

MIL-C-508J
28 March 1986

SUPERSEDING
MIL-C-508H
25 June 1980

MILITARY SPECIFICATION

CLOTH, OXFORD, NYLON, 3 OUNCE

This specification is approved for use by all departments and agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This document covers 3 ounce nylon oxford cloth.

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

Type I - For clothing, equipage, and personnel armor

- Class 1 - For outerwear use
- Class 2 - For use as a lining for garments
- Class 3 - For use in camouflage items
- Class 4 - Natural

Type II - For coating

2. APPLICABLE DOCUMENTS

2.1 Government documents Unless otherwise specified, the following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this document to the extent specified herein.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be used in improving this document should be addressed to: US 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

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SPECIFICATION

FEDERAL

PPP-P-1133 - Packaging of Synthetic Fiber Fabrics

STANDARDS

FEDERAL

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

DRAWINGS

U S. ARMY NATICK RESEARCH, DEVELOPMENT AND ENGINEERING CENTER

2-1-1516 - Woodland Pattern - 48 inches
2-1-1516B - woodland Pattern - 60 inches

(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 officer.)

OTHER GOVERNMENT DOCUMENTS

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. Unless otherwise specified, the following documents of the issue in effect on date of invitation for bids or request for proposal, form a part of this document to the extent specified herein.

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

Chromatic Transference Scale

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

(Technical society and technical association documents are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

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2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein (except for associated detail specifications, specification sheets or MS standards), 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 dyed and finished cloth shall match the standard sample for shade and appearance and shall, unless otherwise indicated (see 3.3.2), 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 Material (see 6.8).

3.2.1 Fiber. The fiber shall be bright, filament, nylon.

3.2.2 Yarn. The yarn shall be multifilament. The warp yarn shall have a minimum of five turns of twist per inch.

3.3 Color. The color shall be as specified and shall match the standard sample (see 6.2 and 6.3). For Navy procurements only, when shade OG-106 is specified for class 1 or 2 of type I, the color shall be obtained by the use of acid or disperse dyes and the use of chrome or premetallized dyes shall be prohibited (see 4.2.3). The color of the type I, class 3 cloth shall be Woodland camouflage pattern obtained by roller or screen printing using four rollers or screens as appropriate for the Light Green 354, Dark Green 355, Brown 356, and Black 357 areas of the pattern (see 6.5). The dyeing of the ground shade approximating Light Green 354, and the overprinting shall be accomplished by using a combination of acid dyes (see 6.5).

3.3.1 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 7000±500 K. with illumination of 100±20 foot candles, and shall be a good match to the standard sample under incandescent lamplight at 2300±100 K.

3.3.2 Colorfastness (type I only)

3.3.2.1 Class 1. The finished dyed cloth shall show fastness to wet dry cleaning, laundering, perspiration, and light equal to or better than the standard sample or at least equal to the rating of "good" when tested as specified in 4.2.3. The cloth shall show fastness to crocking equal to or better than the standard sample or shall have an ATCC Chromatic Transference Scale rating not lower than 3.5 when tested as specified in 4.2.3.

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3.3.2.2 Class 2. The finished dyed cloth shall show fastness to wet dry cleaning, laundering, and perspiration 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 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.

3.3.2.3 Class 3. The camouflage printed and water repellent treated 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" for each of the pattern areas, except Black 357 which shall show at least equal to a rating of "fair" when tested as specified in 4.2.3. The 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 except Black 357 which shall be not lower than 1.5 when tested as specified in 4.2.3.

3.3.3 Pattern execution (class 3). The pattern shall match the standard sample in respect to design, colors, and registration of the respective areas. The pattern repeat of the dyed, printed, and finished cloth shall be 27.25 -1.25 -2.50 inches in the warp direction. Each pattern area shall show solid coverage; skitteriness exceeding that shown by the standard sample in any of the printed areas will not be acceptable. When the standard sample is not referenced for pattern execution or design, the pattern on the base cloth shall match the standard Woodland camouflage pattern drawing (see 2.1 and 6.2).

3.4 Physical requirements. The physical requirements of the finished cloth shall be as specified in table I when tested as specified in 4.2.3.

