MIL-C-43479D
23 March 1987
SUPERSEDING
MIL-C-43479C
11 February 1985

MILITARY SPECIFICATION

# CLOTH, BROADCLOTH, POLYESTER AND COTTON

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

## 1. SCOPE

1.1 Scope. This document covers polyester and cotton blended broadcloth.

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

Type I - 2.8 to 3.6 ounces per sq. yard

Class 1 - White (3024)
Class 2 - Dyed
Class 3 - Dyed and treated with a durable press finish
Class 4 - White (3024) treated with a durable press finish
Class 5 - Dyed and water repellent treated
Class 6 - Dyed, water repellent and downproof treated

Type II - 3.2 to 3.7 ounces per sq. yard, end and end construction

Class 3 - Dyed

## 2. APPLICABLE DOCUMENTS

2.1 Government documents.

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

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

AMSC N/A FSC 8305

SPECIFICATIONS

FEDERAL

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

MILITARY

MIL-T-43548 - Thread, Polyester Core: Cotton-, Rayon-, or Polyester-Covered

STANDARDS

FEDERAL

FED-STD-4 - Glossary of Fabric Imperfections
FED-STD-191 - Textile Test Methods

(Copies of documents required by contractors in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting activity.)

2.1.2 Other Government documents. The following other Government documents 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

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

2.2 Other 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 shall be those listed in the issue of the DODISS specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS shall be the issues of the nongovernment documents which are current on the date of solicitation.

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

Chromatic Transference Scale

Method No. 118 - Oil Repellency: Hydrocarbon Resistance Test
Method No. 124 - Appearance of Durable Press Fabric after Repeated Home Launderings

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

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 shall take precedence. Nothing in this document, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Standard sample. The finished cloth shall match the standard sample for shade and appearance and shall, unless otherwise indicated (see 3.3.6), be equal to or better than the standard sample with respect to all characteristics for which the standard sample is referenced (see 6.3)

3.2 Materials (see 6.8).

3.2.1 Fibers.

3.2.1.1 Polyester fiber. The fiber shall be polyethylene glycol teraphthalate.

3.2.1.2 Cotton. The cotton shall be carded and combed.

3.2.2 Yarns. The yarns shall be a blend of polyester and cotton, drawn and spun into single yarns for both warp and filling. The finished cloth shall contain 65 ± 5 percent polyester and the remaining percentage cotton, based on the dry weight of the desized specimen. Tests shall be made as specified in 4.2.3.

3.3 Color.

3.3.1 Class 1 and 4. The class 1 and 4 cloth shall be White 3024 to match the standard sample (see 6.3). The cloth shall be fully bleached and may be supplemented with fluorescent optical brightener to the blue region. The bleached cloth shall not discolor to a degree greater than that shown by standard sample when tested as specified in 4.2.3. When no standard sample is available, the discoloration shall be no lower than a rating of "Fair" when tested as specified in 4.2.3.

3.3.2 Type I, classes 2, 3, 5 and 6. The color of the cloth shall be as specified (see 6.2) and shall match the standard sample (see 6.3). The use of resin bonded pigments is prohibited when tested as specified in 4.2.3.

3.3.3 Type II, class 3. The colored warp ends of class 3 finished cloth shall be Air Force Blue 1550 and shall match the standard sample (see 6.3). The selvage of the cloth shall be the same color as the base cloth.

3.3.4 Labile sulfur (classes 2, 3, 5, and 6). 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 cloth shall contain no more labile sulfur than shown by the standard sample when tested as specified in 4.2.3. When a standard sample is not available, the dyed and finished cloth shall show no more than a slight trace of labile sulfur when tested as specified in 4.2.3.

3.3.5 Matching. The color and appearance of the dyed and finished cloth shall match the standard sample when viewed under filtered tungsten lamps which approximate artificial daylight having a correlated color temperature of 7500 ± 200 K with illumination of 100 ± 20 foot candles, and shall be a good match to the sample under incandescent lamplight at 2300 ± 200 K.

