INCH-POUND
GL/PD 10-07
26 October 2009
SUPERSEDING
MIL-C-43734D
20 August 1987

PURCHASE DESCRIPTION

CLOTH, DUCK, TEXTURED NYLON

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

1. SCOPE

1.1 Scope. This specification covers the requirements for textured nylon duck cloth, dyed or dyed and overprinted with a camouflage pattern.

1.2 Classification. The cloth covers the following Types, Classes and Styles as specified (see 6.2):

Type I - 1000 denier
- Class 1 - 9.5 oz/sq yd, Untreated
- Class 2 - 9.5 oz/sq yd, Water repellent
- Class 3 - 12.0 oz/sq yd, Water repellent/back coated
- Class 4 - 12.0 oz/sq yd, Water repellent/flame retardant

Type II - 725 denier
- Class 1 - 7.5 oz/sq yd Untreated
- Class 2 - 7.5 oz/sq yd, Water repellent
- Class 3 - 10.0 oz/sq yd, Water repellent/back coated

Type III - 500 denier
- Class 1 - 7.0 oz/sq yd Untreated
- Class 2 - 7.0 oz/sq yd, Water repellent
- Class 3 - 8.0 oz/sq yd, Water repellent/back coated
- Class 4 - 9.5 oz/sq yd, Water repellent/flame retardant

Type IV - 330 denier
- Class 1 - 4.0 oz/sq yd Untreated
- Class 2 - 4.0 oz/sq yd, Water repellent
- Class 3 - 5.5 oz/sq yd, Water repellent/back coated

Style A - Solid shade
Style B - Woodland Camouflage printed
Style C - Desert Camouflage printed (3 Color)
Style D - Universal Camouflage printed
Style E - Woodland Camouflage printed Marine Pattern (MARPAT)
Style F - Desert Camouflage printed, Marine Pattern (MARPAT)

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4 or 5 of this specification. This section does not include documents cited in other sections of this specification, or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4 or 5 of this specification whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those cited in the solicitation or contract (see 6.2).

FEDERAL STANDARDS

FED-STD-4 - Glossary of Fabric Imperfections

COMMERCIAL ITEM DESCRIPTIONS

A-A-59826 - Thread Nylon

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-1487 - Glossary of Cloth Coating Imperfections

(Copies of these documents are available online at http://assist.daps.dla.mil/quicksearch/ or http://assist.daps.dla.mil/ or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation or contract. (See 6.2).

DRAWINGS

U.S. ARMY NATICK SOLDIER, RESEARCH, DEVELOPMENT, AND ENGINEERING CENTER

2-1-1516	-	Woodland Camouflage Pattern
2-1-2240	-	Desert Camouflage Pattern (3 color)
2-1-2519	-	Universal Camouflage Pattern
2-1-2519-1	-	ARPAT Camouflage Pattern, Desert Sand 500
2-1-2519-2	-	ARPAT Camouflage Pattern, Urban Gray 501
2-1-2519-3	-	ARPAT Camouflage Pattern, Foliage Green 502
2-1-2525	-	Woodland MARPAT Pattern 4 color (Coyote 476)
2-1-2526	-	Woodland MARPAT Pattern 4 color (Green 474 with EGA symbol)
2-1-2527	-	Woodland MARPAT Pattern 4 color (Black 477)
2-1-2528	-	Woodland MARPAT Pattern 4 color (Kahki 475)
2-1-2529	-	Desert MARPAT Pattern 4 color (Light Tan 479)
2-1-2530	-	Desert MARPAT Pattern 4 color (Urban Tan 478)
2-1-2531	-	Desert MARPAT Pattern 4 color (Light Coyote 481 with EGA symbol)
2-1-2532	-	Desert MARPAT Pattern 4 color (Highland 480)

(Copies of drawings are available from the U.S. Army Natick Research Development and Engineering Center, Natick Soldier Center, ATTN: NSRDEC-RDNS-WPW-C, Natick, MA 01760.)

CODE OF FEDERAL REGULATIONS

27 CFR Part 21 - Formula for Denatured alcohol
40 CFR Parts (150 – 180) – Protection of Environment

(Copies of these documents are available on-line at http://www.gpoaccess.gov/cfr/index.html or from U.S. Government Printing Office, Superintendent of Documents, Mail Stop, Washington, DC 20402-9328).

ENVIRONMENTAL PROTECTION AGENCY

EPA Pollutants/toxins subtopics
Regulations for the Enforcement of the Federal Insecticide, Fungicide and Rodenticide Act. (40 CFR Parts 150 – 180)

(Listings are available online at www.epa.gov/ebtpages/pollutants.html or from the Environmental Protection Agency, 1200 Pennsylvania Avenue, N.W., Washington, D.C. 20460.)

FEDERAL TRADE COMMISION

Rules and Regulations Under the Textile Fiber Products Identification Act

(Copies are available online at www.ftc.gov or from the Federal Trade Commission, 600 Pennsylvania Avenue, N.W., Washington, DC 20580-0001.)

2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract (see 6.2).

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

AATCC Test Method 8 - Colorfastness to Crocking: AATCC Crockmeter Method
AATCC Test Method 15 - Colorfastness to Perspiration
AATCC Test Method 16 - Colorfastness to Light
AATCC Test Method 20 - Fiber Analysis: Qualitative
AATCC Test Method 22 - Water Repellency: Spray Test
AATCC Test Method 61 - Colorfastness to Laundering, Accelerated
AATCC Test Method 70 - Water Repellency: Tumble Jar Dynamic Absorption Test
AATCC Test Method 81 - pH of the Water-Extract from Wet Processed Textiles
AATCC Test Method 96 - Dimensional Changes in Commercial Laundering of Woven and Knitted Fabrics Except Wool
AATCC Test Method 118- Oil Repellency: Hydrocarbon Resistance Test
AATCC Test Method 119- Color Change Due to Flat Abrasion (Frosting): Screen Wire Method
AATCC Test Method 127- Water Resistance: Hydrostatic Pressure Test
AATCC Test Method 169- Weather Resistance of Textiles Xenon Lamp Exposure
AATCC Evaluation Procedure 1 – Gray Scale for Color Change
AATCC Evaluation Procedure 2 – Gray Scale for Staining
AATCC Evaluation Procedure 8 – AATCC 9-Step Chromatic Transference Scale
AATCC Evaluation Procedure 9 – Visual Assessment of Color Difference of Textiles

(Copies are available on line at www.aatcc.org or from the American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709-2215.)