TABLE I. Physical requirements

| Weight per square yard (minimum) | Yarns per inch (minimum) | | Breaking strength pounds (minimum) | |
|--|-----------------------------|---------|--|---------|
| | Warp | Filling | Warp | filling |
| 2.9 | 180 | 76 | 220 | 135 |

3.4.1 Weave. The weave shall be an oxford weave (a plain weave with two warp ends weaving as one) when tested as specified in 4.2.3. The use of fly shuttle or shuttleless looms is permitted.

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 the 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).

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3.5 Finish. The type and character of finish shall conform to that shown by the standard sample for that specific type and class.

3.5.1 Type I (classes 1, 2, and 4). The cloth shall be scoured, heat set, and lightly calendered. The heat setting shall be done with dry heat or boiling water or both as required to meet the requirements of 3.5.4.

3.5.2 Type I, class 3. The cloth shall be thoroughly scoured and heat set prior to printing. The heat setting shall be performed so that the cloth meets the requirements of 3.5.4. The cloth shall be given an approved quarpel type water repellent treatment (see 6.7), and shall conform to the requirements specified in 3.5.2.1 and 3.5.2.2.

3.5.2.1 Spray rating (type I, class 3). The results of the three individual determinations on the water repellent treated cloth sample for spray rating shall be equal to or better than 70, 70, 70 following three launderings, when tested as specified in 4.2.3.

3.5.2.2 Resistance to organic liquid (type I, class 3). The cloth shall not show wetting by n-tetradecane either initially or after three cotton mobile launderings, when tested as specified in 4.2.3.

3.5.3 Type II. The cloth shall be heat set, so that it meets the requirements of 3.5.4, but not calendered.

3.5.4 Dimensional stability. The cloth shall show no appreciable distortion or puckering. There shall not be more than 2.0 percent dimensional change in either warp or filling when tested as specified in 4.2.3.

3.6 Nonfibrous materials. The total chloroform-soluble and water-soluble material content of the dyed unfinished cloth shall not exceed 1.0 percent when tested as specified in 4.2.3.

3.6.1 Copper and manganese (type II only). The finished cloth prior to coating shall contain not more than 0.003 percent copper nor more than 0.0015 percent manganese when tested as specified in 4.2.3.

3.7 pH. The pH value of the finished cloth shall be no lower than 5.0 nor higher than 8.5 when tested as specified in 4.2.3.

3.8 Spectral reflectance (type I, class 3). The spectral reflectance factors (in percent) for the visible/near infrared wavelength range 600 to 860 nanometers of the colors in the camouflage printed and water repellent treated cloth shall conform to the requirements specified in table II when tested as specified in 4.2.3 (see 3.3 and 6.5)

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TABLE II. Spectral reflectance requirements

| Wavelength nanometers | Reflectance values (percent) | | | | | |
|--------------------------|------------------------------|-----|-----------------|-----|------------------------------------|-----|
| | Black 357 | | Light Green 354 | | Dark Green 355 and Brown 356 | |
| | Min | Max | Min | Max | Min | Max |
| 600 | - | 10 | 8 | 20 | 3 | 13 |
| 620 | - | 10 | 8 | 20 | 3 | 13 |
| 640 | - | 10 | 8 | 20 | 3 | 13 |
| 660 | - | 10 | 8 | 22 | 3 | 13 |
| 680 | - | 10 | 10 | 36 | 3 | 22 |
| 700 | - | 10 | 18 | 60 | 8 | 46 |
| 720 | - | 10 | 26 | 78 | 20 | 66 |
| 740 | - | 10 | 40 | 90 | 30 | 80 |
| 760 | - | 10 | 50 | 92 | 32 | 88 |
| 780 | - | 10 | 55 | 92 | 32 | 90 |
| 800 | - | 10 | 55 | 92 | 32 | 90 |
| 820 | - | 10 | 55 | 92 | 32 | 90 |
| 840 | - | 10 | 55 | 92 | 32 | 90 |
| 860 | - | 10 | 55 | 92 | 32 | 90 |

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

3.10 Face identification (classes 1, 2, and 4). The face side of the classes 1, 2, and 4 cloths shall be identified by applying a stamping on that side of the cloth with the word 'Face' at each end of the roll.

