

MIL-W-43378A
27 June 1969

SUPERSEDING
MIL-W-43378
12 November 1965

MILITARY SPECIFICATION

WEBBING, TEXTILE, COTTON, SPLINT

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

1. SCOPE

1.1 Scope.- This specification covers one type of webbing used for orthopedic devices.

1.2 Classification.- The webbing shall be of the following classes as specified (see 6.2).

Class 1 - 1 inch
Class 2 - 1-1/2 inches
Class 3 - 2 inches

2. APPLICABLE DOCUMENTS

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:

SPECIFICATIONS

MILITARY

MIL-W-43334 - Webbing and Tape, Textile, Packaging and Packing of.

STANDARDS

FEDERAL

FED-STD-191 - Textile Test Methods.

MILITARY

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

FSC 3305

MIL-W-43378A

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

2.2 Other publication.- The following document forms a part of this specification. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

Rules and Regulations Under the Textile Fiber Products Identification Act.

(Copies may be obtained without charge from the Federal Trade Commission, Washington, D. C. 20580.)

3. REQUIREMENTS

3.1 Material.-

3.1.1 Yarn.- The yarn shall be spun from carded cotton.

3.2 Color.- The color shall be natural.

3.3 Physical requirements.- The webbing shall conform to the physical requirements specified in table I when tested as specified in 4.4.

TABLE I.- Physical requirements

Class	Width <u>1/</u> (inches)	Weight per linear yard minimum (ounces)	Threads, minimum, full width			Filling picks per inch minimum	Breaking strength minimum Pounds	Yarn sizes plus or minus 5.0 percent		
			Face and back warp	Binder warp	Stuffer warp			Face and back warp	Binder and stuffer warp	Filling
1	1	0.72	137	15	64	48	250	20/2	12/2	12/2
2	1-1/2	1.08	201	23	96	48	300	20/2	12/2	12/2
3	2	1.45	257	31	122	48	400	20/2	12/2	12/2

1/ A tolerance of plus or minus 1/16 inch will be permitted.

MIL-W-43378A

3.4 Weave.- The weave shall be composed of two ground warps (face and back), one binder warp, and one stuffer warp. The face warp shall weave plain with the picks that show on the face, and the back warp shall weave plain with the picks that show on the back. The binder warp shall weave plain throughout. There shall be 12 ground warp ends on one edge and 13 ground warp ends on the other.

3.5 Finish.- Unless otherwise specified, the webbing shall be in the natural finish.

3.6 Length and put-up.- Webbing shall be furnished in rolls. The length of the rolls shall be a minimum of 65 yards and a maximum of 80 yards, with not more than three pieces to a roll. No piece shall be less than 3 yards in length.

* 3.7 Identification tickets.- Each roll of webbing shall have an identification ticket attached to the roll in accordance with MIL-W-43334.

3.8 Fiber identification.- Each roll of webbing shall be labeled, ticketed, or invoiced for fiber content in accordance with the Textile Fiber Products Identification Act.

3.9 Workmanship.- The webbing shall conform to the quality and grade of product established by this specification. The occurrence of defects shall not exceed the applicable acceptable quality levels.

4. QUALITY ASSURANCE PROVISIONS

* 4.1. Responsibility for inspection.- Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier 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 Certificate of compliance.- Where certificates of compliance are submitted, the Government reserves the right to check test such items to determine the validity of the certification.

* 4.2 Inspection.- Sampling for inspection shall be performed in accordance with MIL-STD-105, except where otherwise indicated hereinafter.

* 4.2.1 Component and material inspection.- In accordance with 4.1 above, components and materials shall be tested in accordance with all the requirements of referenced specifications, drawings and standards unless otherwise excluded,

MIL-W-43378A

amended, modified or qualified in this specification or applicable purchase document. In addition the supplier shall submit a certificate of compliance stating that cotton yarns were the only yarns used in the weaving of the webbing.

- * 4.2.2 Examination of the end item.- Examination of the end item shall be in accordance with 4.2.2.1, thru 4.2.2.3.
- * 4.2.2.1 Yard-by-yard examination.- The required yardage of each roll shall be inspected on both sides for the defects listed below. All defects found shall be counted regardless of their proximity one to another, except where two or more defects represent a single local condition of the webbing, in which case only the more serious defect shall be counted. A continuous defect shall be counted as one defect for each warpwise yard or fraction thereof in which it occurs. The sample unit for this examination shall be one linear yard. The sample size shall be in accordance with level II of MIL-STD-105. The acceptable quality level for classes 1 and 2 shall be 0.40 major and 1.5 total defects (major and minor combined) per 100 units (yards). The acceptable quality level for class 3 shall be 0.65 major and 2.50 total defects (major and minor combined) per 100 units (yards). The lot size shall be expressed in units of 1 yard each. An approximate equal number of yards shall be examined from each roll selected. The number of rolls from which the sample is to be selected shall be in accordance with table II of this specification.

