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MIL-C-87025(SA)
20 September 1976

MILITARY SPECIFICATION

CLOTH, NETTING, COTTON AND POLYESTER

This specification is approved for use by the Naval Supply Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the requirements for one type of open-mesh fabric of cotton and polyester.

2. APPLICABLE DOCUMENTS

2.1 Issues of documents. 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:

SPECIFICATION

FEDERAL

PPP-P-1134 - Packaging and Packing of Cotton and Cotton Synthetic Fiber Blend Fabrics (Excluding Duck Fabrics)

STANDARDS

FEDERAL

FED-STD-191 - Textile Test Methods

MILITARY

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

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

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Navy Clothing and Textile Research Facility, Natick, MA by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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LAWS AND REGULATIONS

Rules and Regulations Under the Textile Fiber Products Identification Act

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

3. REQUIREMENTS

3.1 Standard sample. The cloth 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).

3.2 First article. When specified (see 6.2), the contractor shall furnish sample unit(s) for first article inspection and approval (see 4.2).

3.3 Material. The cloth shall consist of 140 or 150 denier bright polyester filament yarn for the wales and stitches and 4/1 carded cotton of low twist for the filling. The polyester shall comprise 33 (± 3) percent of the fabric and the cotton 67 (± 3) percent. The finished cloth shall conform to the requirements shown in Table I when tested as specified in 4.4.

Table I - Physical requirements of netting cloth

	Minimum	Maximum
Weight, yds./lb. (m/kg)	7.2 (14.5)	7.5 (15.1)
Bursting strength, lbs. (N)	40 (178)	-

3.4 Construction. The cloth shall be an open-mesh type construction with a minimum of 8 wales and 8 chain stitches per inch (25.4 mm) in the lengthwise direction and a minimum of 6 filling yarns per inch (25.4 mm) in the crosswise direction. The filling yarns shall weave through the loops of the chain stitching (see 6.3 and Figure 1).

3.5 Finish. The cloth shall be heat-set prior to wet processing. The application of resins or other finishing materials are not permitted.

3.5.1 pH. The pH value of the water extract of the finished cloth shall be not less than 5.0 nor more than 8.0 when tested as specified in 4.4.

3.6 Color. Unless otherwise specified, the cloth shall be dyed olive green 107.

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3.6.1 Sulfur content. The use of sulfur dyes or dyes containing elementary sulfur or sulfur compounds capable of oxidation to sulfuric acid is prohibited. The finished cloth shall contain no more labile sulfur than shown by the standard sample when tested as specified in 4.4. When a standard sample is not available, the dyed cloth shall show no more than a slight trace of labile sulfur as defined in the test method specified in 4.4.

3.6.2 Matching. The finished cloth shall match the standard sample under artificial daylight, having a color temperature of 7500° Kelvin and shall be a good approximation to the standard sample under incandescent lamplight at 2800° Kelvin.

3.6.3 Colorfastness. The finished cloth shall show fastness to light, laundering and perspiration equal to or better than the standard sample when tested as specified in 4.4. When no standard sample is available, the finished cloth shall show good fastness to light, laundering, and perspiration.

3.7 Nonfibrous materials. The finished cloth shall not exceed 2.0 percent starch and protein content including chloroform-soluble and water-soluble material when tested as specified in 4.4.

3.8 Width. Unless otherwise specified (see 6.2), the width of the cloth shall be 47 to 48 inches wide including the selvages.

3.9 Length and put-up. The cloth shall be put-up on rolls as specified in PPP-P-1134. Unless otherwise specified (see 6.2.1), the total yardage per roll shall be not less than 250 yards (225 m) nor more than 400 yards (360 m). No more than 3 pieces per roll is permitted and no piece shall be less than 50 yards (45 m) in length.

3.10 Fiber identification. Each roll of cloth shall be labeled or ticketed for fiber content in accordance with the rules and regulations under the Textile Fiber Products Identification Act.

3.11 Workmanship. The finished cloth shall conform to the quality established by this specification. The occurrence of defects shall not exceed the applicable quality levels.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract, 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 the prescribed requirements.

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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 First article inspection. When required, the first article, submitted in accordance with 3.2, shall be visually inspected for color, finish, and appearance and shall be tested for chemical and physical properties in accordance with the applicable methods specified in 4.4.

4.3 Inspection. Inspection shall be in accordance with MIL-STD-105, except where otherwise indicated.

4.3.1 Component and material inspection. In accordance with 4.1 above, components and materials shall be inspected and tested in accordance with all requirements of referenced specifications, drawings, and standards unless otherwise excluded, amended, modified or qualified in this specification or applicable purchase document. In addition, the supplier shall furnish a certificate of compliance for the yarn sizes specified in 3.3 and the heat-setting requirement specified in 3.5.