3.11 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 Workmanship. The finished cloth shall conform to the quality established by this document. The demerit points per 100 square yards 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 the document where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

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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 requirements 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 not 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 III 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. 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 in accordance with the following:

| <u>Lot size (yards)</u> | <u>Sample size (rolls) 1/</u> |
|---------------------------------|-------------------------------|
| 3200 or less | 8 |
| 3201 up to and including 10,000 | 13 |
| 10,001 and over | 20 |

1/ No more than one roll shall be taken from any shipping container unless the number of shipping containers in the lot is less than the required number of rolls in which case rolls from all shipping containers shall be present in the sample.

The lot shall be unacceptable if the points per 100 square yards of the total yardage examined exceeds 30.0 points. The lot shall be unacceptable if the points per 100 square yards of two or more individual rolls exceeds 45.0 points. If one roll exceeds 45.0 points per 100 square yards, a second sample

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of the size indicated above shall be examined only for individual roll quality. The lot shall be unacceptable if one or more rolls in the second sample exceeds 45.0 points per 100 square yards. Point computation for lot quality and individual roll quality shall be as follows:

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

4 2.2.1 1 Demerit points. Demerit points shall be assigned as follows:

For defects 3 inches or less 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

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

Objectionable odor
 Baggy, ridgy or wavy cloth
 Width less than specified
 Edge ravels when pulled outward
 Slack or tight selvage ^{1/}
 Overall uncleanness
 Uneven weaving
 Poor dye penetration, mottled, streaky, or cloudy

For type I, class 3:

Pattern design not equal to standard sample
 Incorrect color in any part of the pattern
 Pattern repeat not equal to the standard sample
 Pattern repeat less than 24.75 inches or more than 28.50 inches
 Skitteriness (mottled, uneven color) of pattern exceeds that shown by standard sample
 Excessive feathering or spew (fuzziness at color boundaries) of pattern as compared to the standard sample
 Excessive grinning (off register, gap where ground shade shows through) of pattern as compared to the standard sample
 Excessive halving or trapping (overlapping of colors) of pattern as compared to the standard sample
 Overall application of water repellent not uniform
 Tackiness (sticky to touch)

^{1/} To determine the presence of unacceptable selvage conditions, the following procedure shall be observed. During the visual examination, the perch shall be stopped a minimum of three times for each roll in the

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sample, the tension removed, and the finished cloth examined for the selvage conditions. Suspect rolls should be removed from the perch and unrolled on the floor or table and further examined for the condition. A waviness in the selvage or significant ripples diagonally across the width of the fabric is an indication of slack or tight selvages.

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 marked 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 (see 3.3.1 and 3.5). Any roll in the sample off shade; shaded side to side, side to center, or end to end; or not matching the standard sample for shade and appearance shall be cause for rejection of the entire lot represented by the sample.

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

Face identification missing from either or both ends (for classes 1, 2, and 4).

Not labeled or ticketed in accordance with the Rules and Regulations Under 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, except where otherwise specified, apply to the results of the determinations made on a sample unit for test purposes as specified in the applicable test method. The sample unit shall be 3 continuous yards, full width of the finished cloth. The lot shall be unacceptable if one or more sample units fail to meet any test requirement specified. The sample size (number of sample units) shall be selected from different rolls in the lot as specified below