Classification of defects

Defects	Classification	
	Major	Minor
Abrasion mark - resulting in a weak place	X	
Broken or missing end or picks:		
- Two or more contiguous	X	
- Single		X
Cut, hole, or tear, any	X	
Fine or light filling bar <u>1/</u>	X	
Fine yarn, less than one half the thickness of the normal yarn	X	
Float:		
- Multiple, more than 1/2 inch in combined warp and filling directions	X	
- Multiple, 1/2 inch or less in combined warp and filling directions		X
- Single, more than 1/2 inch in length		X
Heavy filling bar or heavy place <u>1/</u>		X

NIL-W-43378A

Classification of defects (cont'd)

Defects	Classification	
	Major	Minor
Knot on surface or embedded <u>1/</u>		X
Poorly constructed, not firmly and tightly woven	X	
Slack or tight ends <u>1/</u>		X
Slub, slug, jerked-in filling or slough-off, more than three times the thickness of the normal yarn		X
Smash	X	
Weak or soft spot	X	
Wrong draw, more than 9 inches in length		X
Spot, stain or streak <u>1/</u>		X
Edges:		
- Cut, frayed or torn	X	
- Slack or poorly constructed	X	
- Width beyond specified tolerances		X

1/ Clearly visible at normal inspection distance (approximately 3 feet).

4.2.2.2 Overall examination.- Each defect listed below shall be counted no more than once in each roll examined. The sample unit for this examination shall be one roll. The sample size and acceptance number shall be as shown in table II. The lot size shall be expressed in units of 1 linear yard each.

Defects

Objectionable odor
Overall uncleanness

4.2.2.3 Length examination.-

4.2.2.3.1 Examination for length of individual rolls.- Each roll in the sample shall be examined for gross length. Any gross length found to be less than the specified minimum length, or more than the specified maximum length, or any gross length found to be more than 2 yards less than the gross length

MIL-W-43378A

marked on the ticket shall be considered a defect with respect to length. A defect will also be considered to exist if a roll contains more than the allowable number of pieces or if the minimum length of any piece is less than specified. The sample unit for this examination shall be one roll. The sample size and acceptance number shall be as shown in table II.

4.2.2.3.2 Examination for total yardage in sample.- The lot shall be unacceptable if the total of the actual gross length of rolls in the sample is less than the total of the gross lengths marked on roll tickets.

TABLE II.- Overall and length examination

Lot size in yards	Sample size in rolls	Maximum number of overall defects acceptable in sample (see 4.2.2.2)
Up to 1200 ^{1/}	3	0
1,201 up to and including 3,200	5	0
3,201 up to and including 10,000	8	0
10,001 up to and including 35,000	13	0
35,001 up to and including 150,000	20	1
150,001 and over	32	2

^{1/} If a lot contains fewer than 3 rolls, each roll in the lot shall be examined.

4.3 Examination of preparation for delivery.- An examination shall be made in accordance with the provisions of MIL-W-43334 to determine that packaging, packing and marking requirements of Section 5 of this specification are complied with.

4.4 Testing of the end item.- The methods of testing specified in FED-STD-191, wherever applicable and as listed in table III shall be followed. When the data in the "number of determinations per sample unit" and the "results reported as" columns are not specified in the table they shall be as required by the referenced test method. The physical values specified in Section 3 apply to the results of the determinations made on a sample unit for test purposes as specified in the applicable test methods. All test reports shall contain the individual values utilized in expressing the final result. The sample unit shall be 2 yards, full width of the webbing. The lot shall be unacceptable if one or more units fail to meet any requirement specified. The sample size shall be in accordance with table IV.

