

INCH-POUND

MIL-C-7350G  
17 April 1992  
SUPERSEDING  
MIL-C-7350F  
6 July 1981

MILITARY SPECIFICATION  
CLOTH, PARACHUTE, NYLON

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

1. SCOPE

1.1 Scope. This specification covers nylon cloth for fabrication of parachute.

1.2 Classification. The cloth shall be two types as specified.

Type I - 2.25 ounces

Type II - 3.50 ounces

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, and standards. The following specifications and standards 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).

SPECIFICATIONS

FEDERAL

V-T-295	Thread, Nylon
PPP-P-1133	Packaging and Packing of Synthetic Fiber Fabrics

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Technology & Industrial Services Division, SA-ALC/TIRDM, Kelly AFB, TX 78241-5609 by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 8305

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## STANDARDS

## FEDERAL

FED-STD-191      Textile Test Methods.  
FED-STD-751      Stitch, Seam and Stitching.

## MILITARY

MIL-STD-105      Sampling Procedures and Tables  
                    for Inspection by Attributes.  
MIL-STD-851      Coding: Manufacturer's Color,  
                    Nylon Parachute Cloth.

(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, and publications. The following other Government documents, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues shall be those in effect on the date of the solicitation.

Rules and Regulations Under the Textile Fiber Products Identification Act.

(Application for copies should be addressed to the Federal Trade Commission, Washington, DC 20580.)

2.2 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 Material. The nylon yarn used in the manufacture of all parachute fabric shall be multi-continuous filament, bright, high tenacity, heat and light resistant polyamide made from hexamethylene diamine and adipic acid, or its derivatives. It shall have a melting point of  $489 \pm 9^{\circ}\text{F}$  ( $254 \pm 5^{\circ}\text{C}$ ) when tested in accordance with table V. The yarn shall not be bleached in any manner or process. The use of any recycled material is prohibited; unless otherwise specified.

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3.2 Yarn twist. Any yarn twist (warp and filling) is acceptable, provided all requirements for this specification are met.

3.3 Weave. The weave patterns for type I and type II cloth shall be in accordance with figures 1 and 2, respectively.

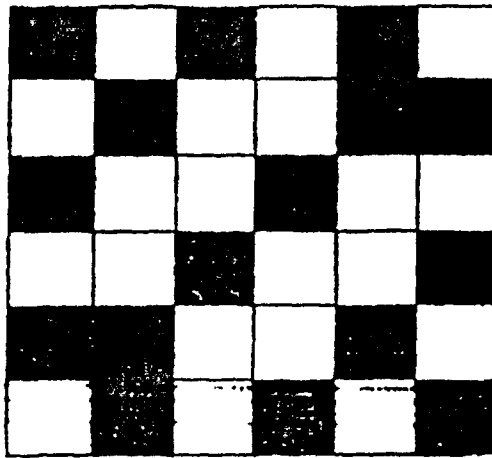


FIGURE 1 WEAVE DESIGN, TYPE I<sup>1/</sup>

<sup>1/</sup>One repeat of weave is shown.

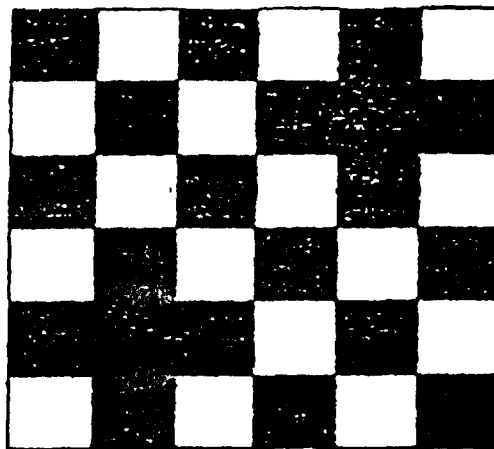


FIGURE 2. WEAVE DESIGN, TYPE II<sup>1/</sup>

<sup>1/</sup>One repeat of weave is shown.

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3.4 Physical and chemical properties. The physical and chemical properties of the finished cloth shall conform to table I and the following subparagraphs thereto. The frequency of testing shall be dependent on the width of the fabric delivered. For fabrics wider than 36 inches, the number of tests made shall be increased proportionately with the increase of width--for example, 1/3 more readings (two) shall be taken for 48 inch wide fabric. For 72 inch wide fabric delivered without splitting, the number of tests shall be doubled; if the fabric is split by the finisher, the fabric is considered as 36 inches wide and will be tested at the frequency specified herein.

TABLE I. Physical properties.

Characteristics	Type I	Type II
Weight, ounces/sq. yard (maximum)	2.25	3.50
Weave, ends and picks per inch (minimum)	68 x 68	52 x 52
Breaking Strength <sup>1/</sup> , pounds/inch (minimum)		
Warp	85	135
Filling	85	135
Elongation percent (warp and filling) (minimum)	25	25
Tear strength, pounds <sup>1/</sup> , (warp and filling), (minimum)	10	30
Thickness, inches, (maximum)	0.007	0.014
Air Permeability, cubic feet/minute/sq. foot	90-140	150-200

<sup>1/</sup>All individual values shall meet the specified minimum requirements.

