Technical and Quality Requirements for the Unisex ACU Coat contracts

DLA Troop Support

This document contains contract requirements applicable to all types and classes of the Unisex ACU Coats. This information supplements other contract requirements which may exist to cover similar topics.

This document is subject to revision via contract modification. Each section is marked with a date showing when that section was last updated. The entire document will be periodically reissued in full with all updates incorporated.

DLA TROOP SUPPORT C&T AQAR is also part of this contract and is referenced throughout this document.

END ITEM TECHNICAL REQUIREMENTS

Unisex ACU Coat, GL/PD 14-04B

This section last updated: 05.08.2025

Coat, Army Combat Uniform, Permethrin Treated, Operational Camouflage Pattern (OCP) (PGC03976) shall be made in accordance with Type I, Class 2, Style A of GL/PD 14-04B.

Coat, Army Combat Uniform, Flame Resistant, Permethrin Treated, Operational Camouflage Pattern (OCP) (PGC03818) shall be made in accordance with Type III, Class 2, Style A of GL/PD 14-04B.

Sewing pattern

The Contractor is responsible for adjusting patterns as necessary to anticipate dimensional changes and ensure that the finished garment meets the required finished measurements in Table VII. (See paragraph 3.4.1.2 and 3.10)

Request pattern by style name and date to ensure that the correct pattern is provided by the government.

COAT, (unisex) Army Combat Uniform, PD14_04A

Pattern Date: 8 November 2023

Interim changes to GL/PD 14-04B, March 7, 2023

Significant note: The insect repellant treatment shall be applied to finished Class 2 coats by a treatment facility approved by the Army for each item being treated. The insect repellant treatment shall be applied at the fabric level by a treatment facility approved by the Army for each item being treated.

PAGE 8
Delete Table IIA (Thread requirements, Type I only), in its entirety and replace with the following:

"TABLE IIA. Thread requirements, Type I only.

Component area	Thread Specification	Needle Thread (Tex size) 1/	Bobbin/ Looper Thread (Tex size) 1/
All seaming, stitching and bar tacking	A-A-50199, Type II	45-59	45-59
Button attachment	A-A-50199, Type II	70-104	70-104
Overedge stitching (raw edges)	A-A-50199, Type II	21-23	21-23

1/ Needle and Bobbin/Looper shall use same Tex size thread"

PAGE 17
3.8.3 Insect repellent label (Class 2 and 3 only, all types and styles).

Line 10: Delete "right" and substitute with "left".

Additional notes for GL/PD 14-04B:

1. It is important that the components (i.e. loop tapes & chest pockets) on the front of the coat be aligned because of the visual impact of symmetry on the most visible area of the coat. The most critical area to align is the name tape loop tapes, and it is assumed that the pockets will be properly aligned below the loop strips. In order to measure the alignment of the front details, zip and fasten the front closures, then lay a ruler or square perpendicular to the front edge. With this straight line in place, determine whether tapes are 1) straight and 2) at the same level, within 1/4" tolerance.

2. In the event that there is variation in the shade of fastener tapes (even among material that has received a CoC from the supplier or a passing result from DLA-PTC), loop tapes at right and left sleeve pockets and collar shall match.

3. Regarding paragraph 3.8.3 Insect protection/identification/care label (Class 2 only, all types and styles) and paragraph 3.8.4 Hang tag, insect protection (Class 2 only, all types and styles).

Where label description calls for "Insect Repellent Brand Name", the brand name shall be printed in standard text (to match the rest of the label) rather than the company's proprietary logo.

4. Wherever seam stitching or topstitching is meant to end at a bartack (such as at the bi-swing) stitching shall stop at the bartack within 1/8" tolerance. The opening shall not be made smaller due to stitching past the bartack.

5. All garment pieces shall be cut and assembled with the warp in line with the directional line markings (often labeled “Cut on warp”) as marked on the government-furnished pattern, including pockets and small pieces (see paragraph 3.10).

6. GL/PD 14-04B paragraph 3.10 states "The Government patterns provide a seam allowance of 1/2 inch for side seams, shoulder seams, and sleeve seams, 3/8 inch allowance for collar and all other seams, except where otherwise specified, and 1/4 inch allowance for pocket flaps", but "Minor modifications to the pattern are permitted where necessary to accommodate manufacture’s processes to include garment treatments and use of automatic equipment." Ensure that all finished dimensional requirements are met.

7. Stamps may be used in the interior of the garment for vendor tracking or processing purposes. When stamps are used, they shall be positioned so that they are not visible from the outside of the garment when worn. Any bleed-through or positioning of the stamp that makes it visible from the outside of the garment when worn is considered a major defect #164. The underside of flaps and the space between the pocket top and pocket flap or cuff tab and cuff are considered visible when worn because they will be visible when opened.

8. As designed in the pattern, the chest pocket flap hook piece overlaps the chest pocket loop piece slightly to allow for bulk in the pocket. Defect #117 allows for matched fastener tape pieces to be misaligned by up to 1/4". While the tape placement at the chest pocket is slightly offset to start, the maximum 1/4” misalignment still stands as a defect in this location.

9. For garments manufactured by a subcontractor, the Identification and Care label (see paragraph 3.8.2 & 3.8.2.1 and 3.8.2.2), “Contractor Name” section shall read: "Manufactured by (subcontractor name) for (prime contractor name)". Identification and Care label shall state whether the uniform is Style A (unisex) or Style B (female).

10. All specifications outlined in GL/PD 14-04B shall be the most current specification listed on Assist unless outlined in this document.

11. Upper Sleeve Pocket Clarifications:
    A. The upper sleeve pocket consists of the following pattern pieces:
        1. Sleeve Pocket
        2. Sleeve Pocket Zipper Facing
    B. The pocket must be cleaned finished and/or serged. This is referenced in GL/PD 14-04B in paragraph 3.7, line 3 and 3.11.1, line 4.
        a. Figure 1 and 2, shows two options of setting the zipper to the pocket to ensure it is clean finished.

i. Two row of stitching on loop tape
ii. One row of stitching on loop tape

b. Figure 3 (serged) and4 (clean finished)

C. The Zipper requires two rows of stitching for setting of the zipper onto the sleeve pocket and pocket zipper facing. Shown in Figure 5

D. Table VIII, Visual examination, Page 33 denotes that visible raw edges (inside greater than one inch) is a major, listed as 156. In addition 157 Major could also be used due paragraph 3.7 and 3.11.1 requirements.

E. The 4 ½" finished width of the pocket should be measured as show in Figure 6. Measure from point A to point B.

Figure 1, 2 rows of stitching through the Loop

Figure 2, One row of stitching through loop tape

Figure 3, Serged Sleeve pocket Zipper Facing

Figure 4, Clean finished Sleeve Pocket

Figure 5, Upper Sleeve pocket zipper setting

Note: Zipper needs to be set with two rows of stitching.

Figure 6

Interim changes to reference documents

This section last updated: 05.08.2025

DLA Troop Support C&T AQAR

Revision 1, dated August 2021

**Special note: Contractors shall ensure that blocks 2 and 15 of the form DD1222 are updated to reflect the correct information. Historically, both blocks contained the information of the DCMA QAR and their stamp/signature. When contractor's representative samples, these blocks shall include the contractor's representative's information. Block 23 shall still include the DCMA QAR to receive the results of the report even though they may not be sampling the material to be tested.

DELETE WITH NO REPLACEMENT
2.1.3.2. Combining Manufacturing Lots in Treated Lot. Multiple completed Manufacturing Lots may be combined into a single Treated Lot as long as the garments being treated have the same print, type of fabric and garment style. Each Manufacturing Lot shall be independently counted for Government Source Sampling Testing purposes.

DELETE Para 2.1.3.3 in its entirety and replace with:
2.1.3.1. Multiple Treated Lots from a Manufacturing Lot. A "Treated Lot" size may differ from the "Manufacturing Lot" size. A single Manufacturing Lot may be treated in different Treated Lots. While the splitting of Manufacturing Lots should be minimized as much as possible, when a single

Manufacturing Lot is too large to be treated as one Treated Lot, it may be treated in more than one Treated Lot. In this event, each Treated Lot is sampled individually for Government Source Sampling Testing purposes. Test results and full traceability must be maintained in association with each lot.
Samples for all Government Source Sampling Testing or inspection shall be pulled by the Government QAS from the completed Manufacturing Lot (or a partial quantity of the completed Manufacturing Lot, as described below) which has been assembled for final presentation to the Government.

MIL-PRF-32659

Dated 30 Jul 2020
Vector Protection Treatment

V-B-871F - Button, Sewing, Hole and Button Staple (plastic)

CHANGES TO V-B-871F, BUTTON, SEWING HOLE, AND BUTTON STAPLE (PLASTIC), APPLICABLE TO THIS CONTRACT ONLY:

PAGE 3

Paragraph 2.2 Other publications.