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

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TABLE III. End item tests

| Characteristic | Requirement paragraph | Test method |
|---|-----------------------|-------------------|
| Nylon identification | 3.2.1 | 1530 <u>1</u> / |
| Luster | 3.2.1 | <u>1</u> / |
| Multifilament | 3.2.2 | Visual <u>2</u> / |
| Twist per inch | 3.2.2 | 4052 |
| Dyes for type I (Navy only) | 3.3 | <u>1</u> / |
| Colorfastness to: | | |
| Wet dry cleaning | 3.3.2 | 5622 |
| Laundering | 3.3.2 | 5614 |
| Perspiration | 3.3.2 | 5680 |
| Light | 3.3.2 | 5660 |
| Crocking | 3.3.2 | 5651 |
| Weight | 3.4 | 5041 |
| Yarns per inch | 3.4 | 5050 |
| Breaking strength | 3.4 | 5100 |
| Weave | 3.4.1 | Visual <u>2</u> / |
| Scouring (type I) | 3.5.1 and 3.5.2 | <u>1</u> / |
| Calendered (type I, class 1, 2 or 4) | 3.5.1 | <u>1</u> / |
| Heat set | 3.5.1 and 3.5.3 | <u>1</u> / |
| Spray rating (type I, class 3) after 3 launderings | 3.5.2.1 | 5556, 5526 |
| Resistance to organic liquid (type I, class 3) | 3.5.2.2 | 4.3.2 |
| Dimensional stability | 3.5.4 | 4.3.1 |

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TABLE III. End Item tests (cont'd)

| Characteristic | Requirement paragraph | Test method |
|--|-----------------------|-------------|
| Nonfibrous material | 3.6 | 2611 |
| Copper and manganese content (type II) | 3.6.1 | 2053 |
| pH | 3.7 | 2811 |
| Spectral reflectance (type I, class 3) | 3.8 | 4.3.3 |

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

2/ One determination shall be made from each sample unit and the results reported as "pass" or "fail"

4.2.4 Packaging inspection. The inspection shall be in accordance with the quality assurance provisions of PPP-P-1133.

4.3 Methods of inspection.

4.3.1 Dimensional stability test. Each test specimen shall be a square of cloth at least 20 by 20 inches. The specimens before marking and before measuring for dimensional change shall be in equilibrium with Standard Conditions as defined in FED-STD-191. While laid flat without tension, each specimen shall be inscribed with an 18-inch square approximately equidistant from the edges and with sides parallel to the warp and normal filling directions. The marked specimens shall be placed in a preheated oven and maintained at a temperature of 280°F (+2°) for a period of 2 hours. The specimens may be looped over a rod or laid flat on a rack but shall have free air circulation on both sides. The rod or rack shall be of low-conductivity (nonmetallic) material. Following the heating period, the specimens shall be removed promptly from the oven and allowed to cool to room temperature on a flat surface and then brought to equilibrium under Standard Conditions as defined in FED-STD-191. Each side of each inscribed square shall then be measured for dimensional change in both the warp and filling directions (two measurements each for the warp and filling per specimen). Each change in dimension shall be reported to the nearest 0.1 percent. The specimens shall also be visually compared with the original unheated cloth for any appreciable distortion or puckering. Appreciable means a change that is immediately noticeable when comparing the tested specimen with the original. If closer inspection is required to make apparent a slight change, the change is not considered appreciable.

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4.3.1.1 Number and location of specimens. Three specimens shall be tested from each sample unit. One specimen shall include the selvage on one side of the cloth, one the center area, and the third the selvage on the other side. Each specimen shall be from a different filling area than the others.

4.3.2 Resistance to organic liquid test. Place a small specimen of the cloth on a smooth horizontal surface face up. Using a pipette, or eye-dropper, gently deposit one drop of n-tetradecane on the surface of the specimen. After 1 minute, examine the specimen under light at an angle. Absence of light reflectance at the fabric-drop interface shall be taken as evidence of wetting. Three specimens (or areas) taken at various locations across the sample shall be tested.

4.3.3 Spectral reflectance test (type I, class 3). Reflectance factor data shall be obtained by spectrophotometers in the range from 600 to 860 nanometers (nm) relative to barium sulfate standard white reference (see 6.6). Other working white standards, i.e., Halon, ceramic tiles, porcelain enamel tiles or opal glass, may be used provided these have been calibrated to absolute white by use of the reference standard (see 6.9). The spectral band width at 860 nm shall be less than 25 nm. Reflectance measurements shall be made by either the monochromatic or polychromatic mode operation. When the polychromatic mode operation is used, the spectrophotometer (see 6.6) shall operate with the specimen diffusely illuminated with the full emission of a continuous source that simulates in the visible spectrum either CIE Source A or CIE Source D65. Specimens shall be measured as a single layer backed with ten layers for Light Green 354, Dark Green 355 and Brown 356, and three layers for Black 357 of the same shade cut from the standard. Readings will be taken on a minimum of two different areas, and the data averaged. The specimen shall be viewed at an angle no greater than 10 degrees from normal. Photometric accuracy of the spectrophotometer shall be within 1 percent and the wavelength accuracy shall be within 2 nm. When the measured reflectance values for any color at four or more of the listed wavelengths do not meet the limits specified in table II, it shall be considered a test failure.

