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INCH-POUND

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SUPERSEDING
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MILITARY SPECIFICATION

TAPE, TEXTILE, COTTON OR POLYESTER, GENERAL PURPOSE, NATURAL OR IN COLORS

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

1. SCOPE

1.1 Scope. This specification covers two types of lightweight general purpose, cotton or polyester tape.

1.2 Classification. The tape shall be of the following types and classes as specified (see 6.2).

Type I	- Lightweight tape
Type Ia	- Extra lightweight tape
Class 1	- Natural
Class 1a	- Natural, water repellent, mildew resistant 2,2' methylenebis-(4-chlorophenol) (see 6.7).
Class 1b	- Natural, water repellent, mildew resistant (copper 8-quinolinolate)
Class 2	- Bleached
Class 3	- Dyed
Class 4	- Dyed, water repellent, mildew resistant (copper 8-quinolinolate)
Class 8	- Dyed, water repellent

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be used in improving this document should be addressed to: U.S. Army Natick Research and Development Center, Natick, MA 01760-5014, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC/NA FSC 8315

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2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATION

MILITARY

MIL-P-43334 - Packaging of Textile Webbing and Tape

STANDARDS

FEDERAL

FED-STD-191 - Textile Test Methods

MILITARY

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

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

FEDERAL TRADE COMMISSION

Rules and Regulations Under the Textile Fiber Products Identification Act

(Copies are available from the Federal Trade Commission, Pennsylvania Avenue at Sixth Street, N.W., Washington, DC 20580-0001.)

2.2 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2).

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AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

Chromatic Transference Scale

(Application for copies should be addressed to the American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709-2215.)

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other informational services.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.3) in accordance with 4.3.

3.2 Samples. The dyed tape shall match the standard sample for shade and shall be equal to or better than the standard sample with respect to all characteristics for which the standard sample is referenced (see 6.4).

3.3 Material. It is encouraged that recycled material be used when practical as long as it meets the requirements of this specification.

3.3.1 Cotton yarns. The yarns shall be made from carded or combed cotton, except that the catch cord thread on the shuttleless loom shall be combed peeler mercerized cotton yarn. The yarns shall be spun and twisted into ply yarns as specified in tables I and II.

3.3.2 Polyester yarn (alternate for type Ia, class 2 tape only). When type Ia, class 2 tape is specified, textured multi-filament polyester yarns in the sizes specified in table II may be used. The yarn shall be in its natural state (bleaching is not required).

3.4 Construction.

3.4.1 Type I tape. The type I tape shall conform to the requirements specified in table I. The width of the tape shall be as specified (see 6.2), and the tolerances in width for tape shall be −1/32 + 1/16 inch for tape up to and including 1-1/2 inches in width; ± 1/16 inch for tape 2 inches and 2 1/2 inches in width; and ± 3/32 inch for tape 3 inches in width. The weave for type I shall be composed of two ground warps (face and back), a binder warp, and filling. The face warp shall weave plain weave with picks that show on the face. The back warp shall weave plain weave with the picks that show on the

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back. The binder warp ends shall weave one up and one down. There shall be a minimum of six ground warp ends in each selvage edge weaving plain. When latch type shuttleless looms are utilized, the filling yarn shall traverse the full width of the tape and shall be held at the edge by an extra catch-cord end interlacing with the filling yarn, in a method depicted in figure 1 or 3. When bobbin type shuttleless looms are utilized, interlacing of the catch-cord and filling shall occur within the selvage area before the first binder end (see figure 2).

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TABLE I. Type I tape requirements