3.3.6 Colorfastness. The dyed classes 2, 3, 5, and 6 finished cloth shall show fastness to laundering (after 3 cycles), perspiration, and light equal to or better than the standard sample or equal to or better than a rating of "good" when tested as specified in 4.2.3. The dyed and finished class 5 cloth shall show "good" fastness to light after 40 standard fading hours even when a standard sample is available. The dyed and finished classes 2, 3, 5 and 6 cloth shall show fastness to crocking equal to or better than the standard sample or shall have an AATCC Chromatic Transference Scale rating not lower than 3.5 when tested as specified in 4.2.3.

3.4 Physical requirements. The finished cloth shall conform to the requirements in table I when tested as specified in 4.2.3.

TABLE I. Physical requirements

| Type | Weight oz per sq yd | | Yarns per inch | | Breaking strength pounds | | Weave |
|---|---|---|---|---|---|---|---|
| | | | Minimum | | Minimum | | |
| | Min. | Max. | Warp | Filling | Warp | Filling | |
| I | 2.8 | 3.6 | 132 | 68 | 90 | 35 | Plain |
| II | 3.2 | 3.7 | 100 | 64 | 70 | 52 | Plain |

3.4.1 Construction. Type II cloth shall be of an end-and-end construction with alternating warp ends in blue and white. The blue warp ends shall be solid color and the white warp ends and all the picks shall be white.

3.4.2 Width. The width of the cloth shall be as specified (see 6.2) and shall be the minimum acceptable width inclusive of selvage when fly shuttle looms or shuttleless with tuck-in selvage looms are used. For all other shuttleless looms the width measurement shall be made between the last warp yarn on each side excluding the protruding fringe(s).

3.5 Finish.

3.5.1 Type I, classes 1 and 2; type II, class 3. The cloth shall be scoured, singed, stabilized, mercerized and bleached when required, to result in a smooth and lustrous finish equal in character to that of the standard sample and to meet the requirements of this document. The finish shall be of a cellulose reactive type.

3.5.2 Type I, classes 3 and 4. The cloth shall be given an approved durable press treatment (see 6.6). The cloth shall be processed and cured to meet the requirements of 3.7.

3.5.3 Type I, class 5 and class 6 (water repellency). The cloth shall be given an approved quarpel type (see 6.7) water repellent treatment and shall conform to the water repellency requirements of table II when tested as specified in 4.2.3.

TABLE II. Water repellency requirements (type I, classes 5 and 6)

| Characteristic | Class 5 | Class 6 |
|---|---|---|
| Hydrostatic, cm (min) | | |
| Initial | 15 | 20 |
| After laundering | 10 | 20 |
| Dynamic absorption, % (max) | | |
| Initial | 25 | 15 |
| After laundering | 35 | 20 |
| Spray rating (min) | | |
| Initial | 90, 90, 80 | 90, 90, 80 |
| After laundering | 80, 80, 80 | 80, 80, 80 |

3.5.3.1 Organic liquid resistance (type I, classes 5 and 6). The water repellent treated cloth shall show no wetting by n-decane after 30 seconds when tested as specified in 4.2.3.

3.5.4 Downproofness (type I, class 6). The cloth shall be given an approved durable downproof treatment (see 6.9) in order that the fabric provides satisfactory feather and down retention before and after laundering when tested as specified in 4.2.3.

3.6 Nonfibrous material.

3.6.1 Type I, classes 1 and 2; type II, class 3. The nonfibrous material of the finished cloth shall not exceed 5.0 percent starch and protein content including chloroform-soluble and water-soluble material when tested as specified in 4.2.3.

3.6.2 Type I, classes 3, 4, 5, and 6. The cloth shall be tested prior to the application of an approved durable press treatment for classes 3 and 4, and prior to the application of an approved water repellent treatment for classes 5 and 6 and the nonfibrous material shall not exceed 2.0 percent starch and protein content including chloroform-soluble and water-soluble material when tested as specified in 4.2.3.

3.7 Appearance rating (type I, classes 3 and 4). The cloth shall be processed so that the white or the dyed, finished and cured cloth shall have an appearance rating of not less than 3.3 when tested after five launderings as specified in 4.2.3.

3.8 Dimensional stability. Except for type I, class 6, the finished cloth or cured cloth shall not shrink or elongate more than 2.0 percent in either the warp or filling direction when tested as specified in 4.2.3. Type I, class 6 finish cloth shall not shrink or elongate more than 2.5 percent in the warp and 2.0 percent in the filling directions when tested as specified in 4.2.3. The preshrinking process used shall not be identified by name or trademark on the cloth, ticket, or package.