Delete American Society for Testing and Material (ASTM) and change to ASTM INTERNATIONAL.

Delete ASTM's contact address in its entirety and change to the following:

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

Paragraph 2.3 Order of Precedence. Add "Unless otherwise stated herein or in the contract," to the beginning of the paragraph.

FED-STD-4 - Glossary of Fabric Imperfections

ADDITIONAL INFO FOR FED-STD-4 GLOSSARY OF FABRIC IMPERFECTIONS:

REVISION B: 7/29/64; AMENDMENT 2: 9/12/75
NOTICE 1, DATED 10/1/87.

DEV. TO FED. STD. 4B & AM. 2, PAGE 2, SEC.I. PARA. 2.1. IN IMPERFECTION COMMERCIAL TERMINOLOGY AND GLOSSARY NO. COLUMNS, AFTER SHADE BAR - 14 INSERT: "SHADED CLOTH-61B".

PAGE 8 PARA. 3.4, GLOSSARY NO. "61A- OFF SHADE", IN "DEFINITION" COLUMN, DELETE ": SHADED SIDE TO SIDE, SIDE TO CENTER OR END TO END".

ADD NEW GLOSSARY NO. "SHADED CLOTH "61B-SHADED CLOTH (SHADED SIDE TO SIDE, SIDE TO CENTER OR END TO END) WITH THE FOLLOWING DEFINITION: "COLOR DIFFERENCE BETWEEN THE RESPECTIVE CLOTH AREAS".

PAGE 22, SECTION III, PARAGRAPH 2.1, IN "IMPERFECTION COMMERCIAL TERMINOLOGY" AND GLOSSARY NO." COLUMNS, AFTER "SHADE BAR-15" INSERT: "SHADED CLOTH - 62A"

PAGE 27, PARAGRAPH 3.4, GLOSSARY NO. "62-OFF SHADE" IN "DEFINITION" COLUMN DELETE: "SHADED SIDE TO SIDE, SIDE TO CENTER OR END TO END".

ADD NEW GLOSSARY NO, "62A-SHADED CLOTH (SHADED SIDE TO SIDE, SIDE TO CENTER OR END TO END)" WITH THE FOLLOWING DEFINITION: "COLOR DIFFERENCE BETWEEN THE RESPECTIVE CLOTH AREAS."

DEVIATION FROM FED. STD. 4B, AND AMEND 2:

PG 2, SECTION 1, PARA.2.1, IN "IMPERFECTION COMMERCIAL TERMINOLOGY" AND "GLOSSARY NUMBER" COLUMNS, AFTER "SHADE BAR-14", INSERT: "SHADED CLOTH 61B".

PG 8, PARA.3.4, GLOSSARY NUMBER "61A-OFF SHADE" IN "DEFINITION" COLUMN, DELETE, "SHADED SIDE TO SIDE, SIDE TO CENTER OR END TO END".

ADD NEW GLOSSARY NO."61B SHADED CLOTH "SHADED SIDE TO SIDE, SIDE TO CENTER OR END TO END" WITH THE FOLLOWING DEFINITION; "COLOR DIFFERENCE BETWEEN THE RESPECTIVE CLOTH AREAS."

PAGE 22, SECTION III, PARAGRAPH 2.1, IN "IMPERFECTION COMMERCIAL TERMINOLOGY" AN GLOSSARY NO." COLUMNS, AFTER "SHADE BAR-15" INSERT: "SHADED CLOTH - 62A"

PAGE 27, PARAGRAPH 3.4, GLOSSARY NO "62-OFF SHADE" IN "DEFINITION" COLUMN DELETE: "SHADED SIDE TO SIDE, SIDE TO CENTER OR END TO END".
ADD NEW GLOSSARY NO, "62A-SHADED CLOTH (SHADED SIDE TO SIDE, SIDE TO CENTER OR END TO END)" WITH THE FOLLOWING DEFINITION: "COLOR DIFFERENCE BETWEEN THE RESPECTIVE CLOTH AREAS."

A-A-50198A - Thread, Gimp, Cotton, Buttonhole

ADDITIONAL INFORMATION FOR A-A-50198A

NO ADDITIONAL INFORMATION

A-A-50199C - Thread, Polyester Core, Cotton or Polyester-Covered

Note new revision A-A-50199 Rev C Dated 28 Apr 25

NO ADDITIONAL INFORMATION

A-A-55126 - Fastener Tape, Hook and Loop, Synthetic

Note new revision A-A-55126 Rev C Dated 21 Dec 16

PAGE 3
After 2.4: Add:
"2.5 Treatments. The hook and loop fastener tapes will be available in the following treatments.
Treatment A - Without special treatment
Treatment B – Polymeric or elastomeric
Treatment C – Pressure sensitive adhesive (see 3.9.2)
Treatment D – Silver impregnated (see 3.9.3)".

PAGE 9
3.5, Line 2, after "(see 7.4 and 7.7)": Delete the rest of the paragraph "and it shall be...or White.".

PAGE 13
3.9: Delete and substitute:
"3.9 Finish. Unless otherwise specified all fastener tapes shall conform to Treatment A (without special treatment).".

3.9.1, Line 4, After "undercoating" insert "Treatment B".

3.9.2, Line 2: After "application," insert "Treatment C,".

After 3.9.2: Add:
"3.9.3 Silver impregnated. When Treatment D, silver impregnation, is specified per the contract, or end-item application, the fastener tapes shall be treated with silver. As a minimal test the hook and loop fastener tape shall have an electrical resistance of equal to or less than 2 Ohms per square inch. Measure the fastener tape resistance with an Ohm meter every 2 yards in the machine direction on both the front and back of each tape strip. Report the electrical resistance for each roll reporting the maximum recorded value in order to ensure that the entire roll is equal to or less than the electrical resistance of 2 Ohms per square inch.".

PAGE 20
7.7.b: Delete and substitute: "Type, class, style, width and treatment required (see 2).".

A-A-55195 - Thread, Para-Aramid, Spun, Intermediate Modulus

ADDITIONAL INFORMATION FOR A-A-55195:

NO ADDITIONAL INFORMATION

A-A-55217- Thread, Aramid, Spun Staple

ADDITIONAL INFORMATION FOR A-A-55217:

Note new revision to A-A-55217B

A-A-55634A - Zippers (Fasteners, Slide Interlocking)

ADDITIONAL INFORMATION FOR A-A-55634A, 23 MARCH 2004:

SPECIAL NOTE!! ALL SLIDE FASTENERS USED ARE TO BE MEASURED FROM "STOP TO STOP". RECOMMEND THAT THIS MEASUREMENT BE TAKEN RANDOMLY BEFORE SLIDE FASTENERS ARE SEWN TO THE ITEMS, COVERALL, OR ANY ITEM REFERRED TO IN THE SOLICITATION. "THE QAR WILL REJECT ANY SLIDE THAT IS NOT LAYING FLAT AFTER IT IS SEWN INTO/ONTO AN ITEM." SPECIAL INFO ON ITEMS THAT UTILIZE SLIDE FASTENERS IS GIVEN BY "ALL USING MILITARY PERSONNEL".

CHANGES TO ZIPPERS (FASTENERS, SLIDE INTERLOCKING), A-A-55634A DATED MARCH 23, 2004, APPLICABLE TO THIS CONTRACT ONLY:

PAGE 12

PARAGRAPH 3.3 COLOR MATCHING. DELETE IN ITS ENTIRETY AND CHANGE TO THE FOLLOWING:

3.3 COLOR MATCHING SPECIFIC STANDARDS (I.E. CG 483, TAN 380, ETC) SHALL BE SUPPLIED TO THE MANUFACTURER BY THE PROCURING ACTIVITY WHEN REQUESTED. THE COLOR OF THE FINISHED FASTENER TAPE SHALL MATCH THE STANDARD SAMPLE WHEN TESTED AS SPECIFIED IN 4.2.1.

PAGE 15

ADD PARAGRAPH 4.2.1 VISUAL COLOR MATCHING.

4.2.1 VISUAL SHADE MATCHING EVALUATION. THE COLOR AND APPEARANCE OF THE FASTENER TAPES SHALL MATCH THE STANDARD SAMPLE WHEN VIEWED USING THE AATCC EVALUATION PROCEDURE 9, OPTION A OR C, WITH SOURCES SIMULATING ARTIFICIAL DAYLIGHT D75 ILLUMINANT WITH A COLOR TEMPERATURE OF 7500 (+ 200) degrees K ILLUMINATION OF 100 (+ 20) FOOT CANDLES, AND SHALL BE A GOOD MATCH TO THE STANDARD SAMPLE UNDER INCANDESCENT LAMPLIGHT AT 2856 (+ 200) degrees K.