MIL-W-43378A

* TABLE III.- Test method

Characteristic	Requirement para- graph	Test method	Number of determina- tions per sample unit	Results reported as
Material:				
Cotton identification	3.1	1200 <u>1/</u>	-	-
Warp:				
Face and back warp	3.3	5050	-	-
Binder warp	3.3	5050	-	-
Stuffer warp	3.3	5050	-	-
Filling:				
Picks per inch	3.3	5050	-	-
Weight	3.3	5041	To nearest 0.01 ounce	-
Breaking strength	3.3	5100 <u>2/</u>	-	-
Weave	3.4	Visual	1	Pass or fail

1/ Unless otherwise specified a certificate of compliance shall be submitted and will be acceptable for the stated requirement.

2/ Breaking strength shall be determined on the full width of the specimen and the jaw dimensions shall be greater than the width of the specimen.

TABLE IV.- Sample size

Lot size	Sample size
800 or less	2
801 up to and including 22,000	3
22,001 and over	5

* 5. PREPARATION FOR DELIVERY

5.1 Packaging.- Packaging shall be level A, B or C as specified (see 6.2).

5.1.1 Levels A, B and C.- Webbing, put up as specified shall be packaged in accordance with the applicable requirements of MIL-W-43334.

5.2 Packing.- Packing shall be level A, B or C as specified (see 6.2).

5.2.1 Levels A, B and C.- Webbing shall be packed in accordance with the applicable requirements of MIL-W-43334.

5.3 Marking.- In addition to any special marking required by the contract or order, shipments shall be marked in accordance with MIL-W-43334.

MIL-W-43378A

6. NOTES

6.1 Intended use.- The webbing is used for orthopedic braces, corsets, leg traction apparatus, straps for back support, and balsa wood life rafts.

6.2 Ordering data.- Procurement documents should specify the following:

- (a) Title, number and date of this specification.
- (b) Class required (see 1.2).
- (c) Length of roll required, (see 3.6).
- (d) Selection of applicable levels of packaging and packing (see 5.1 and 5.2).

* 6.3 The margins of this specification are marked with an asterisk to indicate where changes (additions, modifications, corrections, deletions) from the previous issue were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and suppliers are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship of the last previous issue.

Custodians:

Army - GL
Navy - SA
Air Force - 11

Preparing activity:

Army - GL
Project No. 8305-0543

Review activities:

Army - MD
Navy - SA
Air Force - 45, 82

User activity:

Navy - MS

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SPECIFICATION ANALYSIS SHEET		Form Approved Budget Bureau No. 22-R255
INSTRUCTIONS: This sheet is to be filled out by personnel, either Government or contractor, involved in the use of the specification in procurement of products for ultimate use by the Department of Defense. This sheet is provided for obtaining information on the use of this specification which will insure that suitable products can be procured with a minimum amount of delay and at the least cost. Comments and the return of this form will be appreciated. Fold on lines on reverse side, staple in corner, and send to preparing activity. Comments and suggestions submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or serve to amend contractual requirements.		
SPECIFICATION <div style="display: flex; justify-content: space-between;"> MIL-W-43378A Webbing, Textile, Cotton, Splint </div>		
ORGANIZATION <div style="height: 20px; border: 1px solid black;"></div>		
CITY AND STATE <div style="height: 20px; border: 1px solid black;"></div>	CONTRACT NUMBER <div style="height: 20px; border: 1px solid black;"></div>	
MATERIAL PROCURED UNDER A <div style="display: flex; justify-content: space-around;"> <input type="checkbox"/> DIRECT GOVERNMENT CONTRACT <input type="checkbox"/> SUBCONTRACT </div>		
1. HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE? <div style="padding-left: 20px;"> A. GIVE PARAGRAPH NUMBER AND WORDING. <div style="height: 80px; border: 1px solid black;"></div> </div>		
B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES <div style="height: 150px; border: 1px solid black;"></div>		
2. COMMENTS ON ANY SPECIFICATION REQUIREMENT CONSIDERED TOO RIGID <div style="height: 60px; border: 1px solid black;"></div>		
3. IS THE SPECIFICATION RESTRICTIVE? <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <input type="checkbox"/> YES <input type="checkbox"/> NO (If "yes", in what way?) </div>		
4. REMARKS (Attach any pertinent data which may be of use in improving this specification. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity) <div style="height: 60px; border: 1px solid black;"></div>		
SUBMITTED BY (Printed or typed name and activity - Optional) <div style="height: 20px; border: 1px solid black;"></div>		DATE <div style="height: 20px; border: 1px solid black;"></div>

DD FORM 1426
1 JAN 66

REPLACES EDITION OF 1 OCT 64 WHICH MAY BE USED.