3.4.1 Finish. The cloth shall be heat set and processed, as required to meet the requirements of this specification.

3.4.2 Permanence of set. When the cloth is subjected to the test specified in 4.2.4.3, the permanence of the cloth set shall be as follows:

3.4.2.1 The average of the air permeability readings taken after testing shall be within 15 percent of the average of the readings taken before testing.

3.4.2.2 The cloth shrinkage measured after testing shall not exceed 3 percent in the warp or 2 percent in the filling direction.

3.4.3 Chloroform-soluble material. The total chloroform-soluble material of the finished cloth shall not exceed 2 percent, when tested as specified in table V.

3.4.4 Acidity - alkalinity (pH). The pH value of the finished cloth shall be within the range of 5.5 to 9.0 when tested as specified in table V.

3.4.5 Light and heat resistance. The cloth shall not lose more than 25 percent of its original strength, when tested in accordance with 4.2.4.4.

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3.5 Seam slippage. The load required to separate the seam shall be not less than 10 pounds in either the warp or filling directions, when tested in accordance with 4.2.4.1.

3.6 Color. The color shall be as specified by the procuring activity.

3.7 Colorfastness. Unless otherwise specified by the procuring activity, the dyed and finished cloth shall show "GOOD" fastness to light and crocking when tested as specified in table V.

3.8 Dimension.

3.8.1 Width. As specified by the procurement agency, the tolerance shall be  $\pm 1/2$  inch. The acceptable width shall be inclusive of the selvages but exclusive of fringed ends produced on shuttleless looms (see 6.2).

3.8.2 Length and put up. The fabric shall be in roll form as specified by the procuring agency.

3.8.3 Length and put up for fabric shipped to a Government agency. Unless otherwise specified (see 6.2), the fabric shall be in continuous lengths, each not less than 100 yards long with the following exceptions. A maximum of 9 percent of the yardage may be in pieces that are 50 to 99 yards long, and a maximum of 1 percent in 25 to 49 yard pieces.

3.9 Age. The cloth shall be not more than 3.5 years old from the date of manufacture of the yarn to the date of delivery of the cloth.

3.10 Identification.

3.10.1 Fiber identification. Each roll of the finished fabric shall be labeled or ticketed and invoiced for fiber content in accordance with the Rules and Regulations Under the Textile Fiber Products Identification Act.

3.10.2 Identification yarns. Dyed identification yarns shall be woven  $1\ 1/2$  inches  $\pm 1/2$  inches from selvage edges of the cloth. When a false selvage is to be removed during the manufacturing of the end product, the identification yarns shall be woven within  $1\ 1/2 \pm 1/2$  inches of the cut edges. The colors used shall be as required by MIL-STD-851. Additional dyed yarns may be used to identify the converter (supplier) provided that the converter has identification yarns assigned by MIL-STD-851 or by the procuring activity. The dye used in the marker yarns shall have no deleterious effect on the yarn, and the dyed yarns shall show no bleeding or color transfer when subjected to the tests as specified in table V.

3.10.3 Identification of product. Each roll of finished cloth shall be marked for identification in accordance with PPP-P-1133. In addition, each piece of cloth in each roll shall be clearly and legibly marked with the finisher's roll number or code, and each roll shall have attached a durable tag on which the finisher's roll number or code is listed. The date of manufacture of the cloth shall be included on the tag attached to each roll.

3.11 Workmanship. The finished cloth shall be clean and evenly woven and shall conform to the quality and grade of product established by this specification.

#### 4. QUALITY ASSURANCE PROVISIONS

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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 the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

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 Certification of quality compliance. A certificate of quality compliance shall be prepared for each lot of material offered for acceptance (see 6.2.1). The certificate shall include all quantitative data resulting from specified chemical and mechanical tests. Qualitative results of nondestructive tests and other inspections or tests shall be recorded on the certificate. The certificate shall also state that each lot has been sampled, tested, and inspected in accordance with the specification and meets all specification requirements. The certificate shall be signed by a responsible representative of the contractor.

4.2 Inspection for acceptance. Inspection shall be in accordance with MIL-STD-105, except where otherwise indicated herein.

4.2.1 Inspection of components. In addition to the quality assurance provision of the subsidiary specification, components and materials listed in table II shall be tested for characteristics specified, and in accordance with the referenced test methods. The lot size shall be expressed in units of one cone, tube, or spool for each component. The sample size shall be in accordance with inspection level S-1 of MIL-STD-105. The acceptable quality level for each characteristic shall be 4.0 test failures per 100 units.

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Table II. Components and materials.