Width in inches	Weight per linear yard minimum (ounces)	Yarns (minimum) Full width Face and back warp	Yarns (minimum) Full width Binder warp	Yarns (minimum) Yarns per inch filling 1/	Breaking strength minimum Warp - full width (pounds)	Breaking strength minimum Filling, jaws 1-inch apart 2/ (pounds)	Yarn sizes plus or minus 3 percent Warp Face and Back 3/	Yarn sizes plus or minus 3 percent Warp Binder	Yarn sizes plus or minus 3 percent Filling 1/
3/8	0.13	37	7	42 or 84	50		16/2	20/2	20/2 or 40/2
1/2	0.17	49	10	42 or 84	70		16/2	20/2	20/2 or 40/2
5/8	0.21	61	13	42 or 84	85		16/2	20/2	20/2 or 40/2
3/4	0.26	69	15	42 or 84	100		16/2	20/2	20/2 or 40/2
7/8	0.30	77	17	42 or 84	115		16/2	20/2	20/2 or 40/2
1	0.34	89	20	42 or 84	130		16/2	20/2	20/2 or 40/2
1-1/8	0.45	97	22	46 or 92 4/	145		16/2	16/2	16/2, 30/2 or 32/2 4/
1-1/4	0.43	109	25	42 or 84	165		16/2	20/2	20/2 or 40/2
1-1/2	0.51	129	30	42 or 84	190		16/2	20/2	20/2 or 40/2
2	0.68	169	40	42 or 84	250		16/2	20/2	20/2 or 40/2
2-1/2	0.86	209	50	42 or 84	300		16/2	20/2	20/2 or 40/2
3	1.02	249	60	42 or 84	360	80	16/2	20/2	20/2 or 40/2

1/ 42 yarns per inch (1 yarn per shed) of 20/2 ply, or 84 yarns per inch (2 yarns per shed) of 40/2 ply.

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2/ When bobbin type shuttleless looms are used, the point of interlacing the filling with the catch-cord shall be within the area to be ruptured.

3/ The yarn for the catch-cord shall be combed peeler mercerized cotton yarn no finer than 40/2 for the bobbin type edge and no finer than 50/2 for the latch needle type edge. The color of the catch-cord (either type) shall be the color of the tape.

4/ 46 yarns per inch (1 yarn per shed) of 16/2 ply or 92 yarns per inch (2 yarns per shed) of 32/2 ply or 30/2 ply.

3.4.2 Type Ia tape. The type Ia tape shall conform to the requirements specified in table II. The width of the tape shall be as specified (see 6.2), and the tolerance for the width of the tape shall be ± 1/16 inch. The weave for type Ia shall be plain weave. When latch-type shuttleless looms are utilized the filling yarn shall traverse the full width of the tape and shall be held by an extra catch-cord end interlacing with the filling yarn, in a method depicted in figure 1 or 3. When bobbin type shuttleless looms are utilized, interlacing of the catch-cord and filling shall occur within the first four ends of warp yarn at the edge (see figure 2).

TABLE II. Type Ia tape requirements

	Cotton	Polyester
Width, inches	2	2
Weight per linear yard, ounces (min)	0.45	0.38
Yarns (min):		
Warp, full width	159	159
filling, per inch	32 or 64 1/	16 2/
Breaking strength, warp full width (min)	235	500
Yarn sizes, ± 3 percent:		
Cotton:		
Warp	20/2 3/	-
Filling	20/2 or 40/2 1/	-
Polyester (Denier) 4/:		
Warp	-	450 5/
Filling	-	300

1/ 32 yarns per inch (1 yarn per shed) of 20/2 ply, or 64 yarns per inch (2 yarns per shed) of 40/2 ply.

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2/ Two picks per shed.

3/ The cotton yarn for the catch-cord shall be combed peeler mercerized cotton yarn no finer than 40/2 for the bobbin type edge and no finer than 50/2 for the latch needle type edge. The color of the catch-cord (either type) shall be the color of the tape.

4/ Nominal denier, plied or singles.

5/ The polyester yarn for the catch-cord shall be no finer than 150 denier.

3.5 Color.

3.5.1 Classes 1, 1a, and 1b. The tape shall be unbleached natural.

3.5.2 Class 2. The tape shall be bleached white.

3.5.3 Classes 3,4, and 8. The tape shall be yarn or piece dyed the color specified (see 6.2 and 6.6). When tape conforming to classes 4 and 8 is required, the shade of the dyed tape prior to the application of the finish shall, unless otherwise specified, match the standard sample. The shade of the tape, classes 4 and 8, after finishing shall be that resulting from the combination of the base shade and the color imparted by the specified finish. Unless specifically authorized by the contracting officer, the use of coloring matter as a component of the finish is not permitted. The dyed tape shall show good dye penetration and the dye shall be completely oxidized. The tape shall be well soaped and washed after dyeing.