3.9 pH. The pH value of the water extract of the finished or cured cloth shall be no less than 5.0 nor more than 8.5 when tested as specified in 4.2.3.

3.10 Seam efficiency. The finished or cured cloth shall have a seam efficiency of not less than 90 percent when tested as specified in 4.2.3.

3.11 Length and put-up. Unless otherwise specified (see 6.2) the cloth shall be furnished in continuous lengths, each not less than 40 yards. Each length shall be put-up on full width rolls as specified in 5.1.

3.12 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.

3.12.1 Marking. The face side of the cloth shall be identified by applying a stamping on that side of the cloth with the word "FACE" at each end of the piece.

3.13 Workmanship. The finished cloth shall conform to the quality established by this document. The demerit points per 100 square yards when calculated as specified in section 4 shall not exceed the established maximum point value.

## 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 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 document where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items must meet all requirements of sections 3 and 5. The inspection set forth in this document shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirement in the document shall not relieve the contractor of the responsibility of assuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling in quality conformance does no authorize submission of known defective material, either indicated or actual, nor does it commit the Government to acceptance of defective material.

4.1.2 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 Quality conformance inspection.

4.2.1 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 document or applicable purchase document.

4.2.2 End item examination.

4.2.2.1 Yard-by-yard examination. Each roll in the sample shall be examined on the face side only. When the total yardage in the roll does not exceed 100 yards, the entire yardage in the roll shall be examined. When the total yardage in the roll exceeds 100 yards, only 100 yards shall be examined. All defects as defined in Section I of FED-STD-4, which are clearly noticeable at normal inspection distance (3 feet), shall be scored and assigned demerit points as listed in 4.2.2.1.1 except that only those slubs and knots which exceed the limits shown on Sears Fabric Defect Scales (see 6.5), "E" for slubs and "B" for knots, shall be scored. No linear yard (increments of 1 yard on the measuring device of the inspection machine) from any one roll within the sample shall be penalized more than four points. The sample size shall be 20 rolls selected from 20 containers. The lot shall be unacceptable if the points per 100 square yards of the total yardage examined exceeds the following point values:

32.0 points for type I
25.0 points for type II

The lot shall be unacceptable if the points per 100 square yards of two or more individual rolls exceeds the following point values:

48.0 points for type I
38.0 points for type II

If no individual roll exceeds the point level, the lot shall be acceptable with respect to this characteristic. If one roll exceeds the point level, a second sample of 20 rolls shall be examined only for individual roll quality. The lot shall be unacceptable if one or more rolls in in the second sample exceeds the point level. Point computation for lot quality and individual roll quality shall be as follows:

$$\frac{\text{Total points scored in sample X 3600}}{\text{Contracted width of cloth (inches) X Total yards inspected}} = \text{Points per 100 square yards}$$

4.2.2.1.1 Demerit points. Demerit points shall be assigned as follows:

| | |
|---|---|
| For defects up to and including 3 inches in any dimension | - one point |
| For defects exceeding 3 inches but not exceeding 6 inches in any dimension | - two points |
| For defects exceeding 6 inches but not exceeding 9 inches in any dimension | - three points |
| For defects exceeding 9 inches in any dimension | - four points |

NOTE: The following defects, when present, shall be scored four points for each yard in which they occur:

Baggy, ridgy, or wavy cloth
Width less than minimum specified
Poor dye penetration, mottled, streaky, or cloudy
Excessive neppiness

4.2.2.2 Length examination. During the yard-by-yard examination, each roll in the sample shall be examined for length. Any length found to be less than the minimum specified or more than 2 yards less than the length marked on the ticket shall be considered a defect with respect to length. The lot shall be unacceptable if two or more rolls in the sample are defective in respect to length or if the total of the actual lengths of rolls in the sample is less than the total of the lengths on the tickets.

4.2.2.3 Shade and appearance examination. During the yard-by-yard examination, each roll in the sample shall be examined for shade and appearance. Any roll in the sample off shade; shaded side to side, side to center or end to end; or not having the same appearance as the standard sample shall be cause for rejection of the entire lot represented by the sample.