Material	Character- istics	Requirement Paragraph	FED-STD-191 Test Method	Tests for Each Product Unit	Criteria
Warp and filling yarns	Tenacity	3.1	#1/	#1/	Pass or Fail
	Luster	3.1	#1/	#1/	Pass or Fail
	Melting Point	3.1	1534	#2/	to Nearest of
	Heat and Light Re- sistance Bleaching	3.4.5	#1/	#1/	Pass or Fail
Identi- cation Yarns	Colorfast- ness to Laundering Deleterious Effect of Dye	3.7	5614	#1/	Pass or Fail
		3.10.2	#1/	#1/	Pass or Fail

#1/. Acceptance with respect to this characteristic will be based on a contractor's certificate of compliance.

#2/. Two (2) determinations per warp yarns and two (2) determinations per filling yarns.

4.2.2 End item cloth. The cloth shall be sampled (see 4.2.2.1, 4.2.3.7, and 4.2.3.8) and tested as specified in table V. FED-STD-191 test methods shall be used wherever applicable. The physical and chemical values specified in section 3, except where otherwise specified, apply to the average of the determinations made on a sample unit for test purposes as specified in the applicable test method. All individual test results must also be recorded and reported. The identity (see 3.10.3) of a particular shipper's roll from which all the cloth samples were derived must also be reported with each test result.

#### 4.2.2.1 Sampling and tests.

4.2.2.1.1 Lot. A lot shall consist of all shipper's rolls, from the same finisher's roll, received at the procuring activity at one time. A shipper's roll is defined as one continuous length of finished cloth without any splices. A finisher's roll is made up of greige rolls fastened together in one large roll, and subjected to the same finishing operation.

#### 4.2.3 Examination of product.

4.2.3.1 Yard-by-yard examination. An approximately equal number of yards shall be examined from each selected shipper's roll in the sample. The required

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yardage of each roll shall be examined and the visual defects classified as listed in table III. The sample size shall be in accordance with inspection level III of MIL-STD-105. The acceptable quality level shall be 2.5 major and 10 total defects per 100 units. (A unit is defined as 1 linear yard on the measuring device of the inspection machine).

Table III. Classification of defects.

Defect	Description	Major	Minor
Abrasion	Any abrasion mark showing fuzziness	X	
Biased filling	Biased filling more than two inches from horizontal at greatest point of bias	X	
Bowed filling	Bowed filling more than two inches in height (as measured from a straight line chord to highest point of arc)	X	
Missing End	Two or more contiguous, regardless of length	X	
Missing Picks	Two or more contiguous, regardless of length	X	
	One missing pick, full width		X
Break, cut, hole or tear (other than pinhole, etc.)	Three or more warp or filling yarns ruptured at adjoining points	X	
Floats or skips	Any multiple float 3/16 inch square or more	X	
	Single floats 1/4 inch or more in length	X	
	Contiguous floats or pin floats <sup>1/</sup> , the sequence of which measures less than one inch in length	X	
	Contiguous pin floats, the sequence of which measures one inch or more in length		X
	Multiple floats up to 3/16 inch square		X
	Single floats up to 1/4 inch long		X
	Over 1/8 inch and up to 1/2 inch in width with 10 percent or less variation above normal pick count		X
Filling bar variations			

<sup>1/</sup>A pin float is defined as a float measuring 1/8 inch or less. Single pin floats up to 1/8 inch shall not be considered defects.



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Table III. Classification of defects - Continued.

Defect	Description	Major	Minor
Jerked-in filling	Over 1/8 inch and up to 1/2 inch in width with more than 10 percent variation below normal pick count	X	
	Over 1/2 inch in width with more than 10 percent variation from normal pick count	X	
	1/8 inch or less in width and varying 10 percent or more from normal pick count		X
	Any jerked-in filling occurring more than 4 times within 10 linear inches		X
Loops, kinks, or snarls (except selvage)	All over 1/8 inch in length	X	
	3 or more in any linear yard, up to 1/8 inch in length	X	
	4 or more in the center of the warp caused by the loom center fork, up to 1/8 inch long	X	
	Up to 2 in any linear yard up to 1/8 inch in length		X
Mispick	3 or more picks	X	
	Double or 2 picks		X
Yarn deformations	Over 6 yarn deformations or shifts of 1/32 inch or more over 6 inches in length occurring within an area equal to a 6 inch diameter circle	X	
	3- to 6-yarn deformations of 1/32 inch or more over 6 inches in length occurring within an area equal to a 6 inch diameter circle		X
Selvage defects	Any cut, broken, torn, scalloped or curly noted waviness along selvage edge (check for waviness under no tension)	X	
	Any clearly noticeable roll of edge or edges when tension is released (tight selvage)	X	
	Continuous string or loopy selvage projecting up to 1/8 inch		X

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Table III. Classification of defects - Continued.