ASTM INTERNATIONAL (ASTM)

ASTM D 276 - Standard Test Methods for Identification of Fibers in Textiles
ASTM D 737 - Test Method for Air Permeability of Textile Fabrics

ASTM D 747 - Standard Test Method for Apparent Bending Modulus of Plastics by Means of a Cantilever Beam

ASTM D 751 - Standard Test Method for Coated Fabrics
ASTM D 1424 - Standard Test Method for Tearing Strength of Fabrics by Falling-Pendulum Type (Elmendorf) Apparatus
ASTM D 1683 - Standard Test Method for Failure in Sewn seams of Woven Apparel Fabrics
ASTM D 1776 - Standard Practice for Conditioning and Testing Textiles
ASTM D 1907 - Standard Test Method for Linear Density of Yarn (Yarn Number) by the Skein Method
ASTM D 2582 - Standard Test Method for Puncture-Propagation Tear Resistance of Plastic Film and Thin Sheeting
ASTM D 3775 - Standard Test Method for Warp (End) and Filling (Pick) Count of Woven Fabrics
ASTM D 3776 - Standard Test Methods for Mass Per Unit Area (Weight) of Fabric
ASTM D 3884 - Standard Guide for Abrasion Resistance of Textile Fabrics (Rotary Platform, Double-Head Method
ASTM D 5034 - Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test)
ASTM D 6413 - Standard Test Method for Flame Resistance of Textiles (Vertical Test)

(Copies of documents are available online at www.astm.org or from the ASTM INTERNATIONAL, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.)

OTHER PUBLICATIONS

Repeat Insult Patch Test-Modified Draize Procedure-Principles and Methods of Toxicology, (fourth edition), 2001, A. Wallace Hayes (editor), pp 1057-1060.

(Copies are available online at http://www.taylorandfrancis.co.uk/ or from the Taylor and Francis Group, 325 Chestnut St., Suite 800, Philadelphia, PA 19106.)

Sears Roebuck and Company

Fabric Defect Replica Scales

(Copies are available from Sears Roebuck and Company "Fabric Defect Replica Kit" Department 817 (ATTN: FC 554B), 3333 Beverly Road, HG, FC568B, Hoffman Estates, Il 60179. For information call (847) 286-8952.

2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. **REQUIREMENTS**

3.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspection (see 6.3) in accordance with 4.2.

3.2 Standard sample. The finished cloth shall match the standard sample for shade and appearance, 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).

3.3 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible, provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

3.4 Material.

3.4.1 Yarn. The yarn shall be textured continuous filament nylon. Testing shall be as specified in 4.4.5.

3.4.1.1 Yarn denier. The yarn denier shall be 1000 for Type I, 725 for Type II, 500 for Type III and 330 for Type IV. Testing shall be as specified in 4.4.5.

3.5 Color.

3.5.1 Style A, solid shades. The Style A finished cloth shall be dyed in one of the following shades or as otherwise specified in the contract or purchase order: Camouflage Green 483, Foliage Green 504, Urban Gray 505. Coyote 498, Coyote 3758 and Tan 380 (see 6.2).

3.5.2 Style B, Woodland Camouflage print. The Style B finished cloth shall be dyed to a ground shade either matching or approximating Light Green 354 and then overprinted with the applicable Woodland Camouflage colors by roller or screen printing. When the ground shade is dyed to match Light Green 354, the remaining colors shall be obtained by subsequent printing using three rollers or screens, as appropriate for the Dark Green 355, Brown 356 and Black 357 areas of the pattern. When the ground shade is dyed to approximate Light Green 354, all four colors of the camouflage pattern shall be obtained by subsequent printing using four rollers or screens to match all four colors. The dyeing of the ground shade approximating Light Green 354 and the printing shall be accomplished by using a combination of acid dyes except for Black 357 only, carbon black alone or in combination with acid dyes shall be used. Resin bonded pigments shall not be used.

3.5.3 Style C, Desert Camouflage print (3 color). The Style C finished cloth shall be dyed to a ground shade either matching or approximating Light Tan 492 and then overprinted with the applicable Desert Camouflage colors by roller or screen printing. When the ground shade is dyed to match Light Tan 492, the remaining colors shall be obtained by subsequent printing using two rollers or screens, as appropriate for the Light Brown 493 and Light Khaki 494 areas of the pattern. When the ground shade is dyed to approximate Light Tan 492, all three colors of the camouflage pattern shall be obtained by subsequent printing using three rollers or screens to match all three colors. Resin bonded pigments shall not be used.

3.5.4 Style D, Universal Camouflage print. The Style D finished cloth shall be dyed to a ground shade either matching or approximating Desert Sand 500 and then overprinted with the camouflage pattern by roller or screen printing. When the ground shade is dyed to match Desert Sand 500, the remaining colors shall be obtained by subsequent printing using two rollers or screens, as appropriate for the Urban Gray 501 and Foliage Green 502 areas of the pattern. When the ground shade is dyed to approximate Desert Sand 500, all three colors of the camouflage pattern shall be obtained by subsequent printing using three rollers or screens to match all three colors. Resin bonded pigments shall not be used.

3.5.5 Style E, MARPAT Woodland Camouflage print. The Style E finished cloth shall be dyed to a ground shade either matching or approximating Khaki 475 and then overprinted with the camouflage pattern by roller or screen printing. When the ground shade is dyed to match Khaki 475, the remaining colors shall be obtained by subsequent printing using three rollers or screens, as appropriate for the Green 474, Coyote 476 and Black 477 areas of the pattern. When the ground shade is dyed to approximate Khaki 475, all four colors of the camouflage pattern shall be obtained by subsequent printing using four rollers or screens to match all four colors. Resin bonded pigments shall not be used.