PARAGRAPH 4.2, TABLE VII TEST METHODS, A. APPLICABLE DOCUMENTS. UNDER AATCC SECTION MAKE THE FOLLOWING CHANGES:

DELETE "TM 16E" AND CHANGE TO TM 16 SAME LINE, ADD OPTION 1 OR 3 AFTER LIGHT. TM 61 REMOVE THE WORDS "HOME AND COMMERCIAL FROM THE TITLE OF THE TEST METHOD WITHOUT REPLACEMENT.

MIL-DTL-32075 - Label: For Clothing, Equipage, and Tentage (General Use)

ADDITIONAL INFORMATION FOR MIL-DTL-32075:

MIL-DTL-32075, LABEL FOR CLOTHING, EQUIPAGE, AND TENTAGE, GENERAL USE REPLACES DDD-L-20

INTERIM SPECIFICATION CHANGES TO MIL-DTL-32075:

Page 4, para. 3.3.5, after "Type III or IV, Class 4 of" delete "DDD-L-20" and replace "MIL-DTL 32075,".

Page 6, TABLE I, "Physical requirements of the Type VI finished label" Under "Tearing strength" delete: "(lb.) minimum" and substitute: "(gms) minimum"

Page 12, Para 3.3.2.17, after "NSN" add "and the Universal Product Code (UPC) supplied by the Government, for all NSN"s."

MIL-C-44296 - Cloth, Fusible

ADDITIONAL INFORMATION FOR MIL-C-44296:

INTERIM SPECIFICATION CHANGES TO MIL-C-44296A:

PAGE 1, PARAGRAPH 1.1, SCOPE., LINE 1: AFTER "AND" INSERT "STITCH-REINFORCED NONWOVEN".

PAGE 1, PARAGRAPH 1.2. CLASSIFICATION. BELOW "TYPE IX" ADD "TYPE X - CIRCULAR KNIT SUBSTRATE"

PAGE 1, PARAGRAPH 1.2, LINE 12: BETWEEN "TYPE X-CIRCULAR KNIT SUBSTRATE" AND "CLASS 1" INSERT "TYPE X1- "STITCH-REINFORCED NONWOVEN".

PAGE 2, PARAGRAPH 2. APPLICABLE DOCUMENTS ADD FOLLOWING NEW PARAGRAPH: "2.1.3 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 THE DOCUMENTS NOT LISTED IN THE DODISS SHALL BE THE ISSUES OF THE NONGOVERNMENT DOCUMENTS WHICH ARE CURRENT ON THE DATE OF THE SOLICITATION.

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC) AATCC 20 - FIBER ANALYSIS QUALITATIVE (APPLICATIONS FOR COPIES SHOULD BE ADDRESSED TO AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC), P.O. BOX 12215, TRIANGLE PARK, NC 27709-2215)"

PAGE 3, ADD THE FOLLOWING NEW PARAGRAPH: "3.1.2.10 TYPE X. TYPE X SHALL BE A CIRCULAR KNIT. WHEN SPECIFIED (SEE 6.2), THE FACE SIDE SHALL BE NAPPED."

PAGE 3: AFTER PARAGRAPH 3.1.2.10, ADD THE FOLLOWING: "3.1.2.11 TYPE X1. TYPE X1 SHALL BE STITCH- REINFORCED NONWOVEN WHEREBY A SERIES OF CHAINSTITCHING IS SEWN IN THE MACHINE DIRECTION OF THE SUBSTRATE IN ORDER TO REINFORCE THE NONWOVEN CONSTRUCTION."

PAGE 7, PARAGRAPH 3.4. PHYSICAL REQUIREMENTS. ADD THE FOLLOWING NEW TABLE (TABLE VIIA) AFTER TABLE VII:

"TABLE VII. A PHYSICAL REQUIREMENTS FOR TYPE X

STYLE	CLASS	WEIGHT (INCLUDING ADHESIVE) OZ/SQ/YD.		BURSTING STRENGTH LBS. (MIN)	FIBER CONTENT
		MINIMUM	MAXIMUM		
A	1,2,3 or 4	1.4	1.8	60	1/

1/ 100% NYLON OR POLYESTER."

PAGE 7, PARAGRAPH 3.4 PHYSICAL REQUIREMENTS.: AFTER TABLE"VIII" ADD NEW TABLE IX:

"TABLE IX, PHYSICAL REQUIREMENTS FOR TYPE XI

						BREAKING STRENGTH		
				WGT, OZ/YD2		LBS, (MIN)		STITCHING
STYLE	CLASS	MIN	MAX	MACH	X-MACH	CONTENT	REINFORCEMENT	
A	1,2,3	1.0	1.8	10.0	1.0	1/	2/	

1/ 50 TO 100 PERCENT POLYESTER WITH REMAINING PERCENTAGE NYLON OR RAYON.
2/ STITCH REINFORCEMENT CONDUCTED WITH SINGLE MULTIFILAMENT THREAD USING CHAINSTITCH STITCH TYPE WITH CHAINSTITCH LOOPS ON FUSIBLE SIDE TO PROTECT FROM UNRAVELING."

PAGE 7, PARAGRAPH 3.4.1. BONDING STRENGTH.
- LINE 2, DELETE "(EXCEPT CLASS 5)" AND SUBSTITUTE "(EXCEPT TYPE IX WHEN USED AS FUSIBLE SEAM TAPE AND CLASS 5)".
- LINES 7 AND 8, DELETE "OR SHEETING MATERIAL".

PAGE 9, PARA. 4.2.2.1, LINE 22, DELETE "30" AND SUBSTITUTE "20". LINE 24, DELETE "45" AND SUBSTITUTE "30".

PAGE 11, TABLE VIII. END ITEM TESTS UNDER TEST METHOD COLUMN, LINES 2 AND 3 DELETE "1600" AND SUBSTITUTE "AATCC 20".

PAGE 12, PARAGRAPH 4.3.1.1. BONDING STRENGTH PROCEDURE (INITIAL AND AFTER LAUNDERING/DRY CLEANING). DELETE THE FIRST AND SECOND SENTENCES IN THEIR ENTIRETY AND SUBSTITUTE: "CUT A 12 INCH WARP BY 11 INCH FILLING SAMPLE FROM BOTH THE OUTERSHELL AND FUSIBLE MATERIALS SPECIFIED FOR CONTRACT USE (SEE 6.5)."

PAGE 15: AT THE END OF PARAGRAPH 6.1.1, ADD THE FOLLOWING:
" E. STITCH REINFORCED NONWOVEN TYPE X1 OFFERS HIGH DEGREE STRENGTH/STABILIZATION FOR TAPE AND STAY APPLICATION FOR LARGE OR SMALL PART FUSIBLES AND IS INTENDED TO PROVIDE VERTICAL STABILITY AND ABRASION RESISTANCE."

PAGE 16, PARAGRAPH 6.5. BONDING STRENGTH DISPUTE PROCEDURE. INSERT THE FOLLOWING BETWEEN THE FIRST AND SECOND SENTENCES: "IN SOME CASES, OUTERSHELL SAMPLES REPRESENTATIVE OF SEPARATE PRODUCTION LOTS MAY BE USED TO DETERMINE IF DIFFERENT FINISHES MAY AFFECT BONDING STRENGTH."

MIL-DTL-5038 - Tape, Textile and Webbing, Textile, Reinforcing Nylon

ADDITIONAL INFORMATION FOR MIL-DTL-5038:
Note recent revision to MIL-DTL-5038K, dated 22 June 2016

CO/PD-06-05 - Patch and Brassard, Identification, Infrared Retroflective

ADDITIONAL INFORMATION FOR CO/PD-06-05:

Note recent revision to CO/PD-06-05A, dated 10 November 2011

10 November 2011 version supersedes 4 December 2007 version of document with same name.

MIL-PRF-32635A- Cloth, Flame Resistant

Note new revision MIL-PRF-32635 Rev A 20 Nov 2023

NO ADDITIONAL INFORMATION

MIL-DTL-44436 - Cloth, Camouflage Pattern, Wind Resistant Poplin, Nylon/Cotton Blend

Note new revision MIL-DTL-44436 Rev D Dated 10 Mar 20

NO ADDITIONAL INFORMATION.

GL/PD-10-08B - Patch Kit, Integrated, Flame Resistant (IPK)

Note new revision dated 14 October 2014

ANSI/ASQC Z1.4 - American National Standard Sampling Procedures and Tables for Inspection by Attributes

ADDITIONAL INFORMATION FOR ANSI/ASQC Z1.4:

Updated version: ANSI/ASQ Z1.4-2008.

