Moisture content	3.8	2600	1	Pass or fail (report to nearest 0.1 percent)

See footnotes at end of table.

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Characteristic	Spec. ref.	Test method	No. of deter. per individ. unit of product	Results reported as:
Spliceability	3.9	4.2.5.7	1	Pass or fail
Colorfastness to weathering	3.10.2	4804 <sup>2/</sup>	1	Pass or fail
Identification marker	3.11	<sup>2/</sup>		
Material	3.11	4.2.5.8	1	Pass or fail
Fastness to oil and water	3.11			
Identification ticket	3.12	<sup>2/</sup>		
Material	3.12			

- <sup>1/</sup> Tests to determine compliance with specification requirements, including quantity of delivery, may be under prevailing atmospheric conditions except in settlement of disputes in which case the tests shall be made upon material which has reached equilibrium under standard conditions specified in FED-STD-191.
- <sup>2/</sup> Test reports showing conformance to this specification shall be available for each lot of rope. Reports shall contain actual test, examination or other verifiable quality data.
- <sup>3/</sup> The time of exposure shall be 40 standard fading hours."

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4.2.5.2, delete and substitute:

"4.2.5.2 Determination of length per pound. A minimum of 20 feet of rope shall be measured to nearest 1/4 inch and weighed to within plus or minus 0.5 percent of its total weight. The feet per pound shall be calculated using the following equation:

$$\text{Feet per pound} = L \times \frac{(1 + e/100)}{W}$$

Where:

- L = Measured length of specimen (feet)  
W = Measured weight of specimen (pounds)  
e = Percent elongation at load P (see table II, determined as specified in 4.2.5.4)

Upon completion of this determination, the test length shall be retained for use in additional determinations. From this specimen, a length not less than 4 feet shall be cut to be used in the alternate heat aging test employing plied yarns (4.2.5.3.2.2). The remainder shall be taped off at each end for utilization in the hardness test (4.2.5.5)."

4.2.5.3.1, second line, delete "CCC-T-191" and substitute "FED-STD-191."

4.2.5.3.2, lines 3 and 4, delete "Section 4 of CCC-T-191", and substitute "Method 5850 of FED-STD-191".

4.2.5.3.2.2, delete and substitute:

"4.2.5.3.2.2 Alternate method using plied yarns. Select one 3-ply yarn from each strand of the 4 foot section cut from the portion of the test sample unit used in the length per pound determination. To insure against loss of twist, heat seal the ends of each selected yarn as it is removed from the strand. After folding in two equal lengths, each yarn shall be halved by heat sealing at the mid-point. These respective lengths shall then be separated into 2 sets, each consisting of 3 yarns. One set shall be employed as a control, while the other shall be subjected to the test specified in 4.2.5.3.2. The breaking strength for each set shall be determined in accordance with method 4102 of FED-STD-191, except the elongation shall not be required. The percent change shall be based on the average strength of the control set and the heat age set."

4.2.5.4, last line, delete "CCC-T-191" and substitute "FED-STD-191".

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4.2.5.5.1, first sentence, delete and substitute:

"The portion of the rope remaining from the weight determination shall be used herein."

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4.2.5.5.2, delete and substitute:

"4.2.5.5.2 After soaking. The length of rope employed in the dry hardness test shall be completely immersed, for 16 hours, in a tank of tap water. At the expiration of this period, the specimen shall be removed from the tank and allowed to drain for two hours. The wet hardness value shall be determined as specified in 4.2.5.5.1."

4.5.2.6, second line, delete "CCC-T-191" and substitute "FED-STD-191".

Section 5, delete and substitute:

"5. PREPARATION FOR DELIVERY

5.1 Packaging, packing, and marking. The rope, put-up as specified, shall be packaged level A or C, packed level A, B, or C, and marked in accordance with MIL-C-3131.

6.5, delete.

Custodians:

Army - GL  
Navy - SH  
Air Force - 82

Review activities:

Army - GL  
Navy - SH  
Air Force - 82  
DSA - IS

User activities:

Army - MI, MU  
Navy - YD, OS, MC, CG

Preparing activity:

Navy - SH  
(Project 4020-0214)