

MIL-C-1164G(NU)
26 October 1984
SUPERSEDING
MIL-C-1164F(NU)
30 April 1979

MILITARY SPECIFICATION

CLOTH, TERRY, COTTON, COTTON AND POLYESTER

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

1. SCOPE

1.1 Scope. This specification covers the requirements for terry cloth of one type only.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. Unless otherwise specified, the following specifications, standards, and handbooks of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation form a part of this specification to the extent specified.

SPECIFICATIONS

FEDERAL

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

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Officer in Charge, Navy Clothing and Textile Research Facility, 21 Strathmore Road, Natick, MA 01760 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

FSC 8305

MIL-C-1164G(NU)

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 contractors in connection with specific procurement functions should be obtained from the procuring activity or as directed by the contracting officer.)

* 2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this specification to the extent specified herein.

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 Guide sample. Samples, when furnished, are solely for guidance and information to the contractor (see 6.3). Variations from this specification may appear in the sample in which case this specification shall govern.

3.2 First article. When specified, the contractor shall furnish sample unit(s) for first article inspection and approval (see 4.3 and 6.2).

3.3 Material. (see 6.4).

3.3.1 Yarn. The yarns shall be made of cotton which has been cleaned, carded, drawn and spun into singles yarn for the warp pile, warp ground and filling. As an alternate, the ground warp may be made of a blend of 65+5 percent cotton and the remainder polyester. Testing shall be as specified in 4.5.

3.4 Weave. The cloth shall be woven with a single terry loop pile.

3.5 Width. The width of the cloth shall be as specified (see 6.2) and shall be the minimum acceptable width inclusive of selvages.

3.6 Physical Requirements. The finished cloth shall conform to the physical requirements shown in Table I when tested as specified in 4.5.

MIL-C-1164G(NU)

Table I - Physical requirements

| <u>Weight, (min.)</u> <u>oz/sq yd (g/m²)</u> | <u>Yarns per inch (cm) (min.)</u> <u>Warp (ground and pile included)</u> | <u>Filling</u> |
|--|---|----------------|
| 8.7 (295) | 57 (22.4) | 28 (11.0) |

3.6.1 Finish. The cloth shall be either bleached or unbleached as specified (see 6.2).

3.6.2 Nonfibrous materials. The starch and protein content, including chloroform-soluble and water-soluble material, shall not exceed 5.0 percent for bleached cloth and shall not exceed 12.0 percent for unbleached cloth, when tested as specified in 4.5.

3.7 Length and put-up. Unless otherwise specified (see 6.2), the cloth shall be furnished in continuous lengths, each not less than 5 yards (4.6m). Each length shall be put on full width rolls as specified in PPP-P-1134.

3.8 Fiber identification. Each roll shall be ticketed or labeled for fiber content in accordance with the Rules and Regulations under the Textile Fiber Products Identification Act.

3.9 Workmanship. The finished cloth shall conform to the quality 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, the contractor is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the contractor may use his own or any other facilities suitable for 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 Classification of inspection. The inspection requirements specified herein are classified as follows:

1. First article inspection (see 4.3).
2. Quality conformance inspection (see 4.4).

MIL-C-1164G(NU)

4.3 First article inspection. When required (see 3.2 and 6.2), the first article shall be visually examined for appearance, color and finish and shall be tested for physical and chemical properties in accordance with methods specified in 4.5.

4.4 Quality conformance inspection. Sampling for inspection shall be performed in accordance with MIL-STD-105, except where otherwise indicated.

4.4.1 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, amended, modified, or qualified in this specification or applicable procurement documents.

4.4.2 Examination of the end item. Examination of the end item shall be in accordance with 4.4.2.1 through 4.4.2.3.

4.4.2.1 Yard-by-yard examination. The required yardage of each roll shall be examined and defects clearly noticeable at normal inspection distance (3 feet) (.91m) shall be classified as listed. The defects found shall be counted regardless of their proximity to each other, except when two or more defects represent a single local condition of the cloth, where only one shall be scored. A continuous defect shall be counted as one defect for each yard (.91m) or fraction thereof in which it occurs. The sample unit shall be 1 yard (.91m), full width of the finished cloth. The acceptable quality level shall be 6.5 defects per 100 units (yards). 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 (.91m) each. The number of rolls selected shall be in accordance with Table II.