SAE-AMS-STD-595 - Colors Used in Government Procurement

ADDITIONAL INFORMATION FOR SAE-AMS-STD-595:

COPIES OF FED-STD-595 CAN BE OBTAINED FROM:
GENERAL SERVICES ADMINISTRATION - FEDERAL SUPPLY SERVICE BUREAU
SPECIFICATION SECTION, SUITE 8100
470 EAST L'ENFANT PLAZA, SW
WASHINGTON, DC 20407
PHONE (202) 619-8925.

Commercial sources are also available

GOVERNMENT LABORATORY TESTING OF CLOTH AND END ITEMS

This section last updated: 10/17/19

The use of electronic submission of DD form 1222 is authorized.

NOTE: AQAR Section 3.2 Government Acceptance Testing states that "Unless otherwise stated in the contract, testing performed at the DLA PTC for acceptance purposes will be completed in forty five (45) calendar days" – CURRENT contracts state 30 days and will remain applicable for all current and future BDU items.

Physical testing of materials

Refer to DLA TROOP SUPPORT C&T AQAR for more information on the Source Sampling program (also see updates to this in the "Lot formation and testing for components" section of this document).

For physical (non-shade) testing, in accordance with DLA TROOP SUPPORT C&T AQAR , Part I, the contractor's approved qualified laboratory will be required to forward a completed test report for each lot of cloth to the address below. The QAR will forward the completed DD form 1222. Samples for physical testing will only be forwarded upon request to:

DLA Product Testing Center Analytical
700 Robbins Avenue
Philadelphia, PA 19111
Attn: Bldg 5D
Email: paactlab@dla.mil

End item testing

In accordance with DLA TROOP SUPPORT C&T AQAR , Part 1, section 6. (7), all end item test reports shall be provided to the Government for review under the source sampling program.

For ACU Trouser end item testing requirements, GL/PD 14-05BA, Table XI and terms of contract.

For ACU Coat end item testing requirements, see GL/PD 14-04B, Table IX and terms of contract.

All contractor test reports for permethrin testing shall be sent electronically to:
katherine.a.barton.civ@army.mil
bdu_gcreports@dla.mil

All contractor test reports for other end item tests shall be sent electronically to:
paactlab@dla.mil

SHADE EVALUATION REQUIREMENTS

This section last updated: 05.08.2025

Shade standards applicable to ACU items

The color and appearance of the [item] shall match the standard sample when viewed using the AATCC EP 9, Option C, (see 6.X) with a primary light source simulating the spectral quality of average daylight, CIE illuminant D65, with a color temperature of 6500 (±200) Kelvin (K) illumination of 100 (±20) foot candles. Alternatively, the color and appearance of the [item] shall match the standard sample with a primary light source simulating artificial daylight, CIE Illuminant D75, with a color temperature of 7500K (±200) illumination of 100 (±20) foot candles in lieu of D65. (See 6.X.X). The [item] shall also be a good match to the standard sample with a secondary source simulating the spectral quality of incandescent lamplight, CIE Illuminant A, with a color temperature of 2856K (±200).

NOTES:

A. All prime contractors of current and pending contracts must verify that DD1222s from suppliers indicate whether D65 or D75 light source was used for shade verification. If the light source is not indicated on the DD1222, D65 will be assumed by the Government Shade Laboratory.

B. Visual shade evaluation failures viewed under D65 shall not be reevaluated under a D75 primary light source.

C. All other terms and conditions remain unchanged.

Operational Camouflage Pattern (OCP) Garments

Standard sample for Cloth, Operational Camouflage Pattern, wind resistant poplin, nylon/cotton blend, conforming to class 14 (wrinkle free) of MIL-DTL-44436 is available on roll no. 3963 and is applicable for Shade, Appearance, and IR Spectral Reflectance. This standard shall apply before and after permethrin treatment, when applicable.

Standard sample for Cloth, Flame Resistant, conforming to MIL-PRF-32635, Type III, Class 3, Operational Camouflage Pattern (OCP) shall be Standard Roll # 3936 and is applicable Shade, Appearance, Colorfastness and IR Spectral Reflectance. This standard shall apply before and after permethrin treatment, when applicable.

In order to properly assess shade on OCP material , the government will need 24” lengthwise x 30” widthwise shade swatches. This may deviate from current practices for other camouflage printed materials. Samples smaller than the required measurement of 24” x 30” will not be accepted for evaluation.

For fabrics printed with OCP, all color evaluations to include visual, spectral reflectance and colorfastness are to be performed on the solid color area and not the tonal area.

Standard sample for Fastener Tapes, Hook and Loop, Synthetic, Tan 499, conforming to Type 2 of A-A-55126, is available on roll #3822 and is applicable for shade, appearance, colorfastness and spectral reflectance. Loop color in standard is applicable for both hook and loop.

Unless otherwise indicated, shade for visible components on OCP garments shall conform to Tan 499. The standard for this shade is color chip #20180 from SAE-AMS-STD-595.

Shade evaluation of cloth

General

(a) SAMPLING: Notwithstanding any current provisions of the fabric specification, the following shade evaluation shall apply to this solicitation. Swatches will be cut by the Contractor from those pieces or rolls selected by the Government representative in accordance with the table below. Swatches shall be 4 by 24 inches for single color cloth, 12 inches by full width for most multi-colored camouflage cloth, and 24 inches by full width for Operational Camouflage Pattern cloth.

Lot Size	No. of Pieces to be Sampled
1 to 8 pieces	Each piece
9 to 25 pieces	8 pieces
26 to 90 pieces	20 pieces
91 to 160 pieces	32 pieces
over 160 pieces	1 of 5 pieces

The Government representative (QAR) shall ensure that each piece is cut in half and identify each half with the piece number from which it was cut. One set of swatches (one side of the roll from each of the full-width sampled rolls) and the tally list of piece numbers for each roll from the lot shall be forwarded to the DLA Product Testing Center for evaluation. The remaining swatches shall be retained at the plant for use by the Quality Assurance Representative (QAR).

If one or more of the shade swatches submitted are found unacceptable, the entire lot shall be rejected. A lot that was rejected for shade shall be screened and all pieces in the lot defective for shade shall be removed before such a lot is resubmitted. Resubmitted lots shall again be subjected to the sampling and shade evaluation prescribed herein. This requirement does not negate the Contractor's responsibility to perform shade evaluation prior to submittal of a lot to the Government. Each roll of fabric acceptable for shade from which a shade piece has been removed shall be cut by the Contractor from selvage to selvage so that there will be no evidence of the shade piece cut-out. The portion removed shall not be included in the yardage indicated on the piece ticket. If the Contractor reworks and resubmits rolls originally rejected for shade or finish, it shall not combine the rejected rolls with other lots or with lots rejected for other causes. Such rejected rolls shall be combined to form one resubmitted lot. Each piece shall retain its original piece number, suffixed with an "X". The lot number shall also be suffixed with an "X".

(b) When Section 3 of the fabric specification contains a specific requirement for uniformity of shade and when the standard sample is referenced for uniformity of shade, the swatches submitted in accordance with (a) above shall also be evaluated for uniformity of shade.

(c) The Contractor shall transmit the swatches to:

For OCP NYCO (MIL-DTL-44436D) and FRACU (MIL-PRF-32635A):

DLA Product Testing Center Analytical
700 Robbins Avenue
Philadelphia, PA 19111
Attn: Bldg 5D
Email: ptc.shade@dla.mil

When sending shade swatches to DLA do the following:

- Send a hard copy of the DD1222 with the swatches in the mail

The letter shall indicate "FOR GOVERNMENT SHADE APPROVAL" and contain the following information:
(1) Name of prime Contractor.
(2) Contract number.
(3) Nomenclature.
(4) Government inspection lot number.
(5) Number of swatches being submitted.
(6) QAR's name.
(7) Name and address of the QAR's base plant.
(8) Piece number of standard sample cited in contract.
(9) Tally list with piece numbers (not applicable to case swatching).

(d) If any swatches are rejected by the DLA Product Testing Center--Analytical for shade, those pieces from which the rejected swatches were cut will be removed from the lot. Each piece acceptable for shade from which a shade swatch has been removed shall be cut by the Contractor from selvage to selvage so that there will be no evidence of the shade swatch cut-out. The portion removed shall not be included in the yardage indicated on the piece ticket.
(e) If the Contractor reworks and resubmits pieces originally rejected for shade or finish, it shall not combine the rejected pieces with normal production or with lots rejected for other causes. Such pieces shall be combined to form one resubmitted lot. Each piece shall retain its original piece number, suffixed with an "X". The lot number shall also be suffixed with an "X".