3.5.6 Style F, MARPAT Desert Camouflage print. The Style F finished cloth shall be dyed to a ground shade either matching or approximating Light Tan 479 and then overprinted with the camouflage pattern by roller or screen printing. When the ground shade is dyed to match Light Tan 479, the remaining colors shall be obtained by subsequent printing using three rollers or screens, as appropriate for the Urban Tan 478, Highland 480 and Light Coyote 481 areas of the pattern. When the ground shade is dyed to approximate Light Tan 479, all four colors of the camouflage pattern shall be obtained by subsequent printing using four rollers or screens to match all four colors. Resin bonded pigments shall not be used.

3.5.7 Visual shade matching. The color and appearance of the dyed or camouflage printed finished cloth shall match the standard sample when tested as specified in 4.4.5 (see 6.4).

3.5.8 Colorfastness. The finished cloth shall conform to the colorfastness requirements specified in Table I when tested as specified in 4.4.5.

TABLE I. Colorfastness requirements (all styles)

Style	Color Evaluation	Laundering (3 cycles) 1/ (min.)	Light (40 hrs or 170 kJ 2/ (min.)	Perspiration (Acid & Alkaline) 1/ (min.)	Crocking 3/ (min.)	Accelerated weathering (80hrs. or 340 kJ) 2/ (min.)	Frosting (Carbon Black) 2/ (min.)
"A" Solid Shade	All colors	3-4	3-4	3-4	3.5	3-4	N/A
"B" Woodland Camouflage	All colors except Black 357	3-4	3-4	3-4	3.5	N/A	N/A
	Black 357	3	2-3	3-4	1.0	N/A	3-4
"C" Desert Camouflage 3 Color	All colors	3-4	3-4	3-4	3.5	N/A	N/A
"D" Universal Camouflage	All colors	3-4	3-4	3-4	3.5	N/A	N/A
"E" Woodland MARPAT	All colors except Black 477	3-4	3-4	3-4	3.5	N/A	N/A
	Black 477	3-4	3-4	3-4	1.5	N/A	3-4
"F" Desert MARPAT	All colors	3-4	3-4	3-4	3.5	N/A	N/A

1/ Rated using the AATCC Evaluation Procedure 1, Gray Scale for Color Change and AATCC Evaluation Procedure 2,Gray Scale for Staining.
2/ Rated using the AATCC Evaluation Procedure 1, Gray Scale for Color Change
3/ Rated using the AATCC Evaluation Procedure 8, AATCC 9-Step Chromatic Transference Scale

3.6 Pattern execution The pattern on the printed finished cloth(s) shall match the standard sample with respect to design, colors, and registration of the respective areas. The various areas of the pattern shall be properly registered in relation to each other and shall present definite sharp demarcations with a minimum of feathering or spew. 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 a standard sample is not available for pattern execution, a pattern drawing will be provided (see 6.4), and the pattern on the finished cloth shall match that of the drawing (see 2.2.2. 6.2 and 6.4). The pattern repeat for each style shall be as follows:

Style B Woodland Camouflage - 27.25 (+1.25, -2.50) inches in the warp direction.
Style C Desert Camouflage (3 color) - 16.75 (+1.25, -2.25) inches in the warp direction.
Style D Universal Camouflage - 36.00 (+1.25, -2.50) inches in the warp direction.
Style E Woodland MARPAT - 27.25 (+1.25, -2.50) inches in the warp direction.
Style F Desert MARPAT - 27.25 (+1.25, -2.50) inches in the warp direction.

3.7 Spectral reflectance. The spectral reflectance values for each Style shall conform to the requirements specified in their respective applicable Tables II through VII when tested as specified in 4.4.5.

TABLE II. Spectral reflectance (percent), Style A.

Solid Shades												
Wavelength (nanometers)	Camouflage Green 483		Foliage Green 504		Urban Gray 505		Coyote 498		Coyote 3758		Tan 380	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
600	3	10	8	26	12	26	8	20	8	20	N/A	N/A
620	3	10	8	26	14	26	8	20	8	20	N/A	N/A
640	3	10	8	28	14	28	8	22	8	22	N/A	N/A
660	3	12	10	30	14	30	8	24	8	24	N/A	N/A
680	3	14	10	34	18	34	12	24	10	24	N/A	N/A
700	4	28	12	38	24	38	12	34	14	24	25	53
720	5	40	16	42	26	42	16	42	16	28	25	54
740	10	52	16	46	30	46	22	46	20	34	25	55
760	18	56	18	48	32	48	30	50	30	44	26	56
780	20	56	18	48	34	48	34	54	40	50	27	57
800	24	58	20	50	34	50	36	56	45	56	28	58
820	30	60	22	54	36	54	38	58	50	58	30	59
840	38	60	24	54	38	54	38	58	52	58	33	62
860	40	60	26	56	40	56	40	60	52	62	36	65

TABLE III. Spectral reflectance (percent), Style B.

Woodland Camouflage Pattern						
Wavelengths (nanometers)	Light Green 354		Dark Green 355 and Brown 356		Black 357	
	Min	Max	Min	Max	Min	Max
600	8	20	3	9	N/A	N/A
620	8	20	3	9	N/A	N/A
640	8	20	3	9	N/A	N/A
660	8	20	3	12	N/A	N/A
680	10	30	3	14	N/A	N/A
700	18	50	5	28	N/A	20
720	22	54	7	44	N/A	30
740	30	56	12	52	N/A	33
760	35	58	18	56	N/A	33
780	40	62	26	56	N/A	34
800	55	80	34	56	N/A	34
820	55	80	42	60	N/A	35
840	55	82	44	60	N/A	35
860	60	82	44	60	N/A	35

TABLE IV. Spectral reflectance (percent), Style C.