Defect	Description	Major	Minor
Smash	More than 3 inches of continuous stringy or loopy selvage projecting 1/8 inch or more	X	
	Any frayed selvage	X	
	Any smash	X	
Weaver's stain	Any spot, stain or streak (not dye streaks) of the following magnitudes:		
	a. Single ends or picks 15 inches or more in length	X	
	b. Double ends or picks 8 inches or more in length	X	
	c. More than 2 ends or picks 5 inches or more in length of a clearly noticeable area more than 1/4 inch square inch in area, whichever is greater	X	
	d. Single ends or picks 2 1/2 inches up to 15 inches in length		X
	e. Double ends or picks 2 1/2 inches up to 8 inches in length		X
	f. Over 2 ends or picks less than 5 inches in length or a clearly noticeable area 1/4 square inch or less in area, whichever is greater		X
Slubs, strip-back, etc.	Any abruptly thickened place in the fabric caused by extraneous material woven in the fabric or a stripback continuing for more than 1 1/2 inches and being more than 1/16 inch wide for that length	X	
	Slubs smaller than 1 1/2 inch long or 1/16 inch wide		X
Weave	Pattern other than that specified	X	
Width	Less than specified width	X	
Wrong draw	Clearly noticeable warpwise streak more than 18 inches in length	X	
Manufacturer's Identification Yarn	Missing or wrong yarn	X	

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4.2.3.2 Marking of defects. For direct government purchase only: Each major defect shall be marked by a red string sewn in, or a red plastic tag attached to the selvage. Three minor defects in any yard shall be marked as one major defect. A continuous major defect shall be marked by a single yellow string sewn into, or a yellow plastic tag attached to the selvage for each yard containing the defect.

4.2.3.3 Examination for textile fiber products identification. During the yard-by-yard examination, each roll shall be examined for fiber identification. The lot shall be unacceptable if two or more rolls in the sample are not labeled in accordance with the Rules and Regulations under the Textile Fiber Products Identification Act.

4.2.3.4 Overall examination. The unit of product for overall examination shall be one shipper's roll. The rolls examined shall be those selected for yard-by-yard examination. The presence of any of the following defects shall be cause for rejection of the lot.

- a. Objectionable odor.
- b. Uncleanliness throughout.
- c. Spottiness or off-shade of standard range.
- d. Uneven weaving throughout.

4.2.3.5 Examination for length.

4.2.3.5.1 Individual rolls. During the yard-by-yard examination, each roll shall be examined for length. Any roll length found to be less than the minimum specified or more than two yards below the length marked on the ticket shall be considered a defect with respect to length.

4.2.3.5.2 Total yardage. The lot shall be unacceptable if the total of the actual lengths of rolls examined is less than the total of the lengths marked on the ticket.

4.2.3.6 Inspection of manufacturing process. The contractor shall furnish a certificate of compliance indicating the following processing requirements were satisfied:

- a. Age of yarn in cloth (see 3.9).
- b. Bleach (see 3.1).
- c. The manufacturer shall furnish an affidavit stating that the dyestuffs, or other chemical or finishing agents used, would not cause serious deterioration or affect the color of the cloth under normal warehouse storage conditions or cause greater ultraviolet degradation than occurs in undyed fabric.

4.2.3.7 Sampling of shipper's rolls. Every shipper's roll from each lot (see 4.2.2.1.1) shall be tested as required in paragraphs a through f (below). Full width samples of sufficient length to perform these tests will be taken a minimum of two (2) yards from the end of every shipper's roll in each lot.

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- a. Weight.
- b. Weave.
- c. Breaking Strength and Elongation (original only).
- d. Yarns per Inch.
- e. Tearing Strength.
- f. Original Air Permeability.

4.2.3.8 Additional sampling. In addition to the tests specified in 4.2.3.7, the following tests shall be performed on randomly selected shipper's rolls from each lot. One roll shall be selected for each 10 rolls as shown in table IV below.

Table IV. Sample size.

Lot Size (Rolls)	Sample Size (Rolls)
1-10	1
11-20	2
21-30	3
31-40	4 <sup>1/</sup>

<sup>1/</sup> Select one more roll for every 10 rolls, or fraction thereof, over 40.

The samples shall be the full width of the cloth and of sufficient length to perform all of the tests specified in paragraphs a through h, below. The sample shall be taken a minimum of 2 yards from the end of the roll, or immediately following the sample for paragraph 4.2.3.7 tests. Failure of a sample to conform to any one of the tests shall be cause for rejection of the entire lot represented by the sample.

- a. Thickness.
- b. Seam Strength.
- c. Permanence of Set.
- d. Chloroform soluble material.
- e. Acidity-alkalinity (pH).
- f. Colorfastness to light.
- g. Colorfastness to crocking.
- h. Light and heat resistance.

4.2.4 Test procedures.

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4.2.4.1 Seam slippage. The seam slippage test shall be conducted in accordance with method 5420 of FED-STD-191, except as follows:

- a. The use of a 2 inch jaw is permissible.
- b. Type I, class A, size E nylon thread conforming to V-T-295 shall be used.
- c. Eight stitches per inch shall be used.
- d. The test specimens shall be sewn in accordance with FED-STD-751 using seam type SSa-1 and type 301 stitch.
- e. Elongation in excess of normal stretch shall be 1/2 inch in lieu of 1/4.