3.5.3.1 Labile sulfur. The use of dyes and compounds containing elementary sulfur capable of oxidation to sulfuric acid is prohibited. The dyestuff shall be chosen and applied so that the dyed and finished tape shall contain no more labile sulfur than shown by the standard sample when tested as specified in 4.4.3. When a standard sample is not available the dyed and finished tape shall show no more than a slight trace of labile sulfur when tested as specified in 4.4.3.

3.5.3.2 Color matching. The color of the finished tape shall match the standard sample when viewed under filtered tungsten lamps that approximate artificial daylight and that have a correlated color temperature of 7500 ± 200 K, with illumination of 100 ± 20 foot candles, and shall be a good match to the standard sample under incandescent lamplight at 2300 ± 200 K.

3.5.3.3 Colorfastness of class 3 tape. The class 3 dyed tape shall show fastness to laundering (after 3 cycles), crocking and accelerated weathering equal to or better than the standard sample. When no standard sample is established for colorfastness, the class 3 dyed tape shall show "fair" fastness to laundering, (after 3 cycles), bleaching, and accelerated weathering and no

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more crocking than an AATCC Chromatic Transference Scale rating of 3.5 (except that Ultramarine Blue No. 65010 dyed tape shall show no more crocking than an AATCC Chromatic Transference Scale rating of 3.0) when tested as specified in 4.4.3.

3.5.3.4 Colorfastness of class 4 tape. The class 4 dyed and finished tape shall show fastness to laundering (after 3 cycles) crocking and accelerated weathering equal to or better than the standard sample. When no standard sample is established for colorfastness, the class 4 dyed and finished tape shall show "fair" fastness to laundering (after 3 cycles) and accelerated weathering and no more crocking than an AATCC Chromatic Transference Scale rating of 1.5.

3.5.3.5 Colorfastness of class 8 tape. The class 8 dyed and finished tape shall show fastness to laundering (after 3 cycles) crocking and accelerated weathering equal to or better than the standard sample. When no standard sample is established for colorfastness, the class 8 dyed and finished tape shall show "fair" fastness to combined laundering (after 3 cycles) and accelerated weathering and no more crocking than an AATCC Chromatic Transferenc Scale rating of 3.5 when tested as specified in 4.4.3.

3.6 Nonfibrous material. The starch and protein content, including chloroform-soluble and water-soluble material, of the types I and Ia tape shall not exceed 5.0 percent when tested as specified in 4.4.3. For treated tape, determination shall be made after dyeing and prior to application of the finish.

3.7 Finish. When specified (see 6.2), the tape shall be treated for resistance to mildew, water, or a combination thereof.

3.7.1 Water repellency (classes 1a, 1b, 4 and 8). The classes 1a, 1b, 4 and 8 tapes shall have a water repellent finish. The water repellent shall consist of aluminum salts of saturated carboxylic acid (such as formate, acetate, palmitate or stearate) zirconium salts of such saturated carboxylic acids, or a combination of both mixed with refined mineral and vegetable waxes, titanate esters, or a combination of both. The product shall be applied either in the form of an aqueous emulsion or in the form of a water-free solvent solution. The dynamic absorption of the treated material shall be no more than 40 percent when tested as specified in 4.4.3.

3.7.2 Mildew inhibitors.

3.7.2.1 Copper 8-quinolinolate. The class 1b and 4 tapes shall be mildew resistant treated by evenly depositing within the tape no less than 0.13 percent and no more than 0.40 percent copper as a metal from copper 8-quinolinolate using a one bath solvent process containing a solubilized form of copper 8-quinolinolate. The finished tape shall be free from residual solvent. The test for copper content shall be as specified in 4.4.3.

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3.7.2.2 2,2' Methylene-bis-(4-chlorophenol). The class 1a tape shall be mildew resistant treated with no less the 1.1 percent and no more than 1.9 percent of 2,2' methylene-bis-(4-chlorophenol) applied from solvent solution. The tape shall be dried so that no residual solvent shall be present. The concentration of the mildew inhibitor shall be determined as specified in 4.4.3 (see 6.7).

3.8 pH. The pH value of the water extract of the classes 1a, 1b, 4 and 8 tapes shall be not less than 5.5 nor more than 8.5 when tested as specified in 4.4.3.