Desert Camouflage Pattern (3-color)						
Wavelength, (nanometers)	Light Tan 492		Light Brown 493		Light Khaki 494	
	Min	Max	Min	Max	Min	Max
700	38	53	19	36	25	48
720	38	58	20	36	25	52
740	39	62	20	36	25	54
760	40	66	21	36	26	56
780	41	72	21	38	27	57
800	43	76	22	43	28	58
820	45	76	23	45	30	58
840	48	78	24	46	33	58
860	50	78	25	46	36	59

TABLE V. Spectral reflectance (percent), Style D.

Universal Camouflage Pattern						
Wavelength, (nanometers)	Desert Sand 500		Urban Gray 501		Foliage Green 502	
	Min	Max	Min	Max	Min	Max
600	28	40	12	26	8	18
620	30	42	14	26	8	18
640	34	48	14	28	8	20
660	38	56	14	30	10	26
680	44	60	18	34	10	26
700	46	66	24	38	12	28
720	48	68	26	42	16	30
740	48	72	30	46	16	30
760	50	74	32	48	18	32
780	54	76	34	48	18	34
800	54	76	34	50	20	36
820	54	76	36	54	22	38
840	56	78	38	54	24	40
860	56	78	40	56	26	42

TABLE VI. Spectral reflectance (percent), Style E.

Marine Pattern (MARPAT) Woodland Camouflage Pattern						
Wavelengths (nanometers)	Coyote 476		Green 474 and Khaki 475		Black 477	
	Min	Max	Min	Max	Min	Max
600	8	20	3	9	N/A	N/A
620	8	20	3	9	N/A	N/A
640	8	20	3	9	N/A	N/A
660	8	20	3	12	N/A	N/A
680	10	30	3	14	N/A	N/A
700	18	50	5	28	N/A	20
720	22	54	7	44	N/A	30
740	30	56	12	52	N/A	33
760	35	58	18	56	N/A	33
780	40	62	26	56	N/A	34
800	55	80	34	56	N/A	34
820	55	80	42	60	N/A	35
840	55	82	44	60	N/A	35
860	60	82	44	60	N/A	35

TABLE VII. Spectral reflectance (percent), Style F.

Marine Pattern (MARPAT) Desert Camouflage Pattern						
Wavelength, (nanometers)	Light Tan 479		Light Coyote 481 and Highland 480		Urban Tan 478	
	Min	Max	Min	Max	Min	Max
700	38	53	19	36	25	48
720	38	58	20	36	25	52
740	39	62	20	36	25	54
760	40	66	21	36	26	56
780	41	72	21	38	27	57
800	43	76	22	43	28	58
820	45	76	23	45	30	58
840	48	78	24	46	33	58
860	50	78	25	46	36	59

3.8 Physical requirements. The finished cloth shall conform to the requirements specified in Table VIII when tested as specified in 4.4.5.

TABLE VIII. Physical requirements.

Characteristic	Weight (oz/sq yd) Min	Max	Yarns per inch (min.) Warp	Filling	Breaking strength lbs (min.) Warp	Filling	Air permeability (cu.ft/min./sq.ft) (max)
Type I Classes 1 and 2	8.5	9.5	35	28	500	300	10 1/
Type I Class 3	11.0	12.0	35	28	500	300	N/A
Type I Class 4	11.0	12.0	48	39	500	300	N/A
Type II Classes 1 and 2	6.5	7.5	41	36	450	280	N/A
Type II Class 3	9.0	10	41	36	450	280	N/A
Type III Classes 1 and 2	6.0	7.0	48	35	275	200	N/A
Type III Class 3	7.0	8.0	48	35	300	225	N/A
Type III Class 4	8.0	9.5	48	39	360	270	N/A
Type IV Classes 1 and 2	N/A	5.5	58	38	280	180	N/A
Type IV Class 3	N/A	6.0	58	38	200	155	N/A

1/ Requirement applicable to Type I, Class 1 (Solid Shades) only.

3.8.1 Tear strength (Army uniforms components only). The Type IV, Class 2 cloth, when used for Army uniforms shall have a tear strength of 8.0 pounds minimum in both the warp and fill. Testing shall be as specified in 4.4.5.

3.8.1.1 Puncture propagation tear strength (Marine Corp uniform components only). The Type IV cloth, when used for Marine Corp uniforms shall have a tear strength of 7.0 kgf minimum in the warp and 6.0 kgf minimum in the fill. Testing shall be as specified in 4.4.5.

3.8.2 Abrasion resistance. The Type III, Class 4 cloth shall show abrasion resistance to 1000 cycles minimum and Type IV, Class 3 shall show abrasion resistance to 800 cycles minimum. Testing shall be as specified in 4.4.5.

3.8.3 Weave. The weave shall be plain with one up and one down. The use of a flyshuttle or shuttleless loom is permitted. Testing shall be as specified in 4.4.5.

3.9 Finish. The cloth shall be thoroughly scoured and heat set. Classes 2, 3 and 4 cloths (all Types) shall be given a water repellent treatment (see 3.9.1); Class 3 cloths (all Types) shall be back coated (see 3.9.2) and the Class 4 cloths (Types I and III) shall be flame retardant treated (see 3.9.12).

3.9.1 Water repellency. The Classes 2, 3, and 4 cloths (all Types) shall be given a water repellent treatment that shall be capable of meeting all repellency characteristics referenced in this specification.

3.9.2 Back coating. The Class 3 cloths (all Types) shall be coated on the back side only with a suitable clear polyurethane coating compound and water repellent treated on the face side. The Class 4 cloths (Types I and III) shall be coated on the back side with a flame retardant coating and water repellent treated on the face side. If plasticizers are used in the coating, only phosphate or phthalate ester type plasticizers shall be used.

3.9.3 Spray rating. The results of three individual determinations for the Class 3 cloths shall be equal to or better than 100, 100, 90 initially and 90, 90, 80 after one laundering; for Classes 2 and 4 cloth, the results of three individual determinations shall be equal to or better than 90, 90, 80 initially. Testing shall be as specified in 4.4.5.