4.2.4.2 Air permeability. The test specimen shall be 9 inches long and the full width of the fabric. The air permeability test shall consist of 5 individual readings for the 36 inch wide fabric made in accordance with method 5450 of FED-STD-191. For wider fabric the number of readings shall be increased proportionately with the increase of width. The individual readings shall be equally spaced across the cloth width (see 3.8.1) of the test specimen. The air permeability of the test specimen shall be the average of all the individual readings. However, all individual readings shall also be recorded and reported.

4.2.4.3 Permanence of set. Two 20 inch square specimens of the cloth shall be prepared. Using a template and indelible ink, an 18 inch square shall be marked on each specimen. The specimens shall be subjected to the air permeability tests in accordance with method numbers 5450 of FED-STD-191. The test procedures specified in table V shall be as follows:

Table V. Test methods.

Test Characteristics	Requirement Paragraph	Test Method	
		Paragraph	FED-STD-191
Weave	3.2	(visual) <sup>1/</sup>	
Yarns Per Inch	Table I		5050
Weight	Table I		5041
Thickness	Table I		5030
Breaking Strength and Elongation (ravel strip) <sup>2/</sup>	Table I	4.2.4.4	5104 <sup>3/</sup>
Tear Strength (tongue) <sup>2/</sup>	Table I		5134
Seam Slippage	Table I	4.2.4.1	
Air Permeability <sup>4/</sup>	Table I	4.2.4.2	5450
Permanence of Set	3.4.2	4.2.4.3	
Chloroform Soluble Material	3.4.3		2611
pH	3.4.4		2811
Colorfastness to Light	3.7		5660 <sup>5/</sup>
Colorfastness to Crocking	3.7		5651
Resistance to Light	3.4.5		
Resistance to Heat	3.4.5		
Width	3.8.1		5020

<sup>1/</sup>Per Figures 1, 2 and paragraph 3.3.

<sup>2/</sup>The individual readings shall be reported; each value shall equal or exceed the minimum requirement.

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3/ Except that the clamp jaws shall be 1 inch by 1 1/2 inches or larger, with the long dimension of jaw perpendicular to the direction of the load application.

4/ The individual readings shall be reported.

5/ Except that the specimen shall be exposed for 20 standard fading hours.

- a. The specimens shall be prepared by stapling the opposite sides of the specimen together to form a loop or "skein." One of the specimens will be prepared so that the warp yarns are parallel to the edges of the loop, the other so that the fill yarns are parallel to the edges.
- b. The specimens shall be attached to a glass rod, with twine or non-rusting wire. The twine shall be long enough so the specimen will be completely submerged during the test. The glass rod must be long enough to rest on top of the test chamber.
- c. A glass rod, 1/4 inch diameter by 21 inches long, and weighing  $45 \pm 5$  grams shall be placed in the bottom of the loop.
- d. The container shall be filled to within 3 inches of the top with water, and the water brought to a rapid boil.
- e. Both loops shall then be suspended freely in the boiling water bath and subjected to the action of the boiling water bath for a period of fifteen minutes, after which they shall be removed from the bath and allowed to drain for fifteen minutes.
- f. The staples shall be removed from the specimens and the specimens shall be placed on a horizontal screen to air dry.
- g. After the specimens are thoroughly dry, they shall be exposed for at least four (4) hours to a standard atmosphere of 65 percent  $\pm$  2 percent relative humidity and a temperature of  $70 \pm 2^\circ$  Fahrenheit.
- h. The width of each 18 inch square shall be measured to the nearest 0.01 inch in six (6) places, three (3) in the warp direction and three (3) in the filling direction. The percentage of shrinkage shall be computed as follows:

$$\frac{W_0 - W_F}{W_0} \times 100 = \text{Percent Shrinkage}$$

NOTE:  $W_0$  is the original width,  $W_F$  is the corresponding final width.

- i. The air permeability shall be remeasured in accordance with FED-STD-191, Method 5450.

4.2.4.3.1 Reports. The results of the warp skein and filling skein for air permeability and shrinkage shall be averaged, and acceptance based on the average results.

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**4.2.4.4 Breaking strengths: Original and after exposure to light or heat.** The test specimens for determining all breaking strengths shall be so selected that identical warp and filling yarns are tested originally and after light exposure or heat exposure. This shall be done by marking the test specimens with dye resistant ink before cutting as depicted in figures 3 and 4.