3.9 Curvature. The finished tape shall show no more lateral curvature than 1/4 inch within a yard when tested as specified in 4.4.3.

3.10 Length and put-up. The tape shall be put up in rolls. Unless otherwise specified, each roll shall contain not more than three pieces and the minimum length of any piece shall be 3 yards. One end of each piece in the roll shall be marked with paper or other means to indicate the number of pieces in the roll. The length of the rolls shall be as follows:

Type I - Not more than 100 yards nor less than 80 yards per roll, except that for widths narrower than 5/8 inch the minimum roll length may be 50 yards with not more than two pieces per roll.

Type Ia - The length of the roll shall be 500 feet -6 feet or +12 feet with not more than four pieces per roll and the minimum length of any piece shall be 10 yards.

3.11 Identification ticket. Each roll of tape shall have an identification ticket attached to the roll in accordance with MIL-P-43334.

3.12 Fiber identification. Each roll of tape shall be labeled or ticketed for fiber content in accordance with the Textile Fiber Products Identification Act.

3.13 Workmanship. The finished tape shall conform to the quality of product established by this specification and 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 contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, 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 this specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

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4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

4.1.2 Responsibility for dimensional requirements. Unless otherwise specified in the contract or purchase order, the contractor is responsible for ensuring that all specified dimensions have been met. When dimensions cannot be examined on the end item, inspection shall be made at any point, or at all points in the manufacturing process necessary to ensure compliance with all dimensional requirements.

4.1.3 Certificates 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 Classification of inspections. The inspection requirements specified herein are classified as follows:

a. First article inspection (see 4.3).
b. Quality conformance inspection (see 4.4).

4.3 First article inspection. When a first article is required (see 3.1 and 6.2), it shall be examined for the defects specified in 4.4.2.1 through 4.4.2.3 and tested for the characteristics specified in 4.4.3.

4.4 Quality conformance inspection. Unless otherwise specified, sampling for inspection shall be performed in acccordance with MIL-STD-105.

4.4.1 Component and material inspection. In accordance with 4.1, components and materials shall be inspected in accordance with all the requirements of referenced documents unless otherwise excluded, amended, modified, or qualified in this specification or applicable purchase document.

4.4.1.1 Component and material certification. A certificate of compliance may be acceptable as evidence that the characteristics listed below conform to the specified requirements.

Component	Requirement paragraph
Cotton yarns	3.3.1
Polyester yarns	3.3.2
Yarn sizes and plies	3.4.1 and 3.4.2

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4.4.2 End item examination.

4.4.2.1 Yard-by-yard examination. The tape shall be examined for the defects listed in table III. All defects found shall be counted regardless of their proximity to each other, except where two or more defects represent a single local condition, 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 lot size shall be expressed in yards of tape. The sample unit shall be 1 yard of tape. The inspection level shall be II, and the acceptable quality level (AQL), expressed in terms of defects per hundred units, shall be as follows:

	AQL
For tape widths of 1-1/2 inches and less:	0.40 for major defects 1.50 for total defects
For tape widths of 2, 2-1/2, and 3 inches:	0.65 for major defects 2.50 for total defects

The number of rolls from which the sample is to be selected shall be in accordance with table IV. The sample yardage shall be apportioned equally among the selected rolls.

TABLE III. End item visual defects.

Defects	Classification Major	Minor
Abrasion mark resulting in a weak place	101	
Broken or missing ends or picks:		
-Two or more contiguous	102	
-Single		201
Cut, hole, or tear, any	103	
Fine or light filling bar 1/	104	
Fine yarn or drop ply less than 1/2 the thickness of the normal yarn		202
Float:		
-Multiple, more than 1/2 inch in combined warp and filling directions	105	
-Multiple, 1/2 inch or less in combined warp and filling directions		203
-Single, more than 1/2 inch in length		204
Heavy filling bar or heavy place 1/		205
Knot on surfaces or edges 1/		206
Slack or tight end or ends 1/		207
Slub, slug, jerked-in filling, or slough-off, more than three times the thickness of the normal yarn		208
Smash	106	
Weak or soft spot	107	