4.2.2.4 Roll identification marking. During the yard-by-yard examination, each roll in the sample shall be examined for defects listed below. The lot shall be unacceptable if two or more of the following defects are present in the sample:

Contains identification of a preshrinkage process by name or trademark on cloth or ticket.
Face stamping missing from either or both ends.
Not labeled or ticketed in accordance with the Textile Fiber Products Identification Act.

4.2.3 End item testing. The cloth shall be tested for the characteristics listed in table III. 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 results of the determinations made on a sample unit for test purposes as specified in the applicable test methods. All test reports shall contain the individual values used in expressing the final results. The sample unit shall be 4 continuous yards full width of the finished cloth and for type I classes 3, 5, and 6 a 1/4-yard length full width of the dyed untreated cloth shall also be submitted for non-fibrous materials testing. The lot shall be unacceptable if one or more sample units fail to meet any test requirement specified. The sample size shall be in accordance with the following:

| Lot size (yards) | Sample size (No. of sample units) |
|---|---|
| 800 or less | 2 |
| 801 up to and including 22,000 | 3 |
| 22,001 and over | 5 |

TABLE III. End item tests

| Characteristic | Requirement paragraph | Test method |
|---|---|---|
| Polyester identification | 3.2.1.1 | 1600 1/ |
| Cotton identification | 3.2.1.2 | 1200 1/ |
| Cotton, combed | 3.2.1.2 | 1/ |
| Fiber content | 3.2.2 | 2535 1/ |
| Yarn (single) | 3.2.2 | Visual 1/ |
| Discoloration (classes 1 and 4) | 3.3.1 | 5660 2/ |
| Resin bonded pigments (type I, classes 2, 3, 5 and 6) | 3.3.2 | 1/ |
| Labile sulfur (classes 2, 3, 5 and 6) | 3.3.4 | 2020 1/ |
| Colorfastness to (classes 2, 3, 5 and 6): | | |
| Laundering (after 3 cycles) | 3.3.6 | 5610 3/ |
| Crocking | 3.3.6 | 5651 |

TABLE III. End item tests (cont'd)

| Characteristic | Requirement paragraph | Test method |
|---|---|---|
| Perspiration | 3.3.6 | 5680 |
| Light | 3.3.6 | 5660 4/ |
| Weight | 3.4 | 5041 |
| Yarns per inch | 3.4 | 5050 |
| Breaking strength | 3.4 | 5100 |
| Weave | 3.4 | Visual 5/ |
| Cellulose reactive finish | 3.5.1 | 1/ |
| Mercerization | 3.5.1 | 1/ |
| Approved durable press treatment (type I, classes 3 and 4) | 3.5.2 | 1/ |
| Hydrostatic pressure (classes 5 and 6): | | |
| Initial | 3.5.3 | 5514 |
| After Laundering | 3.5.3 | 5518, 5514 |
| Dynamic absorption (classes 5 and 6): | | |
| Initial | 3.5.3 | 5500 |
| After Laundering | 3.5.3 | 5518, 5500 |
| Spray rating (classes 5 and 6): | | |
| Initial | 3.5.3 | 5526 |
| After Laundering | 3.5.3 | 5518, 5526 |
| Organic liquid resistance (classes 5 and 6) | 3.5.3.1 | AATCC Method No. 118 |
| Downproofness (class 6) | 3.5.4 | 5530 6/ |
| Nonfibrous material | 3.6 | 2611 |
| Appearance rating (type I, classes 3 and 4) | 3.7 | 4.3.1 |
| Dimensional stability (all except type I, classes 3 and 4) | 3.8 | 5552 |
| Dimensional stability (type I, classes 3 and 4) | 3.8 | 4.3.1 |
| pH | 3.9 | 2811 |
| Seam efficiency | 3.10 | 5110 7/ |

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

2/ Method 5660 shall be used except that exposure of the specimen and standard sample shall be for 20 standard fading hours. Any specimen showing discoloration less than or equal to that of the standard sample shall be rated "pass". Any specimen showing discoloration greater than that of the standard sample shall be rated "fail". One determination shall be made for each sample unit and the result reported as "pass or fail".

3/ The specimens shall be dried after each of the three laundering cycles.

4/ Except that for classes 5 and 6, the exposure time shall be 40 standard fading hours.

5/ One determination per sample unit and the result reported as "pass" or "fail".