**Note:** A minimum 1/2 inch border is included around all four sides of all exposure test specimens (both warp and filling). This outside border will be removed after exposure to light or heat and prior to testing the specimen. At the end of the exposure period, the specimen shall be brought to equilibrium under standard conditions. The specimens shall be tested for breaking strength in accordance with FED-STD-191, Method 5104. The percent loss in breaking strength shall be calculated as follows:

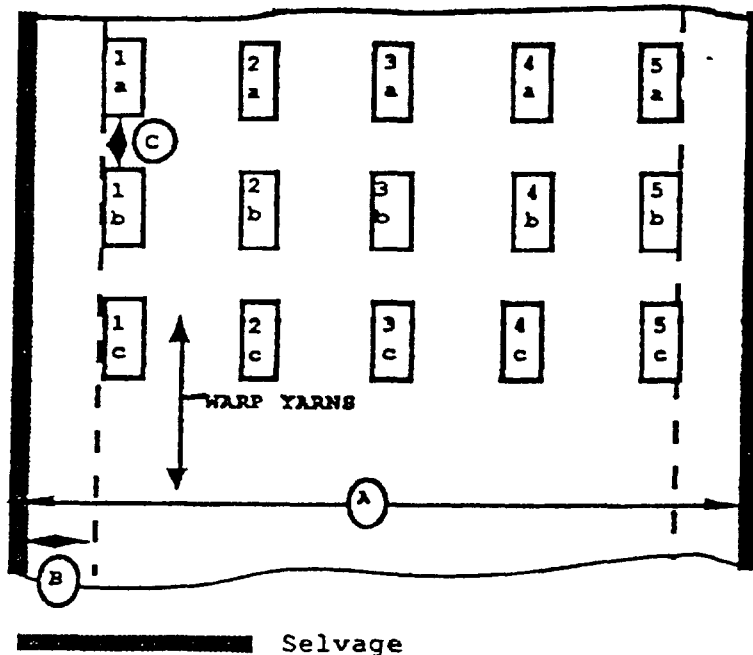
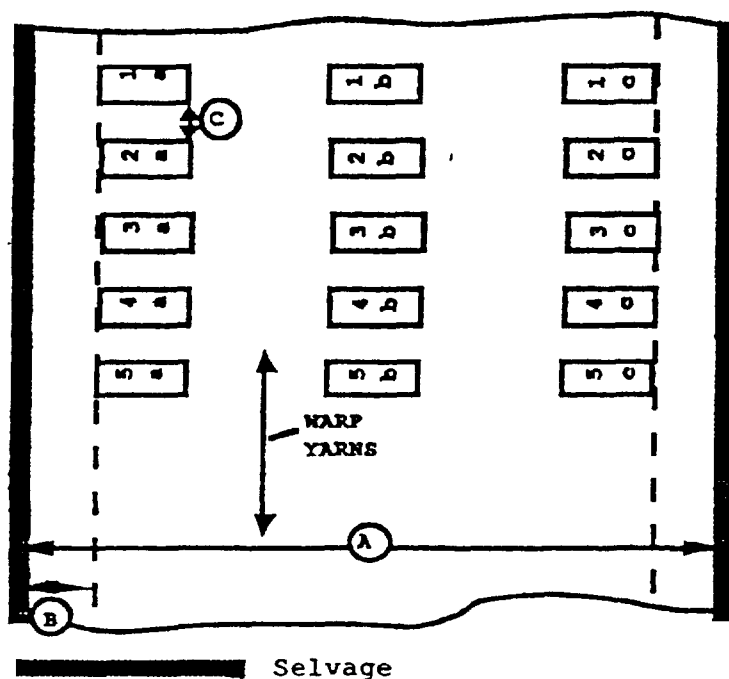


Figure 3 : Warp Tensile Strength Specimen Layout<sup>1</sup>

A = cloth width, B = 10% (min) cloth width, C = distance between specimen groups (5" minimum). Lower case a, b, c identifies specimen groups. Specimens are equally spaced across cloth width.

$$\frac{(\text{Original Avg B.S.} - \text{B.S. After Exposure})}{\text{Original Avg B.S.}} \times 100 = \text{Percent Loss}$$

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Figure 4: Fill Tensile Strength Specimen Layout<sup>1</sup>

A = cloth width, B = 10% (min) cloth width, C = distance between specimen groups (5" minimum). Lower case a, b, c identifies specimen groups. Specimens are equally spaced across cloth width.

$$\frac{(\text{Original Avg B.S.} - \text{B.S. After Exposure})}{\text{Original Avg B.S.}} \times 100 = \text{Percent Loss}$$



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4.2.4.4.1 Test procedure: resistance to light. The test specimens shall be exposed in the accelerated weathering unit as specified in FED-STD-191, method 5804.

4.2.4.4.1.1 Test exceptions. The following exceptions are applicable to method 5804:

- a. Suspend the specimen on the rotating rack by attaching the corners (see figure 5) to the rack. Care must be taken to assure that the filling specimens are not shielded by the center specimen rack.