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TABLE III. End item visual defects. (cont'd)

Defects	Classification Major	Minor
Wrong draw more than 9 inches in length		209
Spot, stain, or streak 1/		210
Edges:		
-Cut, frayed or torn	108	
Slack or poorly constructed	109	
Shade (when colors are specified):		
-Shade bar 1/		211
-Dye streak 1/		212
Untrimmed filling yarn ends 1/		213
Width beyond specified tolerances	110	
Dropped knitted stitch on edge (applicable to shuttleless looms only)	111	
Catch-cord missing (applicable to shuttleless looms only)	112	
Twisted or wavy, will not lay flat upon application of manual pressure 2/	113	
Catch-cord not interlacing with filling (bobbin looms only)	114	

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

2/ A 3-yard length of tape shall be laid on a flat and smooth surface without tension. If the tape does not lie flat or if the tape is wavy or ridgy, it shall be counted as a defect.

4.4.2.2 Overall examination. The tape shall be examined for the defects listed below. Each defect listed shall be counted not more than once in each roll examined. The sample shall consist of the applicable number of rolls indicated in table IV. The lot shall be rejected if the total number of defects in the sample exceeds the applicable acceptance number specified in table IV.

Defects

Off shade, not within established tolerances (class 3)
Cloudy, mottled, or streaky throughout
Poorly constructed, not firmly and tightly woven
Poor color penetration
Objectionable odor
Overall uncleanness
Unevenness of application of treatment (classes 1a, 4 and 8)
Not completely dry (classes 1a, 4 and 8)
Clearly noticeable crystallization of mildew inhibitor (classes 1a and 4)
Not labeled in accordance with Textile Fiber Products Identification Act

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TABLE IV. Sample size

Lot size in yards	Sample size in rolls 1/	Acceptance number 2/
Up to 1,200	3	0
1201 up to and including 3200	5	0
3201 up to and including 10,000	8	0
10,001 up to an 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 three rolls, each roll in the lot shall be examined.

2/ Except that the acceptance number shall be zero for the color and uniformity of shade defects in the overall examination in 4.4.2.2.

4.4.2.3 Length examination. The tape shall be examined for the defects listed below. The sample size shall be the applicable number of rolls indicated in table IV. The lot shall be rejected if the total number of defects in the sample exceeds the applicable acceptance number specified in table IV.

Defects

Gross length is less than the specified minimum length or more than the specified maximum length
Gross length is more than 2 yards less than the gross length marked on the piece ticket
Any piece less than the allowable minimum length
Any roll containing more than the allowable number of pieces permitted for the applicable type of tape

4.4.3 End item testing. The end item shall be tested for the characteristics listed in table V. The methods of testing specified in FED-STD-191, wherever applicable, and as listed in table V shall be followed. All test reports shall contain the individual values utilized in expressing the final results. The sample size shall be as follows:

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

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The lot shall be unacceptable if one or more sample units fail to meet any requirement specified. The sample unit for testing shall be as follows:

Classes 1, 2, and 3 tapes	8 linear yards.
Classes 1a and 1b tapes	8 linear yards of the finished tape and 1/2 linear yard of tape prior to treatment.
Classes 4 and 8 tapes	8 linear yards of the dyed and finished tape and 1/2 linear yard of the dyed tape prior to treatment.

TABLE V. End item tests

Characteristic	Requirement reference	Test method
Weight, oz/yd	3.4.1 and 3.4.2	5041
Breaking strength	3.4.1 and 3.4.2	4108 1/
Texture:		
Warp		
Face and back, type I	3.4.1	5050
Binder warp, type I	3.4.1	5050
Warp, full width type Ia	3.4.2	5050
Filling		
Yarns per inch, types I-Ia	3.4.1 and 3.4.2	5050
Weave	3.4.1 and 3.4.2	Visual
Color prior to treatment: (classes 4 and 8)	3.5.3	Visual
Labile sulfur	3.5.3.1	2020

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TABLE V. End item tests (cont'd)