4.3.2 Examination of the end item. Examination of the end item shall be in accordance with 4.3.2.1 through 4.3.2.4.

4.3.2.1 Yard-by-yard examination. The required yardage of each roll shall be examined on one side only for visual defects classified as listed. All defects found shall be counted regardless of their proximity to each other except where two or more defects represent a single local condition of the cloth, in which case only the more serious defect shall be counted. A continuous defect shall be counted as one defect for each yard or fraction thereof in which it occurs. The sample unit shall be one linear yard. The acceptable quality level (AQL) shall be 4.0 defects per 100 units (DHU). The sample size shall be in accordance with inspection level II of MIL-STD-105. The lot size shall be expressed in units of one yard. The number of rolls from which the sample size is to be selected shall be in accordance with Table II. An approximately equal number of yards shall be examined from each roll in the sample with not more than 100 yards (90 m) per roll examined.

Defects

Any hole resulting from broken or missing wales/stitch yarns
Any cut or tear
Any mend
Loose or tight tension of wales/stitch yarns
Spacing between adjacent filling yarns more than 1/2 inch (12.70 mm) wide

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4.3.2.2 Overall examination. Each defect shall be counted no more than once in each roll examined. The sample unit shall be one roll. The sample size (number of rolls) and the number of defects acceptable shall be as shown in Table II.

Defects

Width less than specified
Objectionable odor
Color not as specified
Overall uncleanness

Table II - Sample sizes

Lot size (yards)	Sample size (rolls)	Acceptance number
Up to 1200 1/	3	0
1201 thru 3200	5	0
3201 thru 10,000	8	0
10,001 thru 35,000	13	0
35,001 thru 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.

4.3.2.3 Length examination.

4.3.2.3.1 Individual rolls. The rolls shall be examined for gross length. Any gross length found to be less than the minimum specified or more than 2 yards less than the gross length marked on the ticket shall be considered a defect with respect to length. The sample unit shall be one roll. The sample size (number of rolls selected) and the acceptance number shall be as shown in Table II.

4.3.2.3.2 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 the roll tickets. The rolls examined shall be those selected for the examination of individual rolls.

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

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4.3.3 Examination of preparation for delivery requirements. An examination shall be made in accordance with the provisions of PPP-P-1134 to determine that packaging, packing, and marking comply with the Section 5 requirements of this specification.

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. The physical and chemical values specified in Section 3 apply to the average of the determinations made on a sample unit for test purposes as specified in the applicable test method. The sample unit shall be two yards full width of the finished cloth. The sample size shall be as listed in Table III. The lot size shall be expressed in units of 1 yard. The lot shall be unacceptable if one or more sample units fail to meet any requirement specified. All test reports shall contain the individual values utilized in expressing the final results.

Table III - Test methods

Characteristic	Requirement paragraph	Test method
Fiber content	3.3	2100, 4.4.1
Weight	Table I	5040
Bursting strength	Table I	5120
Construction	3.4	Visual 1/
pH	3.5.1	2811
Sulfur content	3.6.1	2020
Colorfastness to:		
Light	3.6.3	5660
Laundering	3.6.3	5614
Perspiration	3.6.3	5680
Nonfibrous material	3.7	2611

1/ One determination per sample unit and the results reported as "pass" or "fail."

4.4.1 Fiber content. Test method 2100 shall be followed, except that the fiber percentages shall be calculated as follows:

$$\text{Polyester fiber, percent} = \frac{\text{Weight of dry polyester fiber} \times 100}{\text{Weight of dry desized specimen}}$$

Cotton fiber, percent = 100 - polyester percent

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5. PREPARATION FOR DELIVERY

5.1 Packaging. Packaging shall be level A or C, as specified (see 6.2 and 6.2.1).

5.1.1 Levels A and C. The cloth, put up as specified (see 3.7), shall be packaged in accordance with the applicable requirements of PPP-P-1134.

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

5.2.1 Levels A, B, and C. The cloth shall be packed in accordance with the applicable requirements of PPP-P-1134.

5.3 Marking. In addition to any special marking required by the contract (see 6.2), shipments shall be marked in accordance with the applicable requirements of PPP-P-1134.

6. NOTES

6.1 Intended use. The cloth is intended for use in the manufacture of insect repellent jackets for military personnel.

6.2 Ordering data. Procurement documents should specify the following:

(a) Title, number and date of this specification.
(b) Requirements for the first article (see 3.2).
(c) Width required (see 3.5).
(d) Levels of packaging and packing required (see 5.1 and 5.2).

6.2.1 In preparation of contracts, it must be noted that various options, choices, and alternatives, as indicated in PPP-P-1134 may be exercised in preparation for delivery of the cloth.