2-Stage Shade Evaluation program for Permethrin treated ACU material

Applicable for Class 2 ACU Coats and Trousers only

The following describes the staged process for shade evaluation of cloth to be permethrin treated after garment manufacture.

Samples and DD1222s shall be sent to DLA Product Testing Center at the address in section “C” above.

Stage I - OPTIONAL.

When the Contractor opts for Stage I shade evaluation is, the QAR at the Mill is responsible for ensuring that a 24 inch by full width for Operational Camouflage Pattern (OCP) header is cut from the appropriate number of rolls in accordance with the above sampling plan.

The QAR shall ensure that the header is cut in half and identify each half with the piece number from which it was cut. One set of swatches (one half header from each of the sampled rolls) and the tally list of piece numbers for each roll from the lot shall be forwarded to the DLA Product Testing Center for evaluation. The remaining swatches shall be retained at the plant for use by the Quality Assurance Representative (QAR). The QAR at the Mill shall complete a DD1222 in accordance with traditional procedures. If the given lot passes or fails Stage I, the fabric lot may move onto Stage II Evaluation at the Prime Contractor's risk.

If Stage I evaluation pass or fails, the lot may proceed to Stage II. No DD3440 will be issued for a failing Stage I.

Stage II.

Prime Contractor shall notify the Mill which Permethrin Treatment Facility will perform final permethrin treatment. This is where the samples must be treated for Stage II.

The QAR at the Mill is responsible for ensuring that a 24 inch by full width (for OCP) header is cut from each of the appropriate number of rolls in accordance with the above sampling plan. This is in addition to the header cut for the optional Stage I, if Stage I applies. The QAR at the Mill shall arrange for a set of identifying tags for each roll to be forwarded to the applicable Permethrin Treatment Facility along with each header. Each header shall be cut in half and each piece shall be identified with the piece number from which it was cut.

After permethrin treatment, one set of swatches (one half header from each of the sampled rolls) and the tally list of piece numbers for each roll from the lot shall be forwarded to the DLA Product Testing Center for evaluation. The remaining swatches shall be retained at the plant for use by the Quality Assurance Representative (QAR). The QAR at the Mill shall complete a DD1222 in accordance with traditional procedures.

Pieces sent to the DLA Product Testing Center for evaluation shall be no smaller 24 x 30 for OCP and shall have the identifier tags securely attached.

The QAR at the treatment facility shall complete a DD1222 using the same lot and sample numbers as originally used to represent the lot in Stage I; Blocks 2 and 4 shall be updated to reflect the contact information for the treatment facility and their QAR, Block 8 shall state "Stage II Shade," and Block 13 shall contain the name of the Mill. If Stage I evaluation was done, the lab report number assigned by DLA Product Testing Center or Natick for the Stage I DD1222 must be clearly placed in block 16.

The Prime Contractor shall not cut the fabric until the Stage II has been approved via a DD 1222, or failed and accepted under a waiver via a DD 3440.

Before Contractor is permitted to cut cloth, passing/waived DD1222/DD3440 from Stage II evaluation is required.

Shade evaluation of components

***Shade evaluation of components, for Tan 499, is hereby waived indefinitely. The contracting officer is able to require government shade evaluation at any point in time going forward on subject contract.**

Initial purchase of the components below shall be submitted to DLA Product Testing Center for evaluation of shade. A "component" in this case means a specific size or type of material from a particular supplier; different sizes or types constitute different components and each size or type from each supplier should be separately sampled and evaluated, except as described in "Swatching for fastener tape" below. Upon receipt of a passing result for each component, there shall be no further requirement for government shade evaluation of that component for the duration of the contract, unless specifically requested by the contracting officer. In the case of failing results with waiver granted, additional testing shall be as directed by the contracting officer. Shade evaluation requirement for these listed components applies for all types and classes of ACU; material that is passed or waived may be used on any type or class of ACU under that contract, as permitted by specification. The Government reserves the right to require testing of individual components at any time. Shade evaluation of every lot of basic material is required for the life of the contract.

Trousers (GL/PD 14-05B):
Tape for FR Identification marker (only) – paragraph 3.5.1.2
Buttons - paragraph 3.5.4

Coats (GL/PD 14-04B):
Slide fasteners – paragraphs 3.5.1.1 (any one length), 3.5.1.2, and 3.7.4.2
Tape for IFF tab cover and FR Identification marker (Type III only) – paragraph 3.5.2
Buttons - paragraph 3.5.8
Loop fastener tape for sleeve pocket – paragraph 3.5.3

Components are subject to 1-stage shade evaluation only.

Component materials packaged as rolls (6 inch pieces cut from rolls) shall be sampled as follows:

Lot size	Sample size
1 to 32 rolls	4 pieces
33 to160 rolls	8 pieces
161 to 320 rolls	10 pieces
321 to 500 rolls	12 pieces
Over 500 rolls	12 pieces + 1 piece per 100 rolls

Component materials packaged as each shall be sampled as follows:

Lot size	Sample size
1 to 5 pieces	1 piece
6 to100 pieces	5 pieces
101 to 1000 pieces	10 pieces
1001 to 10000 pieces	50 pieces
Over 10000 pieces	100 pieces

Swatching for fastener tape:

Preference is for fastener tape to be sampled and submitted through the Supplier rather than the Prime Contractor. Any lot of fastener tape submitted for shade evaluation under a DD1222 must represent only one Prime Contractor. However, fastener tape may be sampled from the original master roll (before slitting) as long as traceability is maintained. Narrower widths of fastener tape cut from the master roll need not be re-submitted for shade testing, but a secondary DD1222 shall be prepared and attached to such cuts reflecting the original DD1222 information.

Insect Repellent Treatment Verification Program requirement for garments and textiles for the Department of Defense

This program of government verification applies to contract production of garments and textiles treated with insect repellent for use by the Department of Defense.

Definitions:

Garment or Fabric Type: Item description as designated in PD or military specification including designations of Type, Style, Class and/or Cloth Classification. Garments or fabric of different Types require separate verification testing, to include FAT, Initial Verification Testing and Follow-up Verification Testing for each contract.

Qualified Testing Facility: Laboratory which has been qualified by the government to perform insect repellent content testing in accordance with MIL-PRF-32659 and listed in section 52.246-9032 of the contract.

Manufacturing Lot: A completed homogenous production run of a fixed quantity of manufactured garments or yardage of fabric assembled into an identifiable lot. Manufacturing Lots shall be numbered consecutively over the course of a contract and Manufacturing Lot numbers shall not be repeated within a contract.

Treatment Lot: A homogenous treatment production run of a fixed quantity of garments or fabric yardage treated with insect repellent under identical conditions in a continuous manner without change of process conditions or interruption for treatment of other Treatment Lot(s). Treatment Lots shall be numbered consecutively over the course of a contract and Treatment Lot numbers shall not be repeated within a contract (such as when dividing Manufacturing Lots into multiple Treatment Lots). The Treatment Lot Number is entered as the “Lot/Batch Number” in Box 18 of the DD1222 when samples are submitted to the government laboratory for testing. The size of a treatment lot shall meet the requirements specified in MIL-PRF-32659. Treatment lots shall contain no more than one unique Manufacturing Lot.

FAT Verification Testing: Testing of first Treatment Lot of a garment or fabric type treated for a contract. Required when specified in acquisition documents. Testing is performed in accordance with MIL-PRF-32659.

Initial Verification Testing: Testing performed on treated garments or fabric to verify insect repellent content in the textile by qualified government laboratory on the first Five (5) Treatment Lots of a garment or fabric type produced for a contract. Testing is performed in accordance with requirements specified in MIL-PRF-32659.

Follow-up Verification Testing:
Insect repellent content testing of all Treatment Lots of a garment or fabric type for a contract in accordance with MIL-PRF-32659 by a Qualified Testing Facility
and
Insect repellent content testing of one Treatment Lot per every Ten (10) Treatment Lots of a garment or fabric type for a contract in accordance with MIL-PRF-32659 at a qualified government laboratory.

Government Laboratory: Shipping address for samples to be tested by government laboratory:
Combat Capabilities Development Command – Soldier Center
15 General Greene Ave, Building 5, Whittlesey Bldg
ATTN: Textile Materials Evaluation Branch, Room S127B
Natick, MA 01760-5019

First Article Testing (FAT)

Reference paragraph 4.2 in MIL-PRF-32659 for detailed requirements for FAT.

Testing shall be conducted concurrently by the Qualified Test Facility and by the Qualified Government Laboratory. The Contractor's Qualified Testing Facility shall send results to the Government laboratory for correlation. Government results shall determine final acceptability of the test. In the event of disagreement between Contractor testing and Government test results, the Government shall investigate the cause of the disparity.