3.9.4. Hydrostatic resistance. The Types I, II and III, Class 3 back coated cloths shall show no leakage below a hydrostatic height of 35 centimeters. Testing shall be as specified in 4.4.5.

3.9.5 Dynamic water absorption. The finished Class 3 cloths (all Types) shall show not more than 20 percent dynamic water absorption initially and after one laundering; for the Classes 2 and 4 cloths (all Types) the dynamic water absorption shall not be greater than 25 percent initially. Testing shall be as specified in 4.4.5.

3.9.6 Blocking. The blocking properties at 180°F of the finished back coated side of the Class 3 cloths (all Types) shall not be greater than a No. 3 rating. Testing shall be as specified in 4.4.5.

3.9.7 Resistance to organic liquid. The finished Classes 2, 3 and 4 cloths (all Types) shall show no wetting by N-Tetradecane minimum initially and after 1-laundering. Testing shall be as specified in 4.4.5.

3.9.8 Resistance to Diethyltoluamide (DEET). The finished Class 3 cloths (all Types) shall show no lifting, tackiness, solution, pickoff or adherence to itself greater than a scale rating of 2 (trace blocking). Testing shall be as specified in 4.4.5.

3.9.9 Resistance to low temperature . The finished Class 3 back coated cloths (all Types), shall not show any cracking, flaking or separation of the coating from the base cloth. Testing shall be as specified in 4.4.5.

3.9.10 Resistance to high humidity. For the finished Class 3 back coated cloths (all Types), the coating shall not show stiffness and brittleness nor softness and tackiness and shall show no evidence of cracking or crazing. Testing shall be as specified in 4.4.5.

3.9.11 Stiffness. The stiffness of the Types I, II and III Class 3 finished back coated cloths shall not be more than 0.034 pounds force in the warp or filling directions. The Type IV Class 3 cloth when used for Army uniform components shall show stiffness of 0.001 inch-lb (max) at 32 °F and 70 °F and when used for Marine Corp uniform components shall show stiffness of 11 centimeters (max) in both the warp and filling. Testing shall be as specified in 4.4.5.

3.9.12 Flame resistance. The Class 4 cloths shall be flame retardant treated and shall have an average after-flame time of not more than 3.0 seconds in both the warp and fill directions; an average after-glow time of not more than 2.0 seconds in both the warp and fill directions and an average char length of not more than 4-1/2 inches initially and after 15 launderings in both the warp and fill directions. There shall be no melt/drip after removal of source flame. Testing shall be as specified in 4.4.5.

3.10 pH. The pH value of the water extract of the finished cloth shall be not less than 5.0 or more than 8.5 when tested as specified in 4.4.5.

3.11 Dimensional stability. The finished cloth shall have an average dimensional change of no more than 3.0 percent in the warp and no more than 2.0 percent in the filling directions, with no single value over 3.5 and 2.5 percent, respectively after 1 laundering cycle. Testing shall be as specified in 4.4.5.

3.12 Seam efficiency. The finished cloth shall have a seam efficiency of no less than 80 percent. Testing shall be as specified in 4.4.5.

3.13 Width. For Government procurements only, unless otherwise specified, the width of the finished cloth shall be as specified in the contract or purchase order (see 6.2) and shall be the minimum acceptable width inclusive of selvages. When the cloths are woven on shuttleless looms, the width measurement shall be made between the last yarns on each side, with the protruding fringe(s) excluded.

3.14 Length and put-up. For Government procurements only, unless otherwise specified (see 6.2), the cloth shall be furnished full width in continuous lengths, each not less than 40 yards.

3.15 Face identification. The face side of Style A, solid shade dyed cloth shall be identified by stamping that side with the word "FACE" at each end of the roll.

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

3.17 Toxicity The finished fabric shall not present a health hazard and shall show compatibility with prolonged, direct skin contact when tested as specified in 4.4.5. Chemicals recognized by the Environmental Protection Agency (EPA) as human carcinogens shall not be used.

3.18 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. **VERIFICATION**

4.1 Classification of inspections. The inspection requirements specified herein are classified as follows:

a. First article inspection (see 4.2).
b. Conformance inspection (see 4.3).

4.2 First article inspection. A first article, submitted in accordance with 3.1, shall be inspected, examined for appearance, color and finish defects in 4.4 and tested for the characteristics specified in 4.4.5.

4.3 Conformance inspection. Conformance inspection shall include the examination of 4.4 and the testing in 4.4.5 as applicable.

4.3.1 Inspection conditions. Unless otherwise specified, all inspections shall be performed in accordance with all the requirements of referenced documents, unless otherwise, excluded, amended, modified or qualified in this specification or applicable procurement documents (see 6.2).

4.4 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, that are clearly noticeable at normal inspection distance (3 feet) shall be scored and assigned demerit points as listed in 4.4.1 except that only those slubs and knots which exceed the limits shown on the Sears Fabric Defect Scale (see 2.3), "D" for slubs and "C" for knots, shall be scored and coarse yarn shall only be scored as a defect when the coarse yarn is twice the diameter of the normal yarn used in the fabric. No linear yard (increments of 1 yard on the measuring device of the inspection machine) from any one roll 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 exceed 35.0 points. The lot shall be unacceptable if the points per 100 square yards of two or more individual rolls exceed 53.0 points. If one roll in the sample exceeds 53.0 points per 100 square yards, a second sample of 20 rolls shall be examined for individual roll quality only. The lot shall be unacceptable if one or more rolls in the second sample exceeds 53.0 points per 100 square yards. Point computation for lot quality and individual roll quality shall be calculated as follows:

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

4.4.1 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

4.4.1.1 Four demerit point defects. The following shall be scored four points for each yard in which they occur:

Hole, cut or tear
Objectionable odor
Baggy, ridged or wavy cloth
Width less than specified
Edge ravels when pulled outward
Slack or tight selvage 1/