6/ Except an alternate, tumbling apparatus shall be an empty tumble dryer with no heat applied when operated. When a tumble dryer is used, sixteen #9 solid rubber stoppers weighing approximately 1.5 lbs. shall be used in place of the specified #7 stoppers.

7/ The needle shall measure 0.040 ± 0.001 inch across the blade at the eye. The thread for all classes shall be polyester/cotton or rayon covered in accordance with MIL-T-43548, ticket No. 50, 2 or 3 ply for the needle and ticket No. 70, 2 or 3 ply for the looper.

4.2.4 Packaging inspection. The inspection shall be in accordance with the quality assurance provisions of PPP-P-1134.

4.3 Methods of inspection.

4.3.1 Appearance and dimensional stability after laundering testing.

4.3.1.1 Apparatus and materials. Apparatus and materials shall be as specified in AATCC Technical Manual, Method 124.

4.3.1.2 Preparation of specimens. Three specimens 22 by 22 inches measured parallel to the warp and filling shall be cut from a portion of the cloth sample. One specimen shall be cut from each side of the sample unit to within 3 inches of the selvages and the third specimen shall be taken from the center. No two specimens shall contain the same filling yarns. The specimens shall be conditioned to equilibrium under Standard Conditions in accordance with FED-STD-191. The conditioned specimens shall be laid without tension on a flat surface, care being taken that the cloth is free from wrinkles or creases. Three distances, each a minimum of 18 inches, shall be measured and marked off parallel to each of the warp and filling directions of the specimen. Each pair of markings shall be a minimum of 6 inches from each other and not closer than 1 inch to the edges of the specimen. The distance may be marked with indelible ink and a fine pointed pen, or by sewing fine threads into the cloth, or by stamping. The samples shall then be laundered in accordance with 4.3.1.3.

4.3.1.3 Laundering. Place the three 22 by 22 inch specimens in the washer. The washing load shall be 4 ± 1/4 pounds. Dummy pieces shall be added to the machine, along with the specimens to make up the 4 ± 1/4 pound load. Fill to the full water level of the washer with water of a hardness not to exceed 50 parts per million and at a temperature of 120° ± 5°F and the rinse temperature

shall be 80° ± 5°F. Add 140 ± 1 grams of detergent. Set the washer for a 12 minute cycle on the "Permanent Press" setting. Allow the washing to proceed automatically through the final spin cycle. Remove the specimens immediately at the completion of the final spin and separate from the dummy pieces and each other if tangled. Place the complete washed load (4 pounds) in the dryer and dry at a permanent press setting with a 10-minute cool down cycle. Operate the drier until the load is dry and continue tumbling 5 minutes with the heat turned off (cool down cycle). Remove the load immediately after the machine stops. Repeat the wash and dry cycles for five complete cycles. Remove all specimens and condition to equilibrium under Standard Conditions in accordance with FED-STD-191.

4.3.1.4 Appearance evaluation. Three trained observers shall evaluate each sample unit for appearance characteristics. The observers shall make their evaluations independent of each other. Each observer shall evaluate each specimen for appearance as it hangs on the viewing board while standing in front of the viewing board and 4 feet back from it. The overhead lighting shall be used. Mount each 22 by 22 inch specimen on the viewing board with the center of the specimen 5 feet from the floor. Place three-dimensional plastic replicas on each side of the specimen with the centers 5 feet from the floor, to facilitate comparative rating. The specimen shall be rated according to the appearance on the plastic replica that most nearly matches the appearance of the cloth. No estimated rating falling between the approved replicas shall be given. The average of the rating values assigned for appearance of the cloth by the observers rounded off to the nearest 0.1 rating shall be the rating for the specimen. Each rating value given by the observers for the appearance of the cloth shall also be reported.

4.3.1.5 Dimensional stability. After evaluation for appearance is made, the three 22 by 22 inch specimens shall be laid out without tension on a flat surface in the standard atmosphere. Care shall be taken that the specimens are free from wrinkles and creases. The previously measured distance marked on the specimens shall be measured in both the warp and filling directions. The dimensional stability of the specimens shall be calculated as follows:

$$\text{Dimensional change, percent} = \frac{A-B}{A} \times 100$$

Where A = Average of initial measurements (3 specimens)
B = Average measurements after laundering (3 specimens)

The dimensional change of the sample unit in the warp and filling directions shall be the average of the specimens tested in each direction respectively and shall be reported separately to the nearest 0.1 percent. The individual values used to calculate the average shall also be reported.