Testing for the FAT shall consist of the following (paragraphs referenced from MIL-PRF-32659):

1) AI Content (Gas Chromatography/Mass Spectrometry test)
    a) Requirement as stated in the item specification
    b) Method as stated in MIL-PRF-32659, 4.7.1
    c) Samples will be tested initially (treated unlaundered sample) and after 1, 20 and 50 launderings.
2) %Bite Protection Test
    a) Requirement as stated in the item specification.
    b) Method as stated in MIL-PRF-32659, 4.7.2
    c) Samples will be tested after 1, 20 and 50 launderings.
    d) Shade conformance
    e) Shade to match selected standard after treatment

3) Within 45 days after the Government laboratory receives the first article samples, the laundered swatches (pre-treated fabric or garment samples) will be sent to the United States Department of Agriculture (USDA) for % Bite protection testing. Within 180 calendar days of the USDA receiving the laundered swatches (pre-treated fabric or garment samples) the testing will be completed, and results will be compiled into a final report by the government laboratory. The Contracting Officer shall notify the Contractor, in writing, of the conditional approval, approval, or disapproval of the first article. The notice of conditional approval or approval shall not relieve the Contractor from complying with all requirements of the specifications and all other terms and conditions of this contract. A notice of conditional approval shall state any further action required of the Contractor. A notice of disapproval shall cite reasons for the disapproval. If for some reason the % Bite Protection testing cannot be completed in 180 days, the contractor will be notified of a delay in test result.

4) If the first article is disapproved, the Contractor, upon Government request, shall submit an additional first article for testing. After each request, the Contractor shall make any necessary changes, modifications, or repairs to the first article or produce and treat another lot for FAT. All costs related to these re-tests are to be borne by the Contractor, including all costs for additional tests following disapproval. The Contractor shall furnish any additional first article to the Government under the terms and conditions and within the time specified by the Government. The Government shall act on this first article within the time limit specified in paragraph 3) of this clause. The Government reserves the right to require an equitable adjustment of the contract price for any extension of the delivery schedule or for any additional costs to the Government related to these tests.

5) If the Contractor fails to deliver any first article on time, or the Contracting Officer disapproves any first article, the Contractor shall be deemed to have failed to make delivery within the meaning of the Default clause of this contract.

6) Unless otherwise provided in the contract, the Contractor:
    i) May deliver the approved first article as a part of the contract quantity, provided it meets all contract requirements for acceptance and was not consumed or destroyed in testing; and
    ii) Shall remove and dispose of any first article from the Government test facility at the Contractor's expense.
7) If the Government does not act within the time specified in paragraph 3) or 4) of this clause, the Contracting Officer shall, upon timely written request from the Contractor, equitably adjust under the Changes clause of this contract the delivery or performance dates and/or the contract price, and any other contractual term affected by the delay.

8) The Contractor is responsible for providing operating and maintenance instructions, spare parts support, and repair of the first article during any first article test.

9) Before first article approval, the acquisition of materials or components for, or the commencement of production of, the balance of the contract quantity is at the sole risk of the Contractor. Before first article approval, the costs thereof shall not be allocable to this contract for:
    (1) progress payments, or

(2) termination settlements if the contract is terminated for the convenience of the Government.

(i) The Government may waive the requirement for first article approval test where supplies identical or similar to those called for in the schedule have been previously furnished by the Offeror/Contractor and have been accepted by the Government. The Offeror/Contractor may request a waiver.

(End of Clause)

Alternate I (Jan 1997). As prescribed in 9.308-2(a)(2) and (b)(2), add the following paragraph (j) to the basic clause:

(j) The Contractor shall produce both the first article and the production quantity at the same facility.

Laboratory Qualification Process

Contractor testing for Active Ingredient (AI) content shall be conducted at a laboratory which has been qualified by the Government and listed in section 52.246-9032 of the contract.
Government determination of the proposed laboratory's ability to perform the testing must be completed and the proposed laboratory granted conditional qualification before First Article Test may proceed.
The Combat Capabilities Development Command - Soldier Center (DECCOM SC) Textile Materials Evaluation Branch (TMEB) will send (5) 3-inch diameter pre-cut samples of cloth with known properties to Contractor to be tested for AI content. Results from testing this material shall be submitted to DEVCOM SC TMEB along with end item results in order to establish correlation of testing methods.
The laboratory may be considered a Qualified Testing Facility once DEVCOM SC TMEB determines through correlation testing that the laboratory is acceptable.
If at any time over the course of the contract the Government determines that correlation testing no longer supports Qualification of the laboratory, Qualification may be revoked. When necessary, DLA Troop Support contracting personnel will advise.

- AI Content (Gas Chromatography/Mass Spectrometry test)
  - Requirement as stated in paragraph the item specification
  - Method as stated in MIL-PRF-32659, 4.7.1
  - Samples will be tested initially (treated unlaundered sample) and after 1, 20 and 50 launderings.
- %Bite Protection Test
  - Requirement as stated in the item specification.
  - Method as stated in MIL-PRF-32659, 4.7.2
  - Samples will be tested after 1, 20 and 50 launderings.
- Shade conformance
  - Shade to match selected standard after treatment

(b) Within 45 days after the Government receives the first article the laundered swatches (pre-treated fabric or garment samples) will be sent to USDA for % Bite protection testing. Within 180 calendar days of the USDA receiving the laundered swatches (pre-treated fabric or garment samples) the testing will be completed, and results will be compiled into a final report, the Contracting Officer shall notify the Contractor, in writing, of the conditional approval, approval, or disapproval of the first article. The notice of conditional approval or approval shall not relieve the Contractor from complying with all requirements of the specifications and all other terms and conditions of this contract. A notice of conditional approval shall state any further action required of the Contractor. A notice of disapproval shall cite reasons for the disapproval. If for some reason the % Bite Protection testing cannot be completed in 180 days, the contractor will be notified of a delay in test result.
(c) If the first article is disapproved, the Contractor, upon Government request, shall submit an additional first article for testing. After each request, the Contractor shall make any necessary changes, modifications, or repairs to the first article or produce and treat another lot for FAT. All costs related to these re-tests are to be borne by the Contractor, including all costs for additional tests following disapproval. The Contractor shall furnish any additional first article to the Government under the terms and conditions and within the time specified by the Government. The Government shall act on this first article within the time limit specified in paragraph (b) of this clause. The Government reserves the right to require an equitable adjustment of the contract price for any extension of the delivery schedule or for any additional costs to the Government related to these tests.

(d) If the Contractor fails to deliver any first article on time, or the Contracting Officer disapproves any first article, the Contractor shall be deemed to have failed to make delivery within the meaning of the Default clause of this contract.

(e) Unless otherwise provided in the contract, the Contractor:

(1) May deliver the approved first article as a part of the contract quantity, provided it meets all contract requirements for acceptance and was not consumed or destroyed in testing; and

(2) Shall remove and dispose of any first article from the Government test facility at the Contractor's expense.

(f) If the Government does not act within the time specified in paragraph (b) or (c) of this clause, the Contracting Officer shall, upon timely written request from the Contractor, equitably adjust under the Changes clause of this contract the delivery or performance dates and/or the contract price, and any other contractual term affected by the delay.

(g) The Contractor is responsible for providing operating and maintenance instructions, spare parts support, and repair of the first article during any first article test.

(h) Before first article approval, the acquisition of materials or components for, or the commencement of production of, the balance of the contract quantity is at the sole risk of the Contractor. Before first article approval, the costs thereof shall not be allocable to this contract for:

(1) progress payments, or

(2) termination settlements if the contract is terminated for the convenience of the Government.

(i) The Government may waive the requirement for first article approval test where supplies identical or similar to those called for in the schedule have been previously furnished by the Offeror/Contractor and have been accepted by the Government. The Offeror/Contractor may request a waiver.

(End of Clause)

Initial Verification Testing

The first Five (5) Treatment Lots shall be tested by both DEVCOM SC TMEB and Contractor's Qualified Testing Facility for AI Content only at 0X launderings. The Government shall test the first Five (5) Treatment Lots of pre-treated fabric or post-treated garments. This requirement shall be considered satisfied when passing Government results for Five (5) consecutive Treatment Lots are received from DEVCOM SC TMEB. The Contractor is not free to ship subsequent Treatment Lots under "Follow-up verification" until passing results for Five (5) consecutive Treatment Lots have been confirmed by DLA and communicated to Contractor.
Treatment Lots for all verification (initial or follow-up) testing of pre-treated fabric shall be a minimum of 1000yds and a maximum of 12,500 yards.
Treatment Lots for all verification (initial or follow-up) verification testing of post-treated garments shall be a minimum of 300 garments and a maximum of 5000 garments.