Overall uncleanness
Pattern design not equal to standard sample (Styles B, C, D, E and F)
Incorrect color in any part of the pattern (Styles B, C, D, E and F)
Pattern repeat not equal to the standard sample (Styles B, C, D, E and F)
Pattern repeat less or more than specified dimensions (Styles B, C, D, E and F) (see 3.6)
Skitteriness (mottled, uneven color) of pattern exceeds that shown by standard sample (Styles B, C, D, E and F)
Excessive feathering or spew (fuzziness at color boundaries) of pattern as compared to the standard sample (Styles B, C, D, E and F)
Excessive grinning (off register, gap where ground shade shows through) of pattern as compared to the standard sample (Styles B, C, D, E and F)
Excessive haloing or trapping (overlapping of colors) of pattern as compared to the standard sample (Styles B, C, D, E and F)

1/ To determine the presence of unacceptable selvage conditions, the following procedure shall be followed: During the visual examination, the perch shall be stopped a minimum of three times for each roll in the sample, tension removed and the finished cloth examined for selvage conditions. A waviness in the selvage or significant ripples diagonally across the width of the fabric is an indication of slack or tight selvage.

4.4.1.2 Examination (coated fabric) Class 3. In addition to the defects listed in 4.4.1.1 the required yardage of each roll of the finished coated cloth shall be inspected on the coated side for the visual defects listed below and as defined in MIL-STD-1487. The defects found shall be counted regardless of their proximity to each other, except where two or more defects represent a single local condition on the cloth, in which case only one defect shall be counted. A continuous defect shall be counted as one defect for each warpwise yard in which it occurs. The following shall be scored four points for each yard in which they occur.

Examine	Defect
Coating	Any uncoated area
	Any thinly coated area
	Any blister, tunnel, or delamination of coating
	Any lump or heavily coated area
	Crease or wrinkle that cannot be corrected by manual pressure or resulting in doubling or adhesion of surfaces
	Any spot, stain, or streak more than 1 inch in its longest dimension 1/
	Any embedded foreign matter
	Any scorch or burn
	Any strike through of the coating to the uncoated side of the cloth
	Tackiness

1/ Clearly visible at normal inspection distance (approximately 3 feet).

4.4.2 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. The lot shall be unacceptable if two or more rolls in the sample are defective in respect to length. 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 tickets

4.4.3 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 or shaded side to side, side to center, or end to end, or any roll that does not have the same appearance as the standard sample, shall be cause for rejection of the entire lot.

4.4.4 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 of the following defects are present in any sample:

Not labeled or ticketed in accordance with the Rules and Regulations under the Textile Fiber Products Identification Act
Face marking missing from either or both ends (Style A, solid shade)
Face marking on wrong side (Style A, solid shade)

4.4.5 End item testing. The cloth shall be tested for characteristics listed in Table IX. All test reports shall contain the individual values utilized in expressing the final result. The sample unit shall be 4 yards, full width of finished cloth. The sample size shall be as follows and the lot shall be unacceptable if one or more sample units fail to meet any requirement.

Lot size (yards)	Sample size (sample units)
800 or less	2
801 up to 22,000	3
22,001 and over	5

TABLE IX. - End item tests.

Characteristic	Requirement Paragraph	Test Method
Yarn:		
Fiber identification	3.4.1	AATCC-20 or ASTM D 276
Yarn denier	3.4.1.1	ASTM D 1907
Visual shade matching	3.5.7	AATCC Evaluation Procedure 9, Option A 1/

TABLE IX. - End item tests - Continued

Characteristic	Requirement Paragraph	Test Method
Colorfastness to:		
Laundering (after 3 cycles)	3.5.8	AATCC 61, Test 1A
Light (after 40hrs. or 170 KJ)	3.5.8	AATCC 16, Option 1or 3
Perspiration (acid & alkaline)	3.5.8	AATCC 15
Crocking	3.5.8	AATCC 8
Accelerated Weathering (after 80 hrs. or 340 Kilojoules) (Style A only)	3.5.8	AATCC 169 Option 3
Frosting (carbon black only) (300 cycles)	3.5.8	AATCC 119
Spectral reflectance	3.7	4.5.1
Weight	3.8	ASTM D 3776, Option C
Yarns per inch	3.8	ASTM D 3775
Breaking strength	3.8	ASTM D 5034
Air permeability (Type I Class 1 only)	3.8	ASTM D 737
Tear strength: (Type IV Class 3 Army)	3.8.1	ASTM D 1424
Puncture resistance (Type IV Class 3 Marine Corp)	3.8.1.1	ASTM D 2582
Abrasion Resistance	3.8.2	ASTM D 3884 2/
Weave	3.8.3	Visual
Spray rating (All Types Classes 2, 3 and 4): Initial	3.9.3	AATCC 22
(All Types Classes 3 and 4): After one laundering	3.9.3	AATCC 96 Test VIc and AATCC 22
Hydrostatic resistance (Types I, II and III Classes 3 and 4)	3.9.4	AATCC 127 or ASTM D 751, 3/ 4/
Dynamic absorption: (All Types Classes 3 and 4)		
Initial	3.9.5	AATCC 70
After 1 laundering	3.9.5	AATCC 96, Test VIc and AATCC 70
Blocking (All Types, Classes 3 and 4)	3.9.6	ASTM D 751, and 4.5.2
Resistance to organic liquid: (All Types Classes, 2, 3 and 4)		
Initial	3.9.7	AATCC 118 5/
After one laundering	3.9.7	AATCC 96, Test VIc and AATCC 118