5. PACKAGING

5.1 Put-up and preservation. Put-up and preservation shall be level A or Commercial as specified (see 6.2).

5.1.1 Levels A and Commercial. The cloth shall be put-up and preserved in accordance with the applicable requirements of PPP-P-1134.

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

5.2.1 Levels A, B and Commercial. 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 purchase order, 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 shirtwaists and shirts worn by personnel of the Department of Defense. The type I, class 5 cloth is to be used as lining material for 100 percent synthetic filled sleeping bags. The type I, class 6 cloth is to be used as lining material for down filled sleeping bags.

6.2 Ordering data. Acquisition documents should specify the following:

a. Title, number, and date of this document.
b. Type and class of cloth required (see 1.2).
c. Shade of cloth (type I, classes 2, 3, 5 and 6) required (see 3.3.2).
d. Width of cloth required (see 3.4.2).
e. Minimum length if other than specified (see 3.11).
f. Selection of applicable levels of preservation and packing (see 5.1 and 5.2).

6.3 Standard sample. For access to standard sample, address the contracting office issuing the invitation for bids.

6.4 Dye formula. The standard shade for Army Tan 446 has been dyed with the following combination of dyes:

Polyester
Disperse Blue 73
Disperse Brown 2
Disperse Yellow 42 - C.I. #10338

Cotton
Vat Black 27 - C.I. #69005
Vat Brown 3 - C.I. # 69015
Vat Yellow 22

6.5 Sears fabric defect scales. Sears Fabric Defect Scales are available from Sears, Roebuck and Company, Department 817 (ATTN: BSC 23-29), Sears Tower, Chicago, IL 60684.

6.6 Approval of durable press resin. Approval of the durable press resin for utilization under this document is the responsibility of the U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5014. Approval is based on more extensive evaluations, including those for toxicity, which are not set forth in this document. Because of the time necessary to conduct full evaluation (approximately 6 months), only those treatments approved and so listed in the invitation for bids or request for proposals shall be considered acceptable for the related procurement.

6.7 Approval of water repellent finish (type I, classes 5 and 6). The "Quarpel Type" water repellent treatment consists of the co-application of an emulsified fluorocarbon and a fluorocarbon extender. Approval of components and combinations is the responsibility of the U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5014 and is based on extensive tests including those for toxicity which are not set forth in this document. Because of the time necessary to conduct full evaluation (approximately 6 months), only those chemical treatments already approved and so listed in the invitation for bids or request for proposals shall be considered acceptable for the related procurement.

6.8 Recycled material. It is encouraged that recycled material be used when practical as long as it meets the requirements of the document (see 3.2).

6.9 Approval of durable downproof finish (type I, class 6). Approval of the durable downproof treatment for utilization under this document is the responsibility of the U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5014. Approval is based on more extensive evaluations, including those for toxicity, which are not set forth in this document. Because of the time necessary to conduct full evaluation (approximately 6 months), only those treatments approved and so listed in the invitation for bids or request for proposals shall be considered acceptable for the related procurement.

6.10 Subject term (key word) listing.

Cloth, broadcloth
Cloth, polyester and cotton
Shirts
Sleeping bags

6.11 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.

Custodians:

Army - GL
Navy - NU
Air Force - 99

Review activities:

Army- MD
Air Force - 82
DLA - CT

User activity:

Navy - MC

Preparing activity:

Army - GL

Project No. 8305-0124

**INSTRUCTIONS:** In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge *(DO NOT STAPLE)*, and mailed. In block 5, be specific and provide about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

*NOTE.* This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification 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.

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Natick, MA 01760-5014

# STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

*(See Instructions – Reverse Side)*

| 1. DOCUMENT NUMBER | 2. DOCUMENT TITLE |
|---|---|
| MIL-C-43479D | Cloth, Broadcloth, Polyester and Cotton |

| 3a. NAME OF SUBMITTING ORGANIZATION | 4. TYPE OF ORGANIZATION *(Mark one)* |
|---|---|
| | ☐ VENDOR |
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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 |
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