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-1133.

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-1133.

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

6. NOTES

6.1 Intended use. The type I cloth is for clothing, equipage and personnel armor. The type II cloth is for coating. These cloths are intended for use in the manufacture of the crown for insect headset; button hole stay pieces for insect bar, nylon netting; lining for field trouser liner, arctic trouser liner, field coat liner and parka liner; coverall outershell for anti-G coveralls; and outer cover material of body armor.

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. Color of cloth required (see 3.3).
- d. Woodland camouflage pattern drawing if required (see 3.3.3).
- e. Width of cloth required (see 3.4.2).
- f. Length required if other than specified (see 3.9).
- g. Selection of applicable levels of preservation and packing required (see 5.1 and 5.2).

6.3 Standard sample and pattern drawing. For access to the standard shade sample (see 3.1) address the procuring activity issuing the invitation for bids.

6.4 Premetallized dyes. When premetallized dyes are used, the following is a suggested but not mandatory dyestuff formulation for OG-106:

CI Acid Green 58 $\frac{1}{1}$ /
 CI Acid Green 70 $\frac{1}{1}$ /
 CI Acid Orange 86

$\frac{1}{1}$ Used in approximately 1:1 ratio

6.5 Dye formulations (type I, class 3) The following dyes have been found acceptable for dyeing the ground shade approximately Light Green 354:

Acid Blue 258
 Acid Orange 4R
 Acid Yellow 219

The printing of the Light Green 354, Dark Green 355, Brown 356, and Black 357 shades may be accomplished by varying the amount of the following dyes.

Acid Orange 156
 Acid Red 266
 Acid Blue 258

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Snade Black 357 may also be satisfactorily printed with the use of Carbon Black alone or in combination with the above dyes.

6.6 Spectrophotometers. The following instruments may be used for measuring the infrared reflectance: The General Electric Diano Hardy spectrophotometer, the Beckman Du or Dk Diano Match-Scan, the Cary 14, or the Hunter D54-IR (see 4.3.3).

6.7 Quarapel water repellent. The "Quarapel type" water repellent treatment consists of the co-application of an emulsified fluorocarbon and a modified melamine water repellent extender. Approval of such 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 a full evaluation (approximately 6 months) only those chemical treatments already approved and so listed in the invitation for bid or request for proposal 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.

6.9 Source of materials Barium sulfate of suitable quality for use as a white standard is available from Eastman Kodak Company. Other white reference materials are available from spectrophotometer manufacturers (see 6.6).

6.10 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

Preparing activity:

Army - GL
Project No. 8305-0049

Review activities:

Army - MD
Navy - MC
Air Force - 82
DLA - CT

User activities:

Navy - AS
Air Force - 45

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 as specific as possible 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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DEPARTMENT OF THE ARMY

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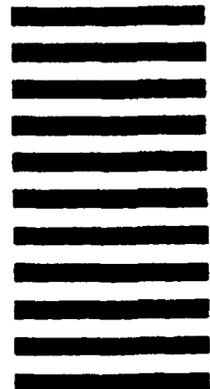
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STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

| | | | |
|--|--|--|--|
| 1 DOCUMENT NUMBER MIL-C-508J | | 2 DOCUMENT TITLE Cloth, Oxford, Nylon, 3 Ounce | |
| 3a. NAME OF SUBMITTING ORGANIZATION | | 4 TYPE OF ORGANIZATION (Mark one) | |
| b ADDRESS (Street, City, State, ZIP Code) | | <input type="checkbox"/> VENDOR | |
| | | <input type="checkbox"/> USER | |
| | | <input type="checkbox"/> MANUFACTURER | |
| | | <input type="checkbox"/> OTHER (Specify) _____ | |
| 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) | |
| | | | |