Follow-up Verification Testing

Once Initial Verification Testing is completed and Five (5) consecutive Treatments have been passed by Government testing, Follow up Verification Testing will be required. Treatment Lots to be sampled for Follow-up Verification Testing shall be selected at random by the Government QAR such that out of each set of 10 Treatment Lots, the QAR shall randomly select one Treatment Lot to be sampled for Follow up Verification testing (i.e., 1 random Treatment Lot out of Treatment Lots 1-10, 1 random Treatment Lot out of Treatment Lots 11-20, etc.). Samples shall be tested by Government for insect repellent Application only at 0X launderings. The Contractor is not required to wait for Government results before shipping or continuing production while under Follow-up Verification except for the Treatment Lot that requires testing. (For example, if Treatment Lot 10 is submitted for Government verification testing, then Treatment Lot 10 may not ship until positive test results are received, while other Treatment Lots do not need to be held if applicable Contractor testing results are passing and reviewed by Government.)
In the event that the requirement for first Five (5) Treatment Lot verification is waived via contract modification, Follow-up Verification Testing of 1 in 10 Treatment Lots begins at the start of production.
Percent Bite Protection testing, and multiple wash insect repellent Content testing are not necessary once the First Article has passed. However, the Government may elect to test treated items at random at any time.

When required, random samples from the Treatment Lots shall be pulled by the Government QAR and sent with completed form DD 1222 to Combat Capabilities Development Command – Soldier Center (DEVCOM SC TMEB) at:

Combat Capabilities Development Command – Soldier Center
15 General Greene Ave, Building 5, Whittlesey Bldg
ATTN: Textile Material Evaluation Branch, Room S127
Natick, MA 01760-5019

LOT FORMATION AND TESTING FOR END ITEMS AND COMPONENTS

This section last updated: 05.08.2025

The following definitions and/or instructions derived from *DLA TROOP SUPPORT C&T AQAR Quality Systems Requirements* are applicable for production and presentation of garments and fabric treated with insect repellent for the Department of Defense.

Sampling of Lots for Testing

A. Samples shall be randomly selected from Manufacturing Lots by the Government Quality Assurance Representative (DCMA QAS) in accordance with contract ANSI AQL requirements for the purpose of Government inspection and acceptance.

   i. In the case of garments to be chemically treated after manufacture, samples shall be randomly selected by a Government QAR in accordance with contract ANSI AQL requirements for inspection of acceptable manufacturing quality before being forwarded to the treatment facility. After treatment, samples shall again be randomly selected by a Government QAR in accordance with contract ANSI AQL requirements for the purpose of final Government inspection and acceptance.

   ii. In the case of pre-treated fabric prior to being garment manufacturing, samples shall be randomly selected by a Government QAR in accordance with contract ANSI AQL requirements for inspection of acceptable quality before being forwarded to the cut and sew facility. After treatment and manufacturing, samples shall again be randomly selected by a Government QAR in accordance with contract ANSI AQL requirements for the purpose of final Government inspection and acceptance. Garments made with pretreated fabric do not need to be sampled for FAT, Initial or Follow-up Verification Testing, as this will be done on the pre-treated fabric level.

Samples for all Government verification testing or inspection shall be pulled by the Government QAR from the completed Treatment Lot which has been assembled for final presentation to the Government.

Except as noted below, the "Manufacturing Lot" size may differ from the "Treatment Lot" size. Test results and full traceability must be maintained in association with each Manufacturing and Treatment Lot.

i. Multiple Manufacturing (Garments or Fabric) Lots may **not** be combined into a single Treatment Lot.

Each Treatment Lot shall be independently counted for verification testing requirements (whether Initial Verification Testing or Follow-up Verification).

Samples for Government verification testing shall be selected from the final treated quantity as presented for each Treatment Lot requiring verification testing.

ii. A single Manufacturing Lot may be treated in different Treatment Lots. While the splitting of Manufacturing Lots should be minimized as much as possible, when a single Manufacturing Lot is too large to be treated as one Treatment Lot, it may be treated in more than one Treatment Lot. In this event, each Treatment Lot is counted for Government verification purposes. For example, if a Manufacturing Lot is treated in two different Treatment Lots, that shall be counted as two different Treatment Lots for verification purposes.

A full set of samples shall be pulled by DCMA QAR or a Suppliers Quality Assurance/Source Sampling Representative and tested by the Contractors Qualified Laboratory for each Treatment Lot. A single test report shall be generated for each Treatment Lot.
* Suppliers Quality Assurance/Source Sampling Representative shall differ from the Laboratory personnel testing and signing off on the DD1222.

iii. An AI Content testing failure (Contractor testing or Government testing) found on a Treatment Lot shall be cause for holding and re-testing the Treatment Lot, at the discretion of the Contracting Officer.
If a failing Treatment Lot is over the min max requirement, it must be reworked to lower the AI Content levels or destroyed if that AI cannot be lowered to required levels. Rework is to be done in accordance with any and all EPA registrations.

B. Testing for post-manufacture AI Content is considered end item testing. Contractor testing in accordance with contract requirements shall be completed and reported for each Manufacturing Lot. Samples for Contractor testing shall be pulled from the same finished quantity as Government verification test samples would be pulled from (see section (B) above), even if Government verification testing is not required. All testing data from end item AI Content testing shall be recorded on a lab report which is signed by the testing lab and includes **all** results from each sample tested; this report shall be provided to the Government QAR and forwarded to DLA Troop Support and DEVCOM SC via a DD1222 form. Please note that only ONE DD1222 needs to be sent to DLA Troop Support and DEVCOM SC per Treatment Lot. The Treatment Lot number shall be entered in Box 18 of the DD1222. The Manufacturing Lot Number, if different from the Treatment Lot number, shall be listed in Box 22 (remarks), for traceability.

If the DD1222 is not filled out correctly, the lot will be considered failing until the correct paperwork is received.

i. If a single Manufacturing Lot is comprised of multiple Treatment Lots, separate Contractor testing shall be completed and reported for each quantity of the Manufacturing Lot treated in a separate Treatment Lot.

C. Prime Contractors are required to maintain applicable records for each lot of their own production and to be able to produce records representing the treatment process for each lot of their subcontractors. Complete traceability shall be maintained for two years following delivery of the final lot of supplies.

D. Garments and pre-treated fabric shall be individually stamped with their Manufacturing Lot number.

E. All end item test reports (including all chemical and physical tests as required by the contract) shall be presented to the Government QAR at the time of final inspection for Government acceptance.

Lot Formation and Testing for Components

A. A "Component Lot" is a completed homogenous production run of a fixed quantity of items from which the required testing samples are randomly selected. Each component lot shall be tested for conformance to all tests required in the contract.

B. Deviation from DLA TROOP SUPPORT C&T AQAR Part 1: Regardless of cost, components other than cloth shall be presented with a Certificate of Compliance (CoC) as stated below in Section C, but Source Sampling or Government Acceptance Testing may be implemented in lieu of CoC at any time at the discretion of the Government. Shade testing of components as stated in the contract is Government Acceptance Testing and is not covered under CoC.

C. Unless otherwise directed by the Government, components other than cloth shall be presented to the Prime Contractor with a CoC from a laboratory listed in the contract as being qualified to perform the required testing. The CoC shall certify that the material in that component lot meets all requirements as stated in the contract. All CoCs shall be supported by test reports to ascertain their validity. The Prime Contractor must maintain and present all CoC records upon government request.

Government notification of results

Copies of all test reports (with completed DD1222s) and Certificates of Conformance pertaining to permethrin treatment must be sent AS SOON AS test results are completed/received. Test results need to be reviewed by DLA/Natick prior to shipping. DLA/Natick has two business days to review test results.

Results shall be forwarded to ALL Army and DLA Troop Support email addresses listed below:

katherine.a.barton.civ@army.mil
amy.l.johnson2.civ@army.mil
bdu_gcreports@dla.mil

Excess Garments

A. Garments that cannot ship with the original lot they were treated with can be combined and shipped with garments from another lot under the following circumstances.

   The garments from previous lots that are being added to another lot must:

   - Be from the same manufacturer and contract.
   - The contract must have open CLINs for the garments being added.
   - Be the same exact item and material. Do not mix female and unisex.
   - Have passing GC Testing results dated within the past 180 days. Copies of the test reports for each previous lot included in the shipment lot must be available.
   - Not exceed 60 units per shipment

Production Samples

All production samples being sent to DLA Troop Support shall be randomly pulled by the QAR and accompanied by a DD1222. This is for any samples requested by DLA or samples being sent by the Prime.