TABLE IX. - End item tests - Continued

Characteristic	Requirement Paragraph	Test Method
Resistance to Diethyltoluamide (DEET)	3.9.8	4.5.3
Resistance to low temperature (All Types, Classes 3 and 4)	3.9.9	4.5.4
Resistance to high humidity	3.9.10	4.5.5
Stiffness: (Types I, II and III Classes 3 and 4)) (Type IV, Class 3 (Army)) (Type IV, Class 3 (Marine Corp)	3.9.11 3.9.11 3.9.11	ASTM D 747 ASTM D 747 4.5.6
Flame resistance Initial After 15 launderings	3.9.12 3.9.12	ASTM D 6413 AATCC 96, Test VIc and ASTM D 6413
pH	3.10	AATCC 81
Dimensional stability(after 1 cycle)	3.11	AATCC 96, Test VIc
Seam efficiency	3.12	ASTM 1683 6/
Toxicity	3.17	4.5.7

1/ Using sources simulating artificial daylight D75 illuminant with a color temperature of 7500 ± 200^0K illumination of 100 ± 20 foot candles, and shall be a good match to the standard sample under incandescent lamplight at 2856 ± 200^0K.
2/ H-18 abrasive wheel with 1000 gram load shall be used. A hole shall be defined as the wear through of one (1) warp end and one (1) filling yarn at the same location.
3/ Leakage is defined as the appearance of water at three or more different places within the 4-1/2 inch diameter test area at a hydrostatic height of 35.0 centimeters. The uncoated side of the coated cloth shall contact the water.
4/ In cases of dispute, the ASTM method prevails
5/ Test for N-Tetradecane minimum only.
6/ The needle shall measure 0.040 ±0.001 inch across the blade at the eye. The thread for all types shall be nylon in accordance with A-A-59826, Type II, Size E, Tex Size 70, 3-ply for both needle and bobbin.

4.5 Methods of inspection.

4.5.1 Spectral reflectance test. Spectral reflectance data shall be obtained from 600 to 860 nanometers (nm) for Woodland Camouflage (Styles B and E), Universal Camouflage (Style D), and unless otherwise specified all solid colors (Style A), 700 to 860 nanometers (nm) for Desert Camouflage (Styles C and E) at 20 nm intervals on a spectrophotometer relative to the barium sulfate standard, the preferred white standard. Other white reference materials may be used provided they are calibrated to absolute white, e.g. magnesium oxide or vitrolite tiles. The spectral band width shall be less than 26 nm at 860 nm. Reflectance measurements shall be

made by either the monochromatic or polychromatic mode of operation. When the polychromatic mode of operation is used, the spectrophotometer shall operate with the specimen diffusely illuminated with the full emission of a continuous source that simulates either CIE Source A or CIE Source D65. Measurements shall be taken on a minimum of two (2) different areas and the data averaged. The measured areas should be at least 6 inches away from the selvage. The specimen shall be measured as a single layer backed with layers of the same fabric and shade as follows: Style B, Woodland pattern cloth, three (3) backing layers shall be used for Light Green 354, Dark Green 355 and Brown 356 colors and two (2) backing layers shall be used for Black 357; Style C, Desert pattern cloth, four (4) backing layers of the same shade cut from the standard; Style D, Universal pattern cloth, four (4) backing layers of the same shade; Style E, MARPAT Woodland cloth, four (4) backing layers for Green 474, Khaki 475 and Coyote 476 and two (2) backing layers for Black 477; and Style F, MARPAT Desert cloth, four (4) backing layers of the same shade. The specimen shall be viewed at an angle no greater than 10° from normal, with the specular component included. Measurements shall be taken on a minimum of two different areas. Specimens shall be oriented in different directions during testing. When possible, the specimens tested shall not contain the same warp or filling yarns when presented to the sample port. Photometric accuracy of the spectrophotometer shall be within 1 percent and wavelength accuracy within 2 nm. The diameter for standard aperture size used in the color measurement device shall be 1.0 to 1.25 inches for Woodland (Style B) and Desert (Style C) Camouflage and unless otherwise specified all solid colors and 0.3725 inches or larger for the Universal (Style D), MARPAT Woodland (Style E) and MARPAT Desert (Style F). (Always use the largest aperture possible.) Any color having spectral reflectance values falling outside the limits at four or more of the wavelengths specified shall be considered a test failure.

4.5.2 Blocking. The test shall be performed in accordance with ASTM D 751, Blocking Resistance at Elevated Temperatures, except that the test shall be performed at a temperature of 180 ± 2°F for 30 minutes. Evaluate the resistance of the specimen to blocking by the scale given below:

1 – No Blocking. Cloth surfaces are free and separate without any evidence of cohesion or adhesion.
2 – Trace blocking. Cloth surfaces show slight cohesion or adhesion.
3 – Slight blocking. Cloth surfaces must be lightly peeled to separate.
4 – Blocking. Cloth surfaces separate with difficulty or coating is removed during separation.

4.5.3 Resistance to Diethyltoluamide (DEET). The DEET solution contains 75 percent diethyltoluamide and 25 percent ethanol (see 4.5.3.1). Three drops of the DEET solution shall be placed in the center of a 4 by 8-inch specimen of the finished cloth with the coated side up. The specimen shall be folded to form a 4 by 4-inch square with the coated side folded onto itself. The folded specimen shall then be placed between two 6 by 6-inch glass plates and a 4-pound weight placed on the assembly and left at standard conditions for 16 hours. The specimen shall then be removed from between the glass plates, and immediately rated using the blocking scale ratings as shown in 4.5.2.

4.5.3.1 DEET Reagent. The DEET reagent is an insect repellent reagent solution of 75% by weight (min) of diethyltoluamide and the remainder denatured alcohol. The diethyltoluamide component of the solution is a technical grade and contains N, N- diethylmetatoluamide of not less than 95% purity and the remainder shall consist of entirely or mixture of ortho or para isomers of N, N- diethyltoluamide. The denatured alcohol component of the solution is ethanol, U.S.P. 94.9% by volume and denatured in accordance with The Code of Federal Regulations 27 CFR 21, Formula 40 (see 2.2.2). The diethyltoluamide must be registered with the U. S. Environmental Protection Agency in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) (see 2.2.2).