6.3 Cloth meeting the requirements of this specification is available from Polylok Corporation, 31 West 54th Street, New York, NY 10019.

6.4 Standard sample. For access to the standard sample, address the procuring activity issuing the invitation for bids (see 3.1).

Custodian:
Navy - SA

User activities:
Navy - MC, AS, YD

Preparing activity:
Navy - SA

Project No. 8305-N491

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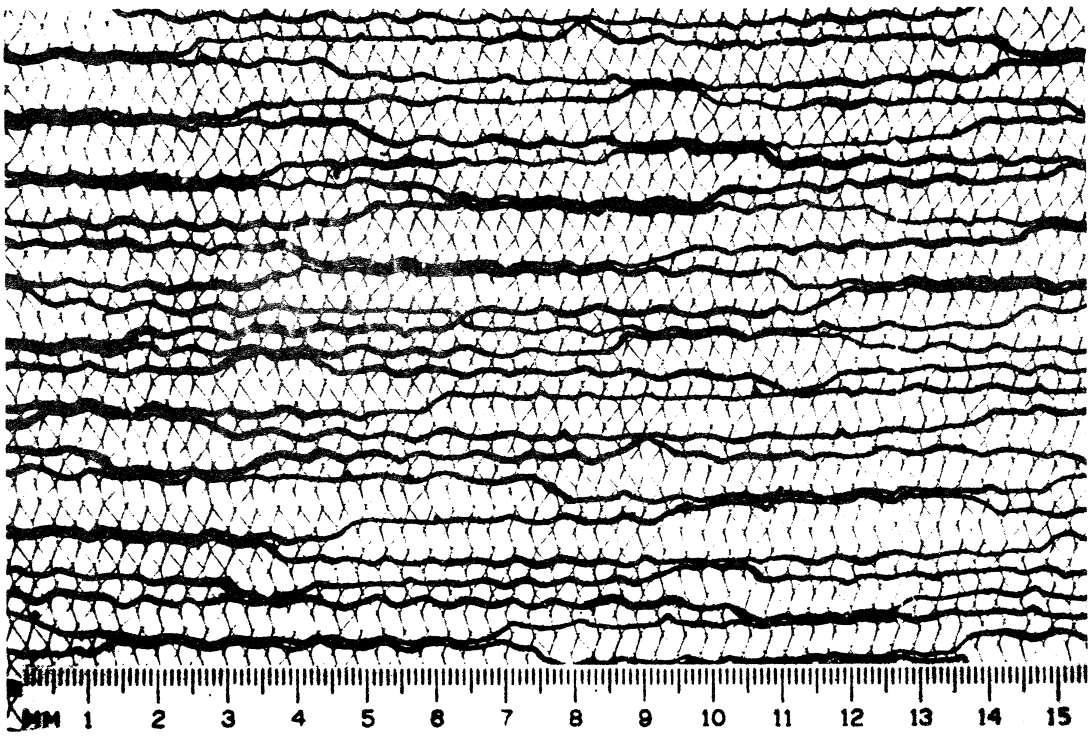

FIGURE 1 - CLOTH, NETTING, COTTON AND POLYESTER

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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

OMB Approval
No. 22-R255

INSTRUCTIONS: The purpose of this form is to solicit beneficial comments which will help achieve procurement of suitable products at reasonable cost and minimum delay, or will otherwise enhance use of the document. DoD contractors, government activities, or manufacturers/vendors who are prospective suppliers of the product are invited to submit comments to the government. Fold on lines on reverse side, staple in corner, and send to preparing activity. 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. Attach any pertinent data which may be of use in improving this document. If there are additional papers, attach to form and place both in an envelope addressed to preparing activity.

DOCUMENT IDENTIFIER AND TITLE

MIL-C-87025(SA); Cloth, Netting, Cotton and Polyester

NAME OF ORGANIZATION AND ADDRESS

CONTRACT NUMBER

MATERIAL PROCURED UNDER A

☐ DIRECT GOVERNMENT CONTRACT ☐ SUBCONTRACT

1. HAS ANY PART OF THE DOCUMENT CREATED PROBLEMS OR REQUIRED INTERPRETATION IN PROCUREMENT USE?
   A. GIVE PARAGRAPH NUMBER AND WORDING.

   B. RECOMMENDATIONS FOR CORRECTING THE DEFICIENCIES

2. COMMENTS ON ANY DOCUMENT REQUIREMENT CONSIDERED TOO RIGID

3. IS THE DOCUMENT RESTRICTIVE?

   ☐ YES ☐ NO *(If "Yes", in what way?)*

4. REMARKS

SUBMITTED BY *(Printed or typed name and address - Optional)*

TELEPHONE NO.

DATE

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