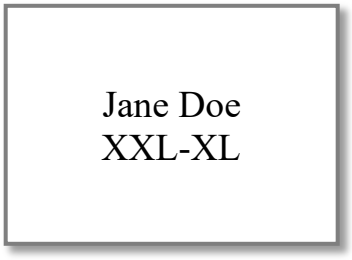
LABELING INFORMATION FOR SPECIAL MEASUREMENT ORDERS

This section last updated: 1/1/2014

The size label for Special Measurement orders shall conform to the requirements stated in paragraph 3.8.1 of the end item specification (GL/PD 14-04B or GL/PD 14-05B), except that the label text shall read as follows:

[NAME OF RECIPIENT] (located in box 1a on DD-358 or on the EMALL spreadsheet)
[SPECIAL MEASUREMENT SIZE] (as provided by DLA Troop Support when order is placed)

Sample:



ACCEPTABLE QUALITY LIMITS FOR END ITEM INSPECTION

This section last updated: 1/1/2014

ANSI/ASQC Z1.4 Acceptable Quality Limits for End Item Inspection shall be as follows:

Visual
Major - Level II, 2.5
Minor - Level II, 10.0
Dimensional - S-2, 4.00
Palletization - S-I, 6.5
Prep - S-2, 2.5

PACKAGING

This section last updated: 6/8/2022

Coats:

30 Coats of one size only shall be packed in a fiberboard shipping container conforming to ASTM-D-5118, Type CF, Style RSC, Grade 275 or ECT 44, variety SW, Class domestic, with a double wall liner. Each container shall have the contents completely covered on the top and bottom with a sheet of commercial grade kraft paper. Any commercial closure method cited in ASTM-D-1974 is acceptable except stapling.

Each Coat shall be laid flat with the front or back up. The sleeves shall be folded at right angles across the chest or back (whichever side is up), one on top of the other. For larger sizes, it may be necessary to adjust the sides in order to accommodate the box size. The bottom edge of the coat may first be folded over a few inches and the coat shall then be folded in half widthwise to fit the box size.

Packaging for all items including special measurements shall be appropriately sized for the contents within and sent thru proper traceable means.

Barcoding

The UPC code must be placed on all shipping cartons on which the NSN appears.

The following defects apply for barcode labels/tags:

Bar code omitted or not readable by scanner
Human-readable interpretation (hri) omitted or illegible
Not visible on folded, packaged item causes damage to the item

252.211-7006 - Radio Frequency Identification (RFI) required

Marking

Marking shall be in accordance with MIL-STD-129.

MIL-STD-129P, with Change 4 - Department of Defense Standard Practice Military Marking for Shipment and Storage – dated 19 September 2007

Interim changes:
Omission of markings on exterior shipping containers of items in the DLA Troop Support Clothing and Textile (C&T) Directorate: the nomenclature and manufacturer's name (when the name

identifies the material) shall be omitted from all exterior shipping containers of DLA Troop Support C&T items, regardless of mode of shipment.

If the manufacturer's name does not identify the material as being clothing, it may remain. NSNs shall be shown on all shipping containers of C&T items. The packing list shall be placed inside the last container to be loaded for each shipment. The words "packing list here" shall be stenciled, not hand lettered, on the container.

Palletization

Significant note - "Palletization is required for these supplies".

Note: the following applies to all non-manufactured wood packaging materials:

"All Wood Packaging Material (WPM) acquired by DOD must meet requirements of International Standards for Phytosanitary Measures (ISPM) 15, "Guidelines for Regulating Wood Packaging Materials in International Trade." DOD shipments inside and outside of the United States must meet ISPM 15 whenever WPM is used to ship DOD cargo, or when wood is being acquired by DLA for future use as packaging material. WPM is defined as wood pallets, skids, load boards, pallet collars, wooden boxes, reels, dunnage, crates, frame and cleats. Packaging materials exempt from the requirements are materials that have undergone a manufacturing process, such as corrugated fiberboard, plywood, particleboard, veneer, and oriented strand board (OSD). All WPM shall comply with one of the following official quality control programs:

Heat Treatment (HT) or Kiln Dried Heat Treatment (KD HT) in accordance with American Lumber Standard Committee, Incorporated (ALSC) Wood Packaging Material Program and WPM Enforcement Regulations (see http://www.alsc.org/; or

All WPM shall include certification/quality markings in accordance with the ALSC or NWPCA standards, as applicable. Markings shall be placed in an unobstructed area that will be readily visible to inspectors. Pallet markings shall be applied to the stringer or block on diagonally opposite sides of the pallet and be contrasting and clearly visible.

All containers shall be marked on a side other than the top or bottom, contrasting and clearly visible. All dunnage used in configuring and/or securing the load shall also comply with ISPM 15 and be marked with an ASLC approved DUNNAGE stamp. Failure to comply with the requirements of this restriction may result in refusal, destruction, or treatment of materials at the point of entry. The Agency reserves the right to recoup from the Contractor any remediation costs incurred by the Government.

Pallet shall be 4 way entry, winged type. Palletized load dimensions shall not exceed 43 inches in length, 52 inches in width, and 54 inches in height (including the pallet).

The palletized load shall be bonded using approved commercial bonding materials. The use of metal banding, in securing boxes to pallets, is discouraged. Pallet loads shall contain the same number of cartons, of identical quantities, of one NSN, to the maximum extent possible.

Pallet loads containing more than one NSN shall be clearly marked to list all the NSN's contained in the load. No carton shall have more than one NSN. At the end of a size run, no more than one carton per NSN may be short or over the specified quantity. Said carton shall be clearly marked "short" or "over".

MIL-STD-147 is referenced for palletized loads.

In addition to requirements specified above the following clause also applies:

52.247-9012 - Requirements for Treatement Of Wood Packaging Materials (WPM) - (July 2006)

MIL-STD-147 is hereby reinstated as follows:

MIL-STD-147E DEPARTMENT OF DEFENSE
16 MAY 2008 STANDARD PRACTICE PALLETIZED UNIT LOADS STANDARDS (COMMERCIAL)
ASME-MH1 American Society of Mechanical Engineers (ASME) Pallets, Slip Sheets, and Other Bases for Unit Loads, for construction of pallets.

RFID LABEL

**RFID labels are applicable to ACU Type I only. This section does not apply to FRACU Type III.*

An RFID inlay shall be added to the barcode label attached to each item. Where the use of self-adhesive barcode labels is authorized, the RFID inlay may be added to the self-adhesive label in lieu of a paper label. All other contract barcode requirements still apply.

The RFID inlay should be passive Gen2 with a frequency range between 860 and 960 MHz. The RFID antenna should be Avery/Dennison AD222 or comparable with ISO/IEC 18000-C EPC global C1G2 Protocol and an EPC memory allocation containing a 96 bit EPC Number. The data linking the EPC number to the NSN and quantity unit pack must be exportable to VIM/ASAP. The bar code of the EPC Number must be printed at the bottom of the tag along with the human readable version below the bar code.

In addition to defects applicable to the paper tag and barcoding element, the RFID tag shall be examined for the defects listed below:
RFID Inlay omitted
RFID Inlay not secure
RFID Inlay not readable with RFID scanner RFID Inlay or configuration not as specified
The manual document "Item-Level Passive RFID Technology Manufacturer's Information Guide" provides guidance on RFID implementation and is available from the contracting officer.

Inspection

Packaging examination:

The fully packaged end item shall be examined for the defects listed below. The lot size shall be expressed in units of shipping containers. The sample unit shall be one shipping container fully packaged. The Inspection level shall be S-2 and the AQL, expressed in terms of defects per hundred units, shall be 2.5.

Examine	Defect
Marking (exterior) & Unit Pack,	Omitted; incorrect; illegible, of improper size, location, sequence or method of application.
Materials	Any component missing, damaged or not as specified.
Workmanship	Inadequate application of components, such as: incomplete closure of container flaps, loose strapping, improper taping, or inadequate stapling. Bulged or distorted container.
Contents	Number of intermediate containers per shipping container is more or less than required. Number of items per container is more or less than required.

Palletization examination:

The fully packaged and palletized end items shall be examined for the defects listed below. The lot size shall be expressed in units of palletized unit loads. The sample unit shall be one palletized unit load, fully packaged.
The Inspection level shall be S-1 and the AQL, expressed in terms of defects per hundred units, shall be 6.5.

Examine	Defect
Finished Dimensions	Length, width or height exceeds specified maximum requirement.
Palletization	Pallet pattern not as specified. Interlocking of loads not as specified. Load not bonded with required straps as specified.
Weight	Exceeds maximum load limits.
Marking	Omitted; incorrect; illegible; of improper size, location, sequence or method of application.