4.5.4 Resistance to low temperature. The test shall be performed in accordance with ASTM D 751, Low Temperature Crack Test, with the exposure time 4-hours (min.) at a test temperature of -40°F $\pm$ 5°F; the test for hydrostatic resistance shall not be performed. The specimen shall be removed from the chamber, allowed to come to room temperature and visually examined for any signs of cracking, flaking or separation of the coating from the base cloth. Unless otherwise specified, at least three specimens from the sample shall be tested. Results of tests shall be expressed as "pass" or "fail" as exhibiting visible coating nonconformities.

4.5.5 Resistance to high humidity. Three 4 by 4-inch specimens shall be laid flat, coated side up, on a supporting plate and the assembly placed in a desiccator containing water in the lower portion. The water level shall be approximately 1-inch below the specimens. The lid of the desiccator shall be put in place and the desiccator placed in a circulating air oven having a temperature of 125°F $\pm$ 2°F for a period of seven days. At the end of the aging period, each specimen shall be removed from the desiccator, visually examined for colorfastness and then visually examined for any evidence of stiffness, brittleness, softness, tackiness, cracking or crazing.

4.5.6 Stiffness test.

Apparatus. The test apparatus shall consist of a framework with a rotating, two-roller spindle assembly and a calibrated linear measuring tool. Of the assembly, the two rolls, each one inch in diameter and approximately 4.25 inches in length, are positioned parallel to one another and held in contact by spring tension. The line of contact of the two rolls shall coincide with the axis of rotation of the spindle assembly attached to the fixed framework. A pointer shall be attached to the spindle assembly to indicate the relative angular position of the assembly to a moveable circular scale calibrated in degrees. The rolls of the spindle assembly shall be capable of being rotated on their axis using a slow gear adjustment to adjust the length of the test specimen. The assembly shall rotate, in both clockwise and counterclockwise directions, at a uniform rate of one revolution per 60 $\pm$ 5 seconds. The linear measuring tool, graduated to 0.1 mm, shall be used to measure the length of a test specimen extending perpendicular from the line of contact or nip of the two rolls.

Test specimens. The specimen shall be a rectangle of cloth 1-1/4 inches wide by 6- to 12-inches long with the longer dimension parallel to the direction being tested; unless otherwise specified, the warp or machine direction of the sample shall be tested. The specimens shall be cut with clean, straight and parallel edges from locations diagonally across the width of the sample and they shall not contain any evidence of creasing or folding.

Number of determinations. Unless otherwise specified, five specimens from each of the designated directions shall be tested from each sample unit.

Procedure. Conditioned test specimens in accordance with ASTM D 1776 and test with specimens and apparatus in that environment, unless otherwise specified. Level the apparatus, before use, so that the spindle assembly is horizontal. Secure an end of the test specimen in and perpendicular to the nip of the rolls with enough length projecting on the left so that on rotating the spindle assembly clockwise, the projecting end of the test specimen falls through the vertical to the right. On rotating the spindle assembly counterclockwise from the stop or end point, the test specimen should not fall back to the left until it is turned through an angle of 90 degrees. Shorten the projecting length until a rotation of 90 $\pm$ 2 degrees causes the end of the test specimen to fall from one side to the other. This defines the critical length which is measured from the line gripping the specimen (or nip of the rollers) to its free end. Measure the critical length of the test specimen in millimeters and to the nearest millimeter using the linear measuring tool. Report all individual readings of critical length and the average of results for the specified direction of test of each sample unit.

4.5.7 Toxicity test. Unless otherwise specified (see 6.2), an acute dermal irritation study and a skin sensitization study shall be conducted on laboratory animals. When the results of the studies indicate the finished cloth is not a sensitizer or irritant, a Repeat Insult Patch Test shall be performed in accordance with the Modified Draize Procedure (see 2.3). If the toxicity requirement (see 3.17) can be demonstrated with historical use data, toxicity testing may not be required (see 6.2).

5. **PACKAGING**

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of material is to be performed by DoD or in-house contractor personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activities within the Military Department or Defense Agency, or within the military service's system commands. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The cloth is intended for use in the manufacture of load bearing vests, field packs, body armor protective vests, duffel bags, reinforcement elbow and knee patches and other field items.

6.2 Acquisition requirements. Acquisition documents should specify the following:

a. Title, number, and date of this specification.
b. Type, Class and Style of cloth required (see 1.2).
c. The specific issue of individual documents referenced (see 2.2 and 2.3).
d. When first article is required (see 3.1, 4.2 and 6.3).
e. Color required if Style A is required (see 3.5.1).
f. Pattern drawing, if required (see 3.6).
g. Width of cloth required, (see 3.13).
h. Length required if other than specified (see 3.14).
i. Inspection conditions (see 4.3.1).
j. Toxicity testing if required (see 4.5.8).
k. Packaging requirements (see 5.1).

6.3 First article. When a first article inspection is required (see 3.1), it will be inspected and approved under the appropriate provisions of FAR 52.209-4. The first article should be a preproduction sample. The contracting officer should specify the appropriate type of first article and the number of units to be furnished. The contracting officer should include specific instructions in acquisition documents regarding arrangements for selection, inspection, and approval of the first article.

6.4 Standard sample. For access to samples and pattern drawings, address the contracting activity issuing the invitation for bids or request for proposal.

6.5 Supersession data . This document supersedes MIL-DTL-43734E and MIL-C-43734D. The supersession data is as follows:

MIL-C-43734D	MIL-DTL-43734E	GL/PD 10-01
Class 1	Type I, Class 1	Type I, Class 1, Style A
Class 2	Type I, Class 3	Type I, Class 2, Style B
Class 3	Type I, Class 2	Type I, Class 3, Style A
Class 4	Type III, Class 3	Type III, Class 3, Style B
Class 5	Type III, Class 3	Type III, Class 2, Style B

6.6 Subject term (key word) listing).

Bag, Duffel
Camouflage, Desert,
Camouflage, MARPAT
Camouflage, Woodland
Camouflage, Universal
Equipage item
Flame resistant
Water repellency

Custodians:

Army – GL

Preparing Activity:

Army - GL