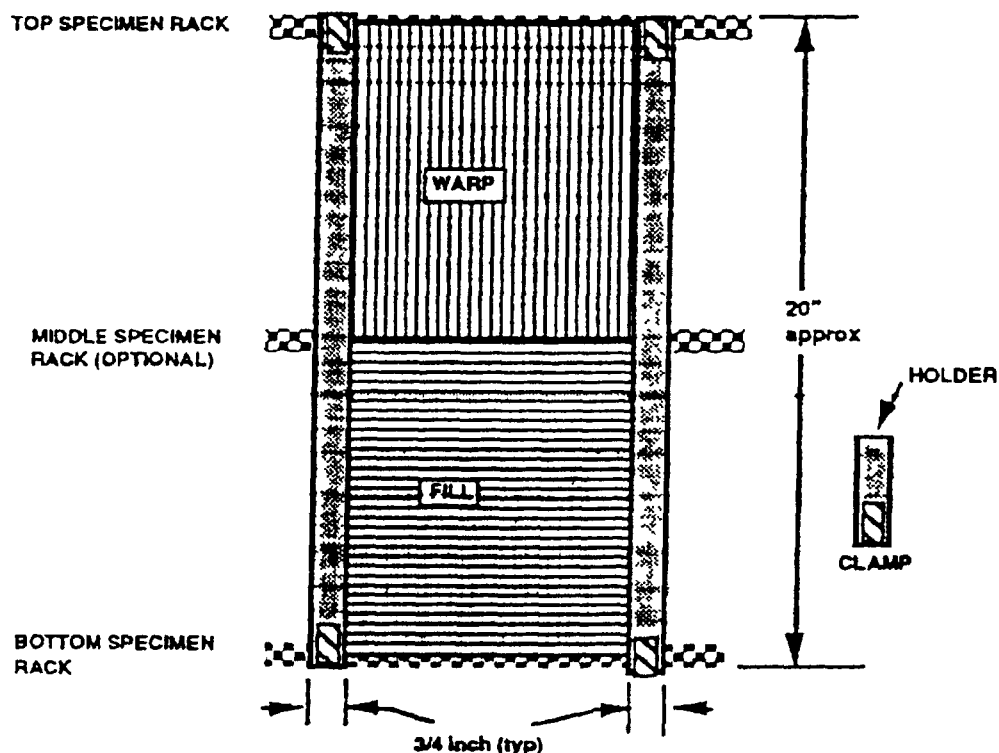


Figure 5 Test Specimens: Resistance to Light

- b. Use Corex D filters and sunshine carbons.
- c. The exposure time shall be fifty (50) hours.
- d. The spray heads shall be shut off during the entire exposure period.
- e. The drain pan shall contain 1/2 to one inch of water during the entire exposure period.

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- f. The relative humidity shall be maintained at  $55 \pm 5\%$ , and the black panel temperature shall be  $155^{\circ}\text{F} \pm 10^{\circ}\text{F}$  during the entire exposure period.
- g. The black panel shall be removed and polished every 500 hours of use. When the black panel surface begins to fade, it shall be replaced.
- h. The filter age shall range from less than 250 hours to a maximum of 2,000 hours. This shall be accomplished in the following manner:
  - (1) Number the filter frames 1 through 8.
  - (2) Replace all filters with new filters.
  - (3) Change one filter every 250 hours until all filters are replaced.
  - (4) Repeat the cycle (paras (2) & (3) above), starting with the Number 1 filter frame.

4.2.4.4.2 Test procedure, resistance to heat. The test specimens (see figure 6) shall be exposed in a circulating air oven at a temperature of  $356^{\circ}\pm 9^{\circ}\text{F}$  ( $180^{\circ}\pm 5^{\circ}\text{C}$ ) for one hour. The velocity of the air shall be adequate to maintain a constant temperature throughout the oven chamber. The velocity will not be so great that the specimens are forced against the rack or walls of the chamber. The specimens shall be attached to the rack of two corners and suspended free with a one-ounce clamp attached to each of the free corners (see figure 6). The oven chamber shall be preheated to  $356^{\circ}\pm 9^{\circ}\text{F}$  ( $180^{\circ}\pm 5^{\circ}\text{C}$ ); the rack containing the specimens shall be placed in the chamber and one one-hour cycle started immediately.

Note: When placing the specimens in the chamber, do so as quickly as possible to prevent loss of chamber temperature.