Characteristic	Requirement reference	Test method
Colorfastness for classes 3,4 and 8:		
Laundering (after 3 cycles)	3.5.3.3, 3.5.3.4, and 3.5.3.5	5610 6/
Crocking	3.5.3.3, 3.5.3.4, and 3.5.3.5	5651
Accelerated weathering	3.5.3.3, 3.5.3.4, and 3.5.3.5	5671 2/
Nonfibrous material 3/	3.6	2611
Water repellency for classes 1a, 1b, 4 and 8:		
Dynamic absorption	3.7.1	4500
Water repellent material	3.7.1	4/
Mildew inhibitors:		
Classes 1b and 4		
Copper 8-quinolinolate	3.7.2.1	2060 5/
Copper content percent	3.7.2.1	2050
Class 1a		
2,2' methylene-bis-(4-chlorophenol)	3.7.2.2	2011
pH for Classes 1a, 1b, 4 and 8	3.8	2811
Curvature	3.9	4.5.1

1/ During the breaking strength test, it shall be observed whether the nonconventional edge of the shuttleless loom tape ruptures prior to the body of the tape. When the edge ruptures at a breaking strength value less than the minimum requirement specified, the tape shall be rejected.

2/ Time of exposure shall be 40 standard fading hours.

3/ Performed after dyeing and prior to treatment on classes 4 and 8 tapes.

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4/ A certificate of compliance shall be submitted and will be acceptable for the stated requirement.

5/ The contractor shall certify that only copper 8-quinolinolate was used in the treatment of the classes 1b and 4 tape.

6/ The specimens must be dried after each of the 3 laundering cycles. On the color transfer cloth evaluation, only the stain on the cotton fibers of the color transfer cloth shall be evaluated.

4.4.4 Packaging inspection. The sampling and inspection of the preservation, packing, and container marking shall be in accordance with the requirements of MIL-P-43334.

4.4.5 Palletization examination. The examination shall be in accordance with the quality assurance provisions of MIL-P-43334.

4.5 Methods of inspection.

4.5.1 Measurement of curvature.

4.5.1.1 Test specimen. The test specimen shall be a length of tape, full width, measuring a minimum of 40 inches. The specimen shall not be stretched, smoothed, or otherwise changed from its original condition prior to testing.

4.5.1.2 Number of determinations. Five specimens shall be tested from each sample unit.

4.5.1.3 Apparatus. A sheet of polymethyl methacrylate (PMMA) weighing approximately 35 ounces with dimensions of 45 inches by 5 inches by 1/4 inch.

Straight edge	- a rigid straight edge measuring 36 inches in length.
Roller	- a roller 1 inch in diameter, weighing 1-1/2 pounds.

4.5.1.4 Procedure. The specimens shall be placed flat on a smooth, horizontal flat surface without tension and allowed to reach moisture equilibrium as defined in section 4 of FED-STD-191. After equilibrium is reached a weight shall be placed at one end of the tape. The roller shall be placed on the specimen at the end of the tape where the weight is located. The specimen should be approximately in the center of the roller. The roller shall be rolled along the length of the specimen, care being taken to keep the specimen in the center of the roller and not to exert any pressure on the roller. When the roller has passed over the length of the tape, the PMMA shall then be placed on the specimen for a period of 1 hour. Without moving the PMMA on the specimen, the straight edge shall be placed on the PMMA so that both ends of the straight edge are aligned perpendicularly with the outermost edge of the specimen. Determine the highest degree of curvature of the specimen from the straight-edge by measuring to the nearest 1/32 of an inch perpendicularly from the straight edge. Record the highest measurement (see figure 4).

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4.5.1.5 Report. One or more of the five specimens having a lateral curvature greater than 1/4 inch shall be reported as a test failure.

5. PACKAGING

5.1 Preservation. Preservation shall be level A or Commercial as specified (see 6.2).

5.1.1 Levels A and commercial. Tape, put up as specified in 3.10, shall be preserved in accordance with the applicable requirements of MIL-P-43334.

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

5.2.1 Levels A, B and Commercial packing. Tape shall be packed in accordance with the applicable requirements of MIL-P-43334.

5.3 Palletization. When required (see 6.2), palletization shall be in accordance with the applicable requirements of MIL-P-43334.

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

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The tape is for use in the manufacturing of tentage, clothing and equipage items.

6.2 Acquisition requirements. Acquisition documents must specify the following:

a. Title, number, and date of this specification.
b. Type and class required (see 1.2).
c. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1 and 2.2).
d. When a first article is required (see 3.1, 4.3, and 6.3).
e. Width required (see 3.4.1 and 3.4.2).
f. Color required (see 3.5).
g. Treatment required (see 3.7).
h. Levels of preservation and packing (see 5.1 and 5.2).
i. When palletization is required (see 5.3).

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6.3 First article. When a first article is required, it shall be inspected and approved under the appropriate provisions of FAR 52.209. The first article should be a preproduction sample. The contracting officer should specify the appropriate type of first article and the number of units to be furnished. The contracting officer should also include specific instructions in acquisition documents regarding arrangements for selection, inspection, and approval of the first article.

6.4 Sample. For access to samples, address the contracting activity issuing the invitation for bids or request for proposal.

6.5 Subject term (key word) listing.

Textured, multi-filament
Lightweight
Plain weave
Water repellent
Tentage
Clothing
Equipage

6.6 Color. Olive Green and Olive Drab colors have been replaced by Camouflage Green 483. Any end item which previously used Olive Green or Olive Drab shall use Camouflage Green 483.

6.7 Mildew inhibitor. The use of the mildew inhibitor agent 2,2' methylene-bis-(4-chlorophenol) has not been approved for uses where intimate skin contact is involved.

6.8. Changes from previous issue. Asterisks are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

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Custodians:

Army - GL
Navy - NU
Air Force - 11

Review activities:

Army - EA, MD
Navy - AS, MC
Air Force - 82, 99
DLA - CT

User activities:

Army - AT, AR
Air Force - 45

Preparing activity:

Army - GL

(Project 8315-0349)

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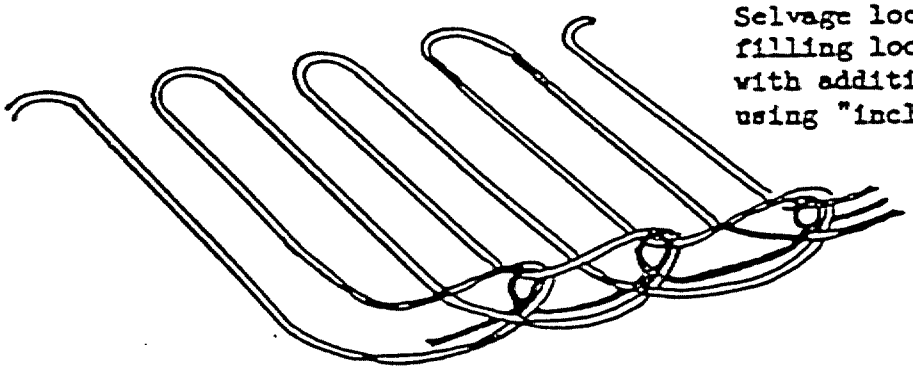
Figure 1

Catch-Cord Diagram



Selvage locked by knitting filling loops simultaneously with additional catch thread using "inclined" latch needle.

Figure 2

Catch-Cord Diagram

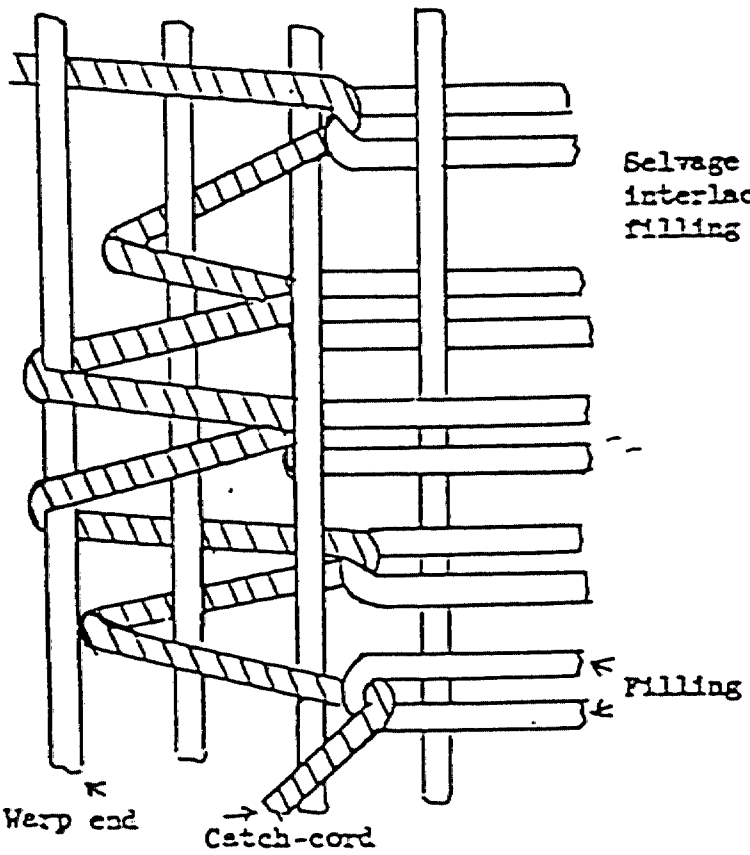


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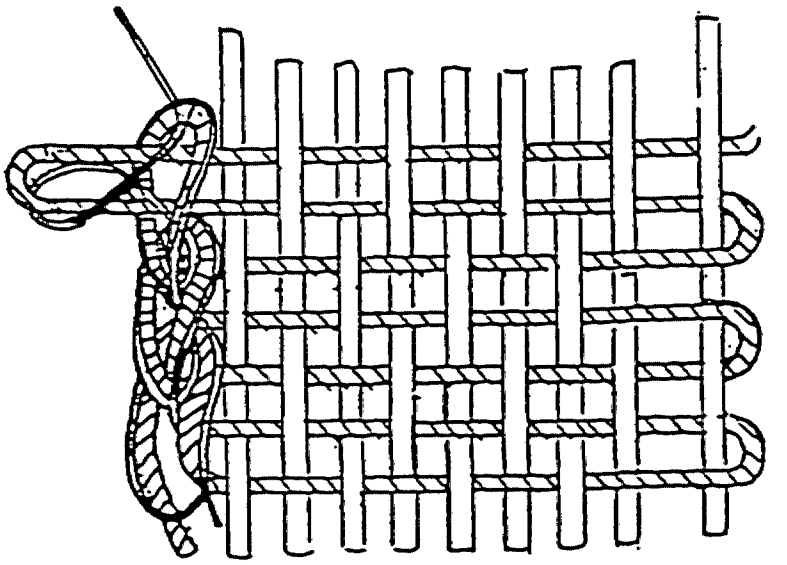
Figure 3
Catch-Cord Diagram



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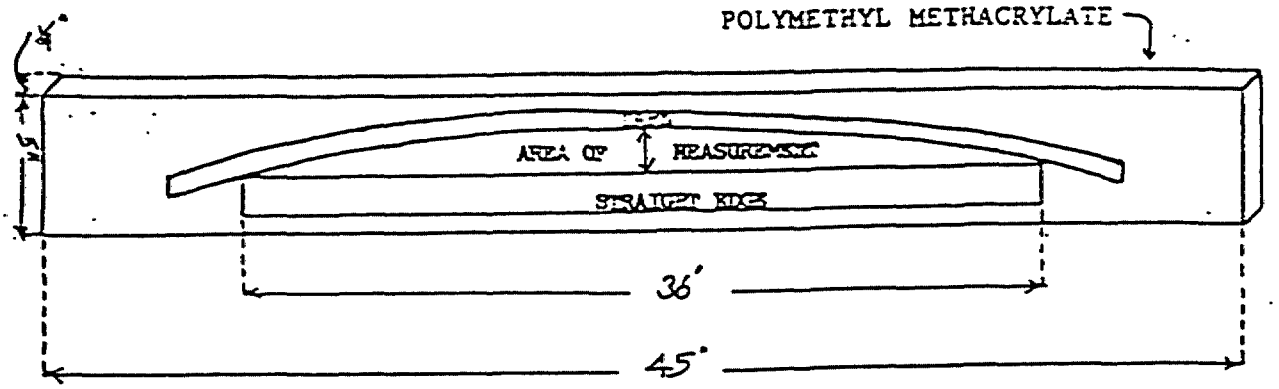
Figure 4
Diagram Curvature Measurement