Defects

Cut, hole, tear, smash

Terry loops missing or improperly formed, 2 inches (5.1cm) or more in combined directions

Broken or missing yarns, two or more contiguous 12 inches (30.5cm) or more

Fine or light filling bar (light place)

4.4.2.2 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 selected as sample) and the acceptance number shall be as shown in Table II. The rolls selected for the yard-by-yard examination shall be included in the examination.

MIL-C-1164G(NU)

Defects

Unbleached when bleached is specified (see 6.2)

Overall uncleanness (colored fly shall not be considered unclean) 1/

Width less than specified 1/

1/ Shall not be scored unless it occurs for more than 5 yards (4.6m) per roll.

4.4.2.3 Examination for length.

4.4.2.3.1. Individual rolls. The rolls shall be examined for length. Any length found to be less than the minimum specified or more than 2 yards (1.8m) less than the 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 as sample) and the acceptance number shall be as shown in Table II.

4.4.2.3.2. Total yardage in sample. The lot shall be unacceptable if the total of the actual lengths of rolls in the sample is less than the total of the lengths marked on the roll tickets. The rolls examined shall be those selected for the examination of individual rolls.

Table II - Sample size for examination

| Lot size (yards) | Sample size (rolls) | Acceptance number |
|------------------------------------|---------------------|-------------------|
| 1200 or less <u>1/</u> | 3 | 0 |
| 1201 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 lot contains less than three rolls, each roll in the lot shall be examined.

4.4.2.4. 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.

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

MIL-C-1164G(NU)

4.5 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, except when otherwise indicated, apply to the average 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 results. The sample unit shall be one continuous yard (.91m) full width of the finished cloth. The lot size shall be expressed in terms of one yard (.91m) each. The lot shall be unacceptable if one or more sample units fail to meet any of the requirements specified. The sample size shall be in accordance with the following:

| <u>Lot size yards</u> | <u>Sample size</u> |
|--------------------------------|--------------------|
| 800 or less | 2 |
| 801 up to and including 22,000 | 3 |
| 22,001 and over | 5 |

Table III - Test methods

| <u>Characteristics</u> | <u>Requirement reference</u> | <u>Test method</u> |
|------------------------|------------------------------|--------------------|
| Yarn identification | 3.3.1 | 1200 <u>1/</u> |
| Yarn ply | 3.3.1 | Visual <u>2/</u> |
| Weave | 3.4 | Visual <u>2/</u> |
| Yarns per inch | 3.6 | 5050 |
| Weight | 3.6 | 5041 |
| Finish | 3.6.1 | Visual <u>1/</u> |
| Nonfibrous materials | 3.6.2 | 2611 |

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

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

5. PACKAGING

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

5.1.1 Levels A and C. The cloth put-up on rolls 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 or order, shipments shall be marked in accordance with applicable requirements of PPP-P-1134.

MIL-C-1164G(NU)

6. NOTES

6.1 Intended use. The terry cotton is to be used as a wiping cloth where a lint free soft cloth is needed.

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

- a. Title, number and date of this specification
- b. When first article sample is required, the item will be tested and should be a first article sample. The Contracting Officer should include specific instructions in acquisition documents regarding arrangements for examination, quantity, and testing and approval of the first article.
- c. Width and finish required (see 3.5 and 3.6.1)
- d. Length required (3.7)
- e. Selection of applicable levels of packaging and packing (see 5.1 and 5.2)

6.3 Samples. For access to samples, address the procuring activity issuing the invitation for bids.

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

* 6.5 Changes from previous issue. 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 contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Custodian:
Navy - NU
Air Force - 99

Preparing Activity:
Navy - NU

Review Activity:
DLA - CT
Air Force - 82

Project No. 8305-0927

User Activity:
Air Force - 45

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL*(See Instructions – Reverse Side)***1. DOCUMENT NUMBER**
MIL-C-1164G(NU)**2. DOCUMENT TITLE**
CLOTH, TERRY, COTTON, COTTON AND POLYESTER**3a. NAME OF SUBMITTING ORGANIZATION****4. TYPE OF ORGANIZATION (Mark one)** VENDOR USER MANUFACTURER OTHER (Specify): _____**b. ADDRESS (Street, City, State, ZIP Code)****5. PROBLEM AREAS****a. Paragraph Number and Wording:****b. Recommended Wording:****c. Reason/Rationale for Recommendation:****6. REMARKS****7a. NAME OF SUBMITTER (Last, First, MI) – Optional****b. WORK TELEPHONE NUMBER (Include Area Code) – Optional****c. MAILING ADDRESS (Street, City, State, ZIP Code) – Optional****8. DATE OF SUBMISSION (YYMMDD)**