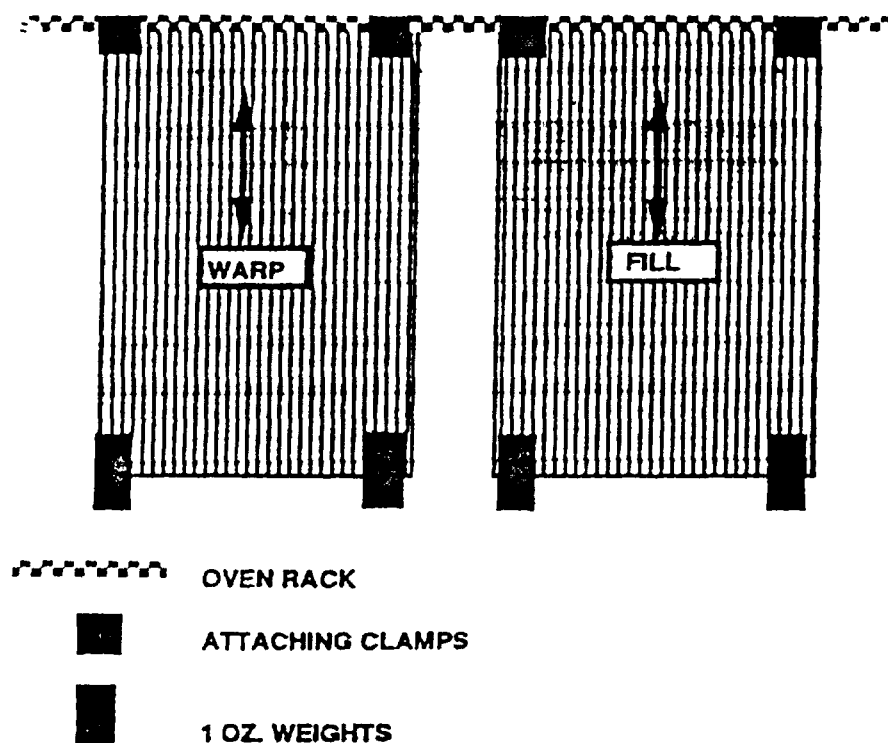


FIGURE 6. Test-specimens, resistance to heat.

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4.3 Examination for preparation for delivery. Examination shall be made in accordance with the provisions of PPP-P-1133 to determine that packaging, packing and marking requirements of section 5 of this specification are complied with.

## 5. PACKAGING/PACKING

5.1 Packaging level. Packaging shall be level A, C, or commercial as specified (see 6.2). The cloth shall be packaged in accordance with the applicable requirements of PPP-P-1133.

5.2 Packing level. Packing shall be level A, B, C, or commercial as specified (see 6.2). The cloth shall be packed in accordance with the applicable requirements of PPP-P-1133.

5.3 Marking. In addition to any special marking required by the contract or order, shipments shall be marked in accordance with the applicable requirements of PPP-P-1133.

## 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 fabrics are intended for use in cargo parachutes, aircraft deceleration systems and special deceleration systems.

6.2 Ordering data. Procurement documents should specify the following:

- a. Title, number, and date of this specification.
- b. Type (see 1.1).
- c. Color (see 3.6).
- d. Quantity.
- e. Width (see 3.8.1).
- f. Length and put up (see 3.8.2 and 3.8.3).
- g. Selection of the applicable levels of packaging and packing (see 5.1 and 5.2).

6.2.1 Data requirements. When this specification is used in an acquisition and data are required to be delivered, the data requirements identified below shall be developed as specified by an approved Data Item Description (DID (DD Form 1664) and delivered in accordance with the approved Contract Data Requirements List (CDRL), incorporated into the contract. When the provisions of DOD FAR Supplement, Part 27, Sub-Part 27.410-6 (DD Form 1423) are invoked and the DD Form 1423 is not used, the data specified below shall be delivered by the contractor in accordance with the contract or purchase order requirements. Deliverable data required by this specification are cited in the following paragraph.

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<u>Paragraph</u>	<u>Data Requirement</u>	<u>Applicable DID</u>
4.1.2	Certificate of Quality Compliance	Certification Data/Report

(Data item descriptions related to this specification, and identified in section 6 will be approved and listed as such in DOD 5000.19L, Vol. II. AMSDL. Copies of data item descriptions required by the contractors in connection with specific acquisition functions should be obtained from the Naval Publications and Forms Center or as directed by the contracting officer.)

6.3 Subject term (key word) listing.

Air Permeability  
Aging  
Ripstop  
Twill

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

Custodians:

Army - GL  
Navy - AS  
Air Force - 99

Preparing activity:

Air Force - 82

(Project 8304-0228)

Review activities:

Army - AV  
Air Force - 11  
DPSC-DLA

# STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

## INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3, and 8. In block 1, both the document number and revision letter should be given.
2. The submitter of this form must complete blocks 4, 5, 6, and 7
3. The preparing activity must provide a reply within 30 days from receipt of the form.

NOTE: This form may not be used to request copies of documents, nor to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements

<b>RECOMMEND A CHANGE:</b>		<b>1. DOCUMENT NUMBER</b> MIL-C-7350G	<b>2. DOCUMENT DATE (YYMMDD)</b> 15 April 1992
<b>3. DOCUMENT TITLE</b> CLOTH, PARACHUTE, NYLON			
<b>4. NATURE OF CHANGE</b> (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed)			
<b>5. REASON FOR RECOMMENDATION</b>			
<b>6. SUBMITTER</b>			
<b>a. NAME (Last, First, Middle Initial)</b>		<b>b. ORGANIZATION</b>	
<b>c. ADDRESS (Include Zip Code)</b>		<b>d. TELEPHONE (Include Area Code)</b>	<b>7. DATE SUBMITTED (YYMMDD)</b>
		<b>(1) COMMERCIAL</b>	
		<b>(2) AUTOVON</b>	
<b>8. PREPARING ACTIVITY</b>			
<b>a. NAME</b>		<b>b. TELEPHONE (Include Area Code)</b>	
		<b>(1) COMMERCIAL</b>	
		<b>(2) AUTOVON</b>	
<b>c. ADDRESS (Include Zip Code)</b>		<b>IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